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Research Article

### EVALUATION OF *BUDDHIMATTA* ACCORDING TO *DEHAPRAKRITI* IN CONTEMPORARY INTELLIGENCE QUOTIENT (IQ)

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#### ABSTRACT

**Background:** *Prakriti* (~body constitution, temperament) is expression of healthy volunteers in perspective of body functions, behavior, morphology and physiology. Every individuals has different physic and psychological characters as per body constitution. In modern science Intelligence Quotient (IQ) is widely used in practice setting to measure the cognitive abilities because IQ is strongly correlated to educational, professional, economic and social success or failure. However, it may fail to act as an accurate measure of 'intelligence' in its broadest sense to account creativity or emotional intelligence. *Prakriti* assessment is unique feature of Ayurveda which can suggest proper diet, appropriate regime and job work according to body constitution and intelligence.

**Objectives:** To evaluate intellectual capacity of healthy individuals according to different body constitution.

**Materials and Methods:** Firstly assessment of *prakriti* of healthy volunteers was done by *prakriti* assessment proforma. 30 individuals were included in each group according to their *prakriti*. Then IQ of each person was drawn out by applying Culture Fair test Scale 2 form 'A'. Score was analyzed and compare statistically by the test analysis of variance (ANOVA).

**Results:** The test result significantly showed that different body constitution having different intellectual capacity.

**Conclusion:** The study shows that *Prakriti* assessment is one of the guide lines in direction of career selection and gives new scope on future progress in this field.

**Keywords:** *Prakriti*, *Buddhimatta*, Intelligence Quotient.

#### INTRODUCTION

Ayurveda's holistic approach addresses not only the physical health, but spiritual and mental aspect of health also. All the basic concept of health, diseases, patient and treatment are carefully elaborated in compendia. *Prakriti* assessment is one of the criteria applied for examination of patient<sup>1,2</sup>. This broader aspect of health and curing diseases makes life science often triumphs. *Prakriti* is expression of healthy individuals in perspective of body functions, behavior, morphology and physiology. It also describes the naturally form physic and *buddhi* (~intelligence) of individuals which is similar to the definition of 'phenotype' in genetic science<sup>3</sup>. Ayurveda enumerate *prakriti* in various dimension but principally refers *prakriti* of human as *dosha prakriti* or *dehaprakriti*. In concern with intelligence, according to constitution *Acharya* described that volunteers of *Vata* temperament are of unsteady mind<sup>4</sup>, quick in acquisition but with poor memory<sup>5</sup>. Volunteers having predominance of *Pitta* are moderate in knowledge and

understanding<sup>6</sup>. They are clever and so intelligent, that they can easily defeats other in talk<sup>7</sup> while volunteers of *Kapha* temperament are steady in mind<sup>8</sup>, full of knowledge and learned very much<sup>9</sup>. They are slow in understanding<sup>10</sup> but having memory for long time<sup>11</sup>.

Individual differences in cognitive abilities are a prominent aspect of human psychology, and play a substantial role in influencing important life outcomes. IQ is one of the tests which used to assess intelligence. The term IQ was coined by psychologist William Stern. As this is the most researched attempt to measure the intelligence, most widely used in practical setting. However, it may fail to act as an accurate measure of 'intelligence' in its broadest sense to account creativity or emotional intelligence<sup>12</sup>. Present era is full of competition in every sphere. Many individuals are suffering from physical as well as mental stress. To be continued in competition individuals require proper health with proper intelligence. This stress and strain leads to mental disturbance<sup>13</sup> and mind makes wrong decision which may

become career destroying because IQ is strongly correlated to educational, professional, economic and social success or failure<sup>14</sup>. In this concern *Charaka* explain the concept of 'pradnyaparadh' (~affect intelligence) means disturbance of *dhi* (~intellect), *dhruti* (~restraint) and *smruti* (~memory)<sup>15</sup>. With considering all the facts selection of career according to body constitution would be helpful for society because *Prakriti* assessment is unique feature of Ayurveda which can suggest proper diet, appropriate regime and job work according to body constitution and intelligence. Thus effort was taken to evaluate intelligence of the healthy volunteers according to body constitution.

### AIMS AND OBJECTIVES

- To evaluate intellectual capacity according to different body constitution.
- To create awareness in the society about the selection of career according to their own body constitution rather than only intellectual level.

### MATERIALS AND METHODS

Healthy volunteers were selected randomly irrespective of their sex, caste, religion and socioeconomic condition, from college OPD after seeking the permission of institutional ethical committee. *Prakriti* assessment of healthy volunteers was done by *prakriti* assessment proforma firstly, then assessed volunteers were divided in 3 groups *Vataja*, *Pittaja* and *Kaphaja* as per dominance of *dosha*. Similar thirty individuals were included in each group. Such 90 healthy volunteers were selected for study. Then IQ of volunteers was drawn out by applying Culture Fair test Scale 2 form 'A'. Obtained data was analyzed and compare statistically by the test analysis of variance (ANOVA).

#### Inclusion criteria:

- Persons of age group twenty to forty years were selected from either sex.
- Educational qualification having passed H.S.S.C. or above were selected.

#### Exclusion criteria:

- Persons who were known case of major psychological disorders.
- Persons having less than twenty and more than forty years of age.
- Persons denied to comply with the protocol were rejected.

### Methods used to assess *prakriti* and IQ score:

**1) Assessment of *prakriti*:** The proforma was prepared for *Prakriti* assessment. In the proforma, criteria of *Vataja*, *Pittaja* and *Kaphaj prakriti* was selected from given literature in the compendia. Only those criteria were selected which could assessed the *prakriti* significantly to avoid the unnecessary expansion of topic. Proforma consist of total thirty points. Then *prakriti* was assessed by the score obtained more than ten. e.g. if 14 criteria was of *Vata Prakriti*, 11 of *Pitta prakriti* and 4 of *Kapha prakriti*, which shows the *Prakriti* of volunteer was *Vatapradhana Pitta* (predominance of *Vata dosha*). Such thirty volunteers of each *Vata*, *Pitta* and *Kapha Prakriti* were selected. These selected total ninety volunteers were divided in three groups, according to dominance of *prakriti* as follow.

Group V - *Vata* or *Vata* dominant *prakriti*.

Group P - *Pitta* or *Pitta* dominant *prakriti*.

Group K - *Kapha* or *Kapha* dominant *prakriti*.

**2) Measurement of IQ:** IQ of each volunteer was drawn out by applying test of 'g': Culture Fair, Scale 2, form A, prepared by R. B. Cottell and A.K.S. Cottell<sup>16</sup>. It consists of four sub tests. a) In the first subtest, the individual was presented with an incomplete, progressive series. His task was to select, the answer which best continues the series from the choices provided. In this subtest there were thirteen items which had to be solved within 3 minutes. b) In classification subtest, volunteers should select one option which was disparate from the other four. In this subtest there were fourteen items, which had to be solved within 4 minutes. c) In the matrices subtest, the task was to complete the design or matrix which was arranged incomplete earlier. In this subtest, there were thirteen items which had to be solved within 3 minutes. d) In the final subtest (topology), volunteers asked to select one which duplicates the conditions given in the far left box from the five choices provided. In this subtest there were ten items which has to be solved within 2.30 minutes. Precaution was taken, that volunteers solved one test at a time, without copying others and task was completed in stipulated time period. Before each subtest, examples was demonstrated how to complete the task. For each correct answer one mark was allotted and for each wrong answer zero mark was given. The score obtained from the answer sheet was a raw score and need to be transformed before it can be interpreted. Normalized standard score IQ's table converted the total raw score into a normalized standard score IQ.

### OBSERVATION AND RESULTS

**Table 1: Showing I.Q. wise distribution of 90 subjects of 3 *Prakriti*.**

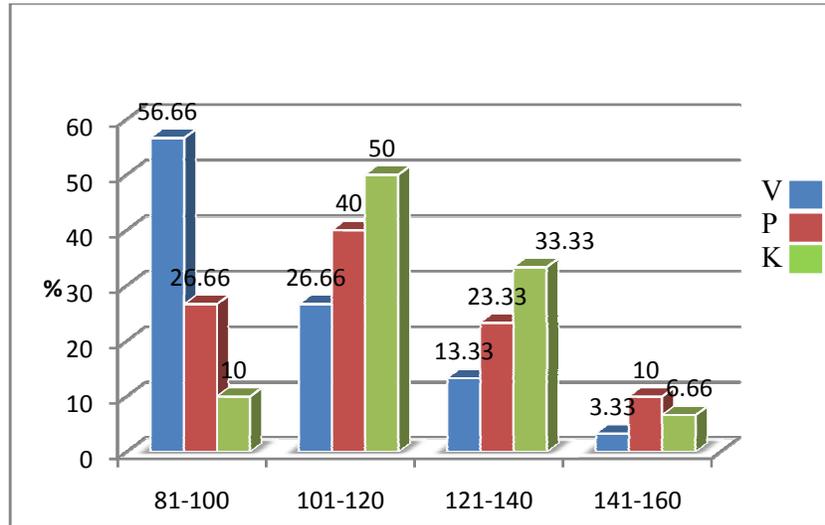
| Sr.no. | I.Q.    | Group V |       | Group P |       | Group K |       |
|--------|---------|---------|-------|---------|-------|---------|-------|
|        |         | Freq.   | %     | Freq.   | %     | Freq.   | %     |
| 1      | 81-100  | 17      | 56.66 | 8       | 26.66 | 3       | 10    |
| 2      | 101-120 | 8       | 26.66 | 12      | 40    | 15      | 50    |
| 3      | 121-140 | 4       | 13.34 | 7       | 23.34 | 10      | 33.34 |
| 4      | 141-160 | 1       | 3.34  | 3       | 10    | 2       | 6.66  |
|        | Total   | 30      | 100   | 30      | 100   | 30      | 100   |

Group V - *Vata* or *Vata* dominant *prakriti*. Group P - *Pitta* or *Pitta* dominant *prakriti*. Group K - *Kapha* or *Kapha* dominant *prakriti*.

Table 2: Showing analysis of variance (ANOVA) table.

| Square of Variance | df      | Sum of square | Mean sum of square | F-Ratio |
|--------------------|---------|---------------|--------------------|---------|
| Between the Age    | 3-1=2   | 2767.3        | 1383.65            | 4.34    |
| Error              | 89-2=87 | 27722.1       | 318.64             |         |
| Total              | 90-1=89 | 30489.4       |                    |         |

Since the computed F-ratio is 4.34 that is greater than the table F-ratio (3.07), the *Buddhimatta* according to *Dehaprakriti* differ significantly.



Graph 1: Showing I.Q. wise distribution of 90 subjects of 3 Prakriti.

Where V - Vata or Vata dominant prakriti. P - Pitta or Pitta dominant prakriti. K - Kapha or Kapha dominant prakriti.

## DISCUSSION

Group V was a *Vata* or *Vata* dominant *prakriti* shows 56.66 % volunteers belongs to 81-100 I.Q., 26.66% volunteers were found in 101-120 I.Q, 13.34% volunteers were found in 121-140 I.Q. and 3.34% volunteers were found in 141-160 I.Q. *Vata prakriti* volunteers sometimes grasps quickly sometimes grasps late, his memorizing capacity was less and unstable, he quickly solved questions in IQ test in hurry but not with good understanding. Therefore he solved more questions in the given time but not correctly. So, IQ score was also less. Hence there were more persons in low IQ range and less person in high IQ range. Group P was *Pitta* or *Pitta* dominant *prakriti* shows 26.66 % volunteers belongs to 81-100 I.Q, 40% volunteers were found in 101-120 I.Q., 23.34% volunteers were found in 121-140 I.Q. and 10% volunteers were found in 141-160 I.Q. As *Pitta prakriti* volunteers always grasps quickly and neatly, their memorizing capacity was moderate and could remember thing for medium spans, good at decision making, could not tolerate mental exertion and fast in working, he solved the questions in IQ test fast but with good understanding, as compared to *Vata prakriti*. Group K is *Kapha* or *Kapha* dominant *prakriti* showed 10 % volunteers belongs to minimum range of IQ. 10% volunteers belongs to 81-100 I.Q., 50% volunteers were found in 101-120 I.Q., 33.34% volunteers were found in 121-140 I.Q. and 6.66% volunteers were found in 141-160 I.Q. *Kapha prakriti* volunteers always grasps late but stands best for long time,

thoughtful, stable, they solved the questions in the IQ test carefully and correctly. They solved few more questions as compare to other body constitution. Hence IQ score was more in *Kapha prakriti* volunteers as compared to others. [Table 1 and Graph 1] Since the computed F-ratio is 4.34 that were greater than the table F-ratio (3.07), the *Buddhimatta* according to *Dehaprakriti* differs significantly. Means IQ of *Vata*, *Pitta* and *Kapha prakriti* increases gradually. [Table 2] As we already know volunteers of *Vata* temperament are quick in acquisition but with poor memory, advice them to choose career where quick advice and decision are required. Volunteers of *Pitta* temperament are clever can easily defeats others in talk but cannot tolerate heat, hunger and physical exertion so they can choose their career where needs innovation and provided freedom for work. *Kapha* temperament is always with steady mind, calm, thoughtful, grateful withstands with physical and mental exertion having memory for long time, so they can choose multitasking jobs which may be more stressful. As stress is well tolerated by them compare to *Vata* and *Pitta prakriti*. In this concern a researcher at the University of Delaware search that higher IQ is required for complex jobs that require reasoning and decision-making<sup>17</sup>. Thus success at work depends largely on fitness and health, not merely on one's intelligence<sup>18</sup> which can assess by *prakriti* assessment. So we think that during the selection of volunteers for particular job advice of Ayurvedic physician who is expertise in *prakriti* assessment should be taken in to consideration. This will results in wide spread

application for the assessment of health of general public. We describe the human intelligence according to *prakriti* and summarize the evidence for its existence. The concept of body constitution is so vast, it is not possible to fathom the depth of such big concept in single study, so more research are needed in this direction to evaluate the each and every criteria of particular body constitution with respect to their attribute. EQ (emotional quotient) can also access as per body constitution

### CONCLUSION

IQ of *Vata prakriti* is less as compare to *Pitta prakriti*. IQ of *Pitta prakriti* is less as compare to *Kapha prakriti*. *Prakriti* assessment is one of the guide lines in direction of career selection.

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