Effect of Deha Prakruti on Intelligence - An Appraisal

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 of 7 types. Vataja, Pittaaja, 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.

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 Kapha

| Vaghbhat | Vuksha (dry) | Snigdha (unctuous) | Snigdha (unctuous) |
|----------|--------------|--------------------|--------------------|
| Laghu (light) | Sheeta (cool) | Teekshna (penetrating) | Sheeta (cool) |
| Khara (rough) | Sukshma (subtle) | Ushna (hot) | Guru (heavy) |
| Chala (mobile) | | | Manda (slow) |

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.

Table 1: Dosha Guna (6)

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Prakruti

Physique, personality, Agni, Bala, mental faculties, Kosha, 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 of 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/ Sanipataja 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), mother (Maatrauja), 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 Shastra (literature) and having Pratyutpanna Mati. Sometimes ‘Medha’ is also used for extraordinary recollection power. Acharya Dvalhana 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). Smrutil means remembrance of things directly perceived, heard or experienced (22), Dhruti means patience which can retrain 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).
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

- **Vata Prakruti 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 seems 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 Dhruti, Smruti, Buddhi and Cheshta (activities). (30)

- **Pitta Prakruti 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 Teeksha Guna and Laghu Guna of Pitta Dosha. VCI

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

| Index                  | Subtest          | Description                                                                 | Proposed abilities measured                      |
|------------------------|------------------|-----------------------------------------------------------------------------|---------------------------------------------------|
| Verbal Comprehension   | 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   | 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         | 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       | 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 |

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

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 Shitra Guna and Snigdha Guna of Kapha Dosha and must be least in case of Vatala persons because of Chala Guna and Ruksha Guna of Vata Dosha.

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 and Laghu Guna of Pitta Dosha and least in Sleshmala persons because of Manda Guna and Guru Guna of Kapha Dosha.

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

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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