

Effect of Deha Prakruti on Intelligence - An Appraisal

Review Article

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Abstract

Ayurveda lays great emphasis on the concept of *Prakruti* (body constitution) in the diagnosis, prognosis and treatment. *Panchamahabhoota* (five basic elements of the universe) in different permutation and combination form *Tridosha* (three humors of the body). *Prakruti* is formed depending on the predominance of any one or two or three *Dosha* at the time of conception. *Prakruti* is of two types: *Dosha Prakruti* or *Deha Prakruti* and *Gunamayi Prakruti* or *Manasa Prakruti*. *Deha Prakruti* is of 7 types. *Vataja*, *Pittaja*, *Sleshmaja*, *Samsargaja* [combination of two *Dosha*] i.e., *Vata-Pitta*, *Pitta-Sleshma*, *Sleshma-Vata* and *Sannipataja* [combination of three *Dosha*] i.e., *Vata-Pitta-Sleshma*. The person of each *Prakruti* is mentioned to be endowed with different characteristic features which includes physical and psychological features, abilities etc. *Medha* (intelligence), *Smruti* (memory) are psychological factors differentiating one person from other with respect to ability to perform any task. *Prakruti* is the deciding factor of various psychological characters including *Medha*. This article aims at studying the effect of *Deha Prakruti* on intelligence.

Key Words: *Ayurveda*, *Prakruti*, *Medha*, Intelligence quotient, *Smruti*, Memory.

Introduction

The concept of *Prakruti* is a unique contribution of *Ayurveda*. Great emphasis has been laid on the examination of *Prakruti* which is the natural state of an individual. This is very important because only by understanding the original state of the body function one can understand the possible derangement in the functioning. The primary aim of *Ayurveda* is also to maintain health in healthy person (1) and hence knowledge of *Prakruti* is imperative. *Prakruti* is further categorized into two i.e. *Deha Prakruti* and *Manasa Prakruti*. *Deha Prakruti* is categorized into 7 types i.e. 3 *Ekadoshaja*, 3 *Dwidoshaja*/ *Samsargaja* and 1 *Tridoshaja*/ *Sannipataja*. Different *Deha Prakruti* individuals are endowed with variations in their psychological as well as physical features. (2)

Intelligence is the aggregate or global capacity of the individual to act purposefully, to think rationally and to deal effectively with his environment (Wechsler, 1944, p.3). (3) A universally accepted uniform definition of intelligence has yet not evolved by the psychologists.

Intelligence quotient (IQ) is the measure of intelligence. It is the ratio of individual's mental age to his or her chronological age. An individual's I.Q.

indicates the rate of mental development or the degree of brightness. If the mental development keeps pace with one's life age, the quotient is 100. (4)

Aim and Objective

This article aims at studying the effect of *Deha Prakruti* on intelligence.

Materials and Methods

Ayurvedic classical texts and online sources are referred for the better understanding of the concept of *Deha Prakruti* and its effect on intelligence.

Literary Review

Dosha

Vata Pitta and Kapha are *Tridosha*. *Dosha* are in a state of dominance in their physiological limits to form *Prakruti*. (5) Persons of different *Prakruti* get influenced by *Dosha* and *Dosha Guna*.

Table 1: *Dosha Guna* (6)

	<i>Vata</i>	<i>Pitta</i>	<i>Kapha</i>
<i>Vagbhata</i>	<i>Ruksha</i> (dry)	<i>Snigdha</i>	<i>Snigdha</i>
	<i>Laghu</i> (light)	(unctuous)	(unctuous)
	<i>Sheeta</i> (cool)	<i>Teekshna</i>	<i>Sheeta</i> (cool)
	<i>Khara</i> (rough)	(penetrating)	<i>Guru</i> (heavy)
	<i>Sukshma</i> (subtle)	<i>Ushna</i> (hot)	<i>Manda</i> (slow)
	<i>Chala</i> (mobile)	<i>Laghu</i> (light)	<i>Slakshna</i>
		<i>Visra</i> (foetid)	(fine)
		<i>Sara</i> (flowing)	<i>Mritsna</i>
		<i>Drava</i> (liquid)	(sticky)
			<i>Sthira</i> (stable)

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Sushruta	<i>Ruksha, Laghu, Sheeta, Khara</i>	<i>Teekshna, Drava, Pootteegandha, Neela, Peeta, Ushna, Katurasa, Amlarasa in Vidagdha state</i>	<i>Shweta, Guru, Snigdha, Picchila, Sheeta, Madhura, Lavana in Vidagdha state</i>
Charaka	<i>Ruksha, Laghu, Sheeta, Daruna, Chala, Vishada, Khara, Sukshma</i>	<i>Slightly Snigdha, Ushna, Teekshna, Drava, Aamla, Sara, Katu</i>	<i>Guru, Sheeta, Mridu, Snigdha, Madhura, Sthira, Picchila</i>

mother (*Maatruja*), Soul (*Aatmaja*), mind (*Sattvaja*), diet (*Rasaja*) and homologation (*Satmyaja*). (16) (17)

Medha

It is specific part of *Buddhi* (intellect/ discriminative power) which has the power of retaining the knowledge for a long period. Due to *Medha* a person will be able to obtain the knowledge of existing objects and hence person becomes learned. (18)

Practically the word '*Medha*' is used to denote higher intellect. The word '*Medhavi*' is used for the person who is the knower of various *Shashtra* (literature) and having *Pratyutpanna Mati*. Sometimes '*Medha*' is also used for extraordinary recollection power. *Acharya Dalhana* defines '*Medha*' very clearly as the capacity to retain knowledge of various texts. (19)

In nutshell it can be concluded that *Medha* is the faculty of *Buddhi* which has the power to grasp (20) the experiences or knowledge and when needed it recalls that retained knowledge as it is. (21). *Smruti* means remembrance of things directly perceived, heard or experienced (22), *Dhrti* means patience which can restrain the mind from its harmful object (23), *Medha* is assessed by *Dharana Shakti* (grasping power). (24)

Intelligence

The capacity for logic, understanding, self awareness, learning, emotional knowledge, reasoning, planning, creativity, critical thinking and problem solving is called as intelligence. Generally, it is considered as the ability to perceive or infer information, and to retain it as knowledge. Intelligence Quotient (IQ) is the measure of intelligence. (25)

Intelligence Quotient (IQ)

It is the measure of intelligence derived as a total score from a set of standardized tests or subtests designed to assess human intelligence. There are various tests available for the assessment of IQ, common tests being Wechsler Adult Intelligence Scale (WAIS), Wechsler Intelligence Scale for Children (WISC) and Stanford-Binet Intelligence Scale etc. (26)

Measurement of IQ

Indian adaptation of Wechsler's Adult Intelligence Scale, Version-IV (WAIS-IV) composed of 10 core subtests and five supplemental subtests can be utilized for yielding scaled scores that sum to derive the Full-Scale IQ. Scores of Verbal Comprehension Index (VCI), Perceptual Reasoning Index (PRI), Working Memory Index (WMI) and Processing Speed Index (PSI) gives rise to Full Scale Intelligence Quotient (FSIQ).

Prakruti

Physique, personality, *Agni, Bala*, mental faculties, *Koshta*, progeny, *Swapna* etc., differs from one person to another. Structure/ Shape of the body, attitude of the person not only depend on *Aahaara Prakara* (type) or *Vihaara* (lifestyle) etc., but also depend on *Prakruti* of the person. (7)(8)

Prakruti is decided at the time fertilization. *Dosha* dominant at the time of fertilization decides the *Prakruti* of a person. It remains constant for lifetime. The *Dosha* which are present in the *Shukra* and *Aartava* at the time of commencement of life decides the *Prakruti*. (9)

Classification of Prakruti

Prakruti is classified into two types: *Deha Prakruti* and *Manasa Prakruti*. *Deha Prakruti* is of 7 types with involvement of one or two or three *Dosha*. (10)

- **Vatala (Vata Pradhana Prakruti):** Individuals possess strength, span of life, procreation, accessories of life and wealth in lesser quantity. (11)
- **Pittala (Pitta Pradhana Prakruti):** Endowed with moderate strength, span of life, spiritual and materialistic knowledge, wealth and accessories of life. (12)
- **Sleshmala (Sleshma Pradhana Prakruti):** Gifted with excellence of strength, wealth, knowledge, energy, peace and longevity. (13)

Dwidoshaja/ Samsargaja Prakruti persons are endowed with characteristic features of both the *Prakruti* and *Tridoshaja/ Sannipataja Prakruti* persons are endowed with characters of all three *Prakruti*.

Factors influencing Prakruti

Dosha that is predominant in the *Shukra* and *Shonita* at the time of union, food and activities of the pregnant women, uterus and season influences the *Prakruti*. (14) (15) Other factors influencing *Prakruti* includes inherited characters from father (*Pitruja*),

Table 2: Information of Indices, Subtests of WAIS-IV (27)

Index	Subtest	Description	Proposed abilities measured
Verbal Comprehension (ability to understand spoken language)	Similarities	Describe how two or concepts are similar	Abstract verbal reasoning; semantic knowledge
	Vocabulary	Name objects in pictures or define words presented to them	Semantic knowledge; verbal comprehension and expression
	Information	General knowledge questions	Degree of general information acquired from culture
Perceptual Reasoning (ability to think and reason using pictures/ visual information)	Block Design	Put together red and white blocks in a pattern according to a displayed model. This is timed, and some of the more difficult puzzles award bonuses for speed	Visual spatial processing and problem solving; visual motor construction
	Matrix Reasoning	View an array of pictures with one missing square, and select the picture that fits the array from five options	Nonverbal abstract problem solving, inductive reasoning
	Visual Puzzles	View a puzzle in a stimulus book and choose from among pieces of which three could construct the puzzle	Visual spatial reasoning
Working Memory (a limited capacity store for retaining information for a brief period while performing mental operations on that information)	Digit Span	Listen to sequences of numbers orally and to repeat them as heard, in reverse order, and in ascending order	Working memory, attention, encoding, auditory processing
	Arithmetic	Orally administered timed, arithmetic word problems	Quantitative reasoning, concentration, mental manipulation
Processing Speed (pace at which you take in information, make sense of it, and begin to respond)	Symbol Search	View rows of symbols and target symbols, and mark whether or not the target symbols appear in each row	Processing speed
	Coding	Transcribe a digit-symbol code using a key. The task is time-limited	Processing speed, associative memory, graphomotor speed

Medha vis-à-vis Intelligence and IQ

Medha is the ability to grasp the information and retain it as the knowledge which can be correlated with intelligence i.e. the capacity to perceive the information and retain it as knowledge. Intelligence quotient being the measure of intelligence can be utilized for measuring *Medha* too.

Relation between Deha Prakruti and Intelligence

- **Vatala and Intelligence:** In the characteristics of *Vata Prakruti* individuals because of predominance of *Vata Dosha*, *Vata Guna Amshaamsha* influence is seen in them. According to *Acharya Charaka*, due to the *Sheeghra Guna* they seem quick in understanding (grasping) but weak in recalling things means they have good short term memory but poor long term memory. (28) While *Acharya Sushruta* has said that they have lack of patience and less discriminative power. (29) According to *Acharya Vagbhata*, they are unsteady in respect of *Dhriti, Smriti, Buddhi* and *Cheshta* (activities). (30)
- **Pittala and Intelligence:** According to *Acharya Charaka*, *Pitta Prakruti* persons are endowed with moderate spiritual and materialistic knowledge. (31) As per *Acharya Sushruta and Acharya Vagbhata*,

Pitta Prakruti person is highly intelligent, clever and loves to monopolise the conversation. (32) (33) (34)

- **Sleshmala and Intelligence:** According to *Acharya Charaka*, *Kapha Prakruti* persons are endowed with excellent knowledge. (35) *Kapha Prakruti* person is endowed with self control and having strong faith in *Shastra*. (36) He is intelligent, takes more time to grasp any subject but possessed with long term memory. (37)

Discussion Prakruti and IQ

Pragnyaparadha (intellectual blasphemy) is responsible for aggravation all the *Dosha*. (38) The indulgence in *Pragnyaparadha* is due to impairment of intellect, patience and memory which are different in different *Prakruti* individuals. Health and mortality depend on IQ. Higher IQs in early life are associated with lower mortality and morbidity rates in later life. (39)

VCI (assessing the ability to understand spoken language) and PRI (assessing the ability to think and reason) must be more in *Pittala* persons because of *Teekshna Guna* and *Laghu Guna* of *Pitta Dosha*. VCI

must be least in case of *Sleshmala* persons because of *Manda Guna* and *Guru Guna* of *Kapha Dosh*.

WMI (assessing the capacity for retaining information for a brief period while performing mental operations on that information) must be more in *Sleshmala* persons because of *Sthira Guna* and *Snigdha Guna* of *Kapha Dosh* and must be least in case of *Vatala* persons because of *Chala Guna* and *Ruksha Guna* of *Vata Dosh*.

PSI (assessing the pace at which one take in information, make sense of it, and begin to respond) must be more in *Pittala* persons because of *Teekshna Guna*, *Utsaaha Karma Laghu Guna* of *Pitta Dosh* and least in *Sleshmala* persons because of *Manda Guna* and *Guru Guna* of *Kapha Dosh*.

Pittala persons are said to have more *Medha* so, FSIQ must be more in them because of *Teekshna Guna* and *Laghu Guna* of *Pitta Dosh*. *Vatala* persons are said to have least *Medha* so also FSIQ due to *Chala Guna*, *Ruksha Guna* of *Vata Dosh*.

Genetics, Environment and IQ

Environmental and genetic factors play a role in determining IQ. Their relative importance has been the subject of much research and debate. (40) Applied *Ayurveda* concept i.e. "Ayurgenomics" can contribute vastly in this avenue. Utilization of *Prakruti* concept can guide the researches in the right direction.

Physiology of Intelligence and Prakruti

High IQ is associated with combinations of neurological parameters which determine an intermediate degree of "arousability" in the cerebral cortex and related structures. This relationship is accounted for in terms of the generally optimal effect that an intermediate degree of arousability would have on different neuro-physiological processes mediating the acquisition, retention and utilization of information. (41) *Prakruti* wise differences in abilities such as discriminative, grasping, retaining, recollection of things etc. can be inferentially correlated with these neuro-physiological processes responsible for variations in intelligence.

Applicability of the Concept

Prakruti based intelligence can be utilized in Cognitive Epidemiology. It is field of research that examines the associations between intelligence test scores and health. Intelligence assessment through *Prakruti* can be an important predictor of later health and mortality differences at early age. It can even help in testing school performance of a student, predicting job performance of an employee, personalized medicine, determining suitability of profession according to *Prakruti* and expecting earning abilities etc. (42)

Conclusion

By knowing *Prakruti* one can understand different physical and psychological attributes and behavioral changes. Intelligence can be inferentially assessed based upon the *Prakruti* of an individual. *Pitta*

Prakruti persons are endowed with more intelligence, *Kapha Prakruti* persons with moderate and *Vata Prakruti* persons with least intelligence. Knowledge of Intelligence in accordance with *Prakruti* can contribute a lot in research thrust areas like Personalized Medicine and Ayurgenomics etc.

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