The problem of establishing the construct validity of triodsha theory of adult temperament was investigated by following an eclectical approach (a combination of psychometric, psycho-physiological, physical and experimental measures). This chapter describes the methods of investigation.

Sample:

Two hundred adult subjects, who consented to participate, constituted the sample in the present study. Males (n=128) and females (n=72) from a wide variety of working background were selected incidentally from the population of Rohtak & Mahendergarh (Haryana). The age of Ss ranged from 18 to 55 years, with a mean of 28.75 years and SD as 8.61. All the subjects belonged to more or less same socio-cultural background and reported themselves to be in a good health and were free from perceptual problems and physical ailment.

Design:

A single sample, correlational, repeated measure design was used. On the basis of different humoural symptoms, a battery of various psycho physiological, psychometric, physical and experimental measures was selected. Each subject was repeated on these measures one by one. A total number of 15 tasks/tests were selected. The sequence and order of
measures was controlled by independently randomizing for each subject. These measures are listed in Table 3.1 which describes the hypothetical dosha loading of various variables operationalized from different measures based on rational-theoretical approach.

1. 16 P.F. (16 Personality Factor)
2. Culture Fair Intelligence Test.
3. PGI Memory Scale
4. Span of attention (Tachistoscopic visual))
5. Tapping Tester/Activity (Manual motoric)
6. Reaction time (Simple-visual)
7. Walk Test-Speed (Time)
8. Loud Reading Test-a test of reading speed and speech loudness.
9. EMG (Electromyography)
10. Skin Conductance (GSR)
11. Blood Pressure
12. Pulse Rate*
14. General Health Questionnaire
15. Skin Temperature
Due to some technical problems the pulse rate could not be recorded on 100 subjects. The rest of 100 subjects were tested on 14 measures with the exception of pulse rate.

When the S was brought to the laboratory, rapport was established with his/her consented/informed. General information regarding the name, age, educational qualification, place of work, address, etc. was sought. Effort was made to make her/him feel comfortable and relaxed with the atmosphere in the laboratory. Then, a general set of instructions was given to S. "You are welcome to this psychology laboratory. I am thankful to you on being agreed to participate in a very interesting session where you will be required to fill out a number of forms and to do some tasks. The questions in the forms are related to the aspects of your personality and temperament. Please try to answer as honestly and sincerely as you can because the success of this study depends upon your co-operation. You can rest assured that your answers will be kept fully confidential and used for research purpose only. Along with this, you will also be measured for a few psychological, psycho-physiological, experimental and physical measures like BP, Pulse Rate, span of attention, etc. Before measurement, you will be given information about the apparatus and some instructions. Detailed
instructions about the filling out of each form and about the apparatus will be provided as we go along. If you have not followed anything, please don’t hesitate to ask. Each task is different from another. So you won’t get bored, rather you will enjoy doing these tasks. I once again assure you the safety on all equipments.”

Procedure:

Materials, procedure and scoring for each measure have been described, separately. A description of the measures used and procedure followed is as follows:

1. **16 PERSONALITY FACTOR:**

   The Sixteen-personality factor questionnaire (16 PF) is an objective scorable test devised by basic research in psychology to give the most complete coverage of personality possible in a brief time. The 16 PF questionnaire was developed by Cattell, Eber and Tatsuka (1970) and published by the Institute for Personality and Ability Testing (IPAT). Nearly ten years of empirical, factor analytic research preceded the first commercial publication of the test in 1949. The test was designed for use with individuals aged sixteen and above. The test measures 16 personality factors: 1. Reserved vs. outgoing; 2. Less intelligent vs. more intelligent; 3. Emotionally unstable vs. emotionally stable; 4. Humble vs. assertive;

Procedure:

16 PF was administered on the subject as per instructions from the cover page of questionnaire. Filled questionnaire was taken back.

Response Scaling:

Scoring was done according to the rules given in manual. Raw scores and sten scores were calculated. Sten scores were converted into the second order factors and these were treated as the final scores. Finally, four second ordered standard (sten) scores were obtained: 1. Introverted vs. extroverted, 2. Low anxiety vs. high anxiety, 3. Tender
minded emotionality vs. tough poise 4, and Subduedness vs. independence.

2. **CULTURE FAIR INTELLIGENCE TEST:**

The Culture -Fair Intelligence Test was also developed by R.B. Cattell (1973) and published by the Institute for Personality and Ability Testing (IPAT). It is a paper and pencil non-verbal test. This test is available at three levels: Scale 1 for age 4 to 8 years and mentally retarded adults, Scale 2 for age 8 to 13 years and average adults; and Scale 3 for Grades 10 to 16 and superior adults. Each scale has been prepared in two parallel forms A and B.

**Procedure:**

Scale 3, Form A was given to the subjects to fill. This form consisted of four subtests. There were 50 items i.e. 13, 14, 13 and 10, respectively, in four subtests to be completed in 12½ mins. It is a speed cum power test. Instructions were given for each sub test as mentioned in the manual.

**Response Scaling:**

Scoring was done with the help of scoring key stencils. Raw scores for each subject were obtained. Raw scores were used as final scores to indicate general intelligence (g) of the subject.
3. **PGI MEMORY SCALE:**

   Dwarka Parshad and N.N. Wig constructed PGI memory scale in 1994. It contains 10 subtests: I. Remote memory, II. Recent memory, III. Mental balance, IV. Attention, concentration, V. Delayed recall, VI. Immediate recall (Sequential reproduction of sentences), VII. Retention for similar pairs, VIII. Retention for dissimilar pairs, IX. Visual retention and X. Recognition.

   PGI memory scale (PGIMS) was found to have a correlation of .71 with Boston Memory scale and .85 with Wechsler memory scale.

**Procedure:**

   PGI memory scale was administered on each of the subject. Instructions were given on the questionnaire. Responses of the subject were noted down by the examiner for each sub-tests. Approximately half an hour was spent in the completion of the test.

**Response Scaling:**

   Scoring was done with the help of the manual of PGIMS composite score was used in the analysis.

4. **SPAN OF ATTENTION:**

   Span of attention means how large an amount of certain sort of materials can be grasped in one view and be errorless announced. In other
words, how large a number of items like dots, beads, digits, etc. can be perceived in a single quick glance and be reported flawlessly (Kothurkar and Venarase, 1986).

**Setting and Apparatus:**

A falling door tachistoscope was used for the measurement of span of attention. Tachistoscope is an apparatus having a window in its middle portion that is called screen. The window is covered by an aluminum plate, which is connected with the lever. When the lever is pressed, the screen opens for 1/10 Sec or 100ms. In that short period the subject read the number of dots and tells the same. Nine cards with black dots (ranging from 3 to 11) were used. The dots were of equal diameter (0.7cm) and symmetrical. The dots were made with black ink on white background. The size of the cards was 12 x 8 cm. S was provided a chair and the apparatus was placed on a stool in front of the subject so that the subject easily saw the dots in the window.

**Procedure**

To determine the span of attention, the subject sat in an isolated chamber and was shown cards with dots (ranging from 3 to 11) through the tachistoscope window. The subject was instructed as, “You will be shown some cards with dots on the tachistoscope window for a fraction of
second. You have to speak out the number of dots seen". Before the actual starting of the experiment, to make the subject familiar with the system, two demonstration trials were given to the subject. Each card was exposed to clear foveal vision for 1/10 Sec. The inter trial interval was 10 to 12 sec. A set of 9 cards (90 Presentation, 10 of each card alternating randomly) was presented. The responses of the subject were recorded for each trial in terms of number of dots the subject had spoken.

**Response Scaling:**

Response of the subjects were scored in terms of the dots reported by the subject against the actual number. For example, a subject who had reported at least 8 correct response out of 10 trials till 6 dots was awarded a score of six. Thus 100% correct response was added with fractionated performance. On the next higher level (7 dots) i.e. did he had reported four times correct responses, was awarded bonus point i.e. 0.28. So, the total span of that subject became 6.28.

**5. TAPPING/Manual Motoric Activity:**

Tapping activity was used for measuring motor performance by the hand (index finger of preferred hand) of the subject.
Settings and Apparatus:

Moraj Tapping Tester (type 6001) was used. Dimensions of the apparatus were 28 cms x 30 cms x 20.5 cm. It had a provision of variable time setting, digital display and automatic counter.

For operating the instrument, the main lead was plugged to a 220/230 volt A.C. 50 HZ power source and switched ‘ON’ the power switch. Time duration was selected as 5 min. from the time knob. The reset switch brings back the counter to zero. The apparatus was positioned in such a manner that the S was not able to see the display.

Procedure:

For recording purpose, the instrument was set as described above. Then the S was instructed as follows: “You are to sit in a comfortable position. You will have to press the key with the index finger of your preferred hand continuously and speedily as you can for 5 minutes”. Then the recording was started. Every 10th second, the output in terms of number of taps was recorded. After 5 minutes the instrument was switched off by pressing the ON/OFF switch.

Response Scaling:

Thirty readings were obtained for each subject. Mean and SD of these thirty readings were computed and those were treated as final raw scores.
High output reveals the activity and expresses underlying strength whereas, low standard deviation as an indicative of endurance, low fluctuation and stability. High mean and low SD indicate *Kaphic* predominance, whereas high mean and high SD may be indicative of *pitta dosha* predominance.

6. REACTION TIME:

The time elapsing between presentation of stimulus (of any quality/modality) and the required response (often release or pressing of key by finger) in a prepared set of state (instructed, warned and motivated) is often called reaction time. Though various paradigms are used, a single red beam of light (Visual Stimulus), in simple reaction time (SRT). When the required response is made contingent to one of the available laboratory array of stimuli, it is called complex reaction time (CRT)

**Setting and Apparatus:**

Electronic chronoscope was used for measuring simple & complex reaction time. The instrument displays of segments LEDs 4 or 6 or 8 digits and resolution is .0001 or .001 or .01 seconds. Accuracy of chronoscope is ± 1 digit. It has two stimuli i.e. audio and visual. In audio stimulus there is a continuous sound on speaker and in visual stimulus there is sooting yellow light, sooting red, yellow and green lights in RTM
The dimensions of the apparatus are 390 x 285 x 90 (H) mm. There is a provision of foot switches in RT series models. S was provided a chair and the apparatus was placed on the stool in front of the subject so that he/she can operate it easily. S was required to respond to either red or green light by pressing the response key, which was activated by stimulus on set.

**Procedure:**

First of all simple reaction time (SRT) was assessed with the help of electronic chronoscope. The subject was instructed to press button (RL₁) whenever red light appeared. With a starting of the experiment, the subject was familiarized with the instrument and three practice trials were taken. Time taken on these trials was not noted down. Very low or very high reaction time were rejected. 40 readings were recorded. Catch trials were also given i.e. no stimulus was presented after the warning signal in between. After a gap of 5 minutes, complex reaction time (CRT) was also assessed with the help of the same apparatus. The subject was instructed to press RL₁ and RL₂ button whenever red and green light appeared respectively. Before starting the actual procedure, the first three trials were taken as practice trials. Performance on these trials were not noted down. A total of 60 readings were taken.
Response Scaling:

For each subject, 40 readings and 60 readings (milli seconds) were obtained. Mean and SD of the simple & complex reaction time were calculated for each subject and these were treated as final scores. Quickness of response is indicative of *vatta dosh* predominance.

7. WALK TEST: Speed of walking or motoric output of the body in usual terms.

**Setting:** - A distance of 115.2m was fixed on the floor of the corridor. The floor of the corridor was smooth. The initial and terminal points for the walk test were marked on the smooth floor.

**Procedure:**

The walk test was taken as a measure of tempo as a component of activity by Buss (1995). Subject was asked to cover a fixed distance (115.2m) with self-paced walk. Single reading in terms of time taken was recorded.

**Response Scaling:**

Walk time was taken as a final score. Higher the speed (m/s) of the subject less will be the time and higher the tempo. It is considered to be the indicative of *vata dosha*. 
8. **LOUD READING TASK: A TEST OF READING SPEED AND LOUDNESS OF VOICE.**

**Setting and apparatus:**

Simple audio tape recorder (Philips) was used for the purpose of recording with inbuilt microphone and later to measure the loudness of the voice. It was fixed in such a way so that the position of the subject is in front of the microphone and there remains a minimum noise in the channel. Although the laboratory oratory was not completely noise proof, the background noises were eliminated by the dB analyzer.

**Procedure:**

After the required setting of the apparatus, the subject was thus instructed to relax and sit comfortably. The subject was asked to read a paragraph (Appendix-I) for $2 \frac{1}{2}$ min in his/her usual/normal voice. The reading material was printed in Hindi. It had sufficient number of lines to read in specific time. After that the cassette was inserted in the record player. When the subject started reading, the stopwatch was started and the record player was switched ON. When the $2 \frac{1}{2}$ mins. were over, the subject was directed to stop the reading and the record player was also switched OFF. The written material was taken back.

**Response Scaling:**
The total number of lines read in a fix duration by the subject was taken as score of reading speed. dB apparatus measured the loudness of the recorded voice analyzed at AIR station, Rohtak. Total lines and dB were treated as a final scores. Reading speed may be indicative of vatta, whereas the amplitude of voice is an index of kapha dosha.

9. ELECTROMYOGRAPHY (EMG): MUSCLE TONE

At any given time, a few fibers in each resting muscle are likely to be contracting, thus maintaining the overall tone (tension) of the muscle. Movement results when a large number of fibers contract at the same time. This apparatus is used for measuring voluntary, semi-voluntary or involuntary muscle activity. EMG displays LCD Meter microvolt under the electrodes and power is 220 V, AC, 50 HZ.

Setting of the apparatus:

EMG Biofeedback “Biotrainer” MBF – was used. This is an electronic device standardized by ‘Medicaid Systems, Chandigarh’. For operating the instrument, the main lead was plugged in. Volume; balance and level control were kept at minimum position and feedback gain control was kept at maximum position. Electrode lead plugs were inserted in the electrode sockets. After hydrating the three electrodes with jelly, they were placed on the forehead muscle (frontalis) of the S. They were
kept in position by a Valcro tape band. The instrument was switched on from ON-OFF switch. From the sensitivity selector, the sensitivity was maintained at 200 µV. The instrument was positioned in such a manner that the subject was not able to see the ongoing display. The parameter for instrument sensitivity were set during pilot sessions.

**Procedure:**

For recording purpose, the instrument was set as described above. Then the subject was instructed as follows: “You have to sit in a comfortable and relaxed position. Electrode will be placed on your forehead muscles. Don’t feel tense in any other way as this will affect the recording adversely. Just sit quietly and relax completely.” Then the recording was started. In total, 60 readings were taken with an inter reading interval of about ten second (monitored by clock). After that the instrument was switched off, electrodes were removed and cleared with cotton. Thus, after the calibration of the instrument, 10 minutes recording with fixed interval schedule technique was done.

**Response Scaling:**

For each subject 60 readings of ongoing muscle tone amplitudes (micro volts) were obtained. Mean and standard deviation of these readings were computed and these were treated as final scores. High
muscle tone indicates bodily arousal and a state of preparedness, thus *pitta* predominance and even *kapha* predominance.

**10. SKIN CONDUCTANCE:**

Emotional thoughts and experiences are associated with increases in the ability of the skin to conduct electricity. The physiological basis of skin conductance is not fully understood, but there is considerable evidence implicating the sweat glands. These glands tend to become active in emotional situations, causing a fall in the electrical resistance of skin that begins from 1.5 to 4.00 seconds after the stimulus event. However, on going skin conductance level reflects general sympathetic arousal since sweat glands are innervated by sympathetic nervous system.

**Setting and Apparatus:**

For the measurement of skin, PHILIPS multimeter PP9086 was used. It is a compact, handheld 4 ½ digit multimeter for measuring resistance among other thing. The silver electrodes were attached to the right hand with electrode jelly and securing them with black belt to record the skin resistance. Then the black test lead was connected to the COM terminal and the red test lead to the Ω terminal. The function switch was set at 200 K Ω. The parameters were standardized in pre-testing sessions for size, placement, location and type of electrode.
Procedure:

After setting the apparatus as per requirement, the subject was instructed. "Sit comfortably and calmly and not to make any movement of the left hand (on which the electrodes were placed after due pasting of electrode jelly). Except this you have to do nothing." Then the instrument was switched on by pushing the ON-OFF switch to ON position. It takes a few seconds for the readings to get stabilized. Once it had stabilized, recording was begun, 60 readings were taken with an inter-reading interval of 10 seconds (fixed interval schedule).

Response Scaling:

A total of 60 readings for skin resistance (R) in kilo ohms (KΩ) were obtained for each S. The consensus among investigators in this area is that it is better to express the skin resistance (R) in terms of skin conductance; where $C = \frac{1}{R}$ rather than the resistance itself. Mean and SD of 60 readings of conductance were computed which were and treated as final score. Since skin conductance level (SCL) is an expression of sympathetic arousal, it was taken as a measure of pitta dosha.
11. SPHYGMOMANOMETER (BLOOD PRESSURE):

Measuring arterial blood pressure involves two independent measurements, a measurement of the peak pressure during the period of heart contraction, the systoles, and a measurement of minimum pressure during the periods of relaxation, the diastoles. Blood pressure is usually expressed as a ratio of systolic over diastolic blood pressure in millimeters of mercury (mmHg). The normal resting pressure for an adult is about 120/80 mm Hg. (1.5: 1 S/D).

Setting and Apparatus:

The apparatus was placed on the table; the cuff air tube was connected with the apparatus. The stethoscope was also placed with the sphygmomanometer.

Procedure:

The recording of blood pressure was not continuous but time sampled. Before beginning of the recordings, following instructions were given to the S. “Sit comfortably and calmly. Breath deeply 5-6 times, relax your shoulders, arms and entire body. Stretch the left hand on which I will put the cuff with the level of your heart, while gently supporting the left hand with the right hand. Don’t make any movement as this could be a cause of error in measurement”. After that the cuff was strapped just
above the left hand of the subject. Care was taken to keep the cuff on bare skin and it was also kept in mind that the arm was not tight so as not to exert any kind of undue pressure. Once the preparation was completed, the measurement was begun. Then, the instrument was switched on, the pressure was increased in the band by pressing the inflation bulb until the air pressure was increased so that the mercury reached at 180 mmHg. As the mercury reached 180 mmHg the air pressure from the band was released gradually and the pulse tone beats were monitored with the help of stethoscope. When the pulse tone beats were heard the systolic pressure was recorded and diastolic pressure was recorded at the point where pulse beats could not be heard any longer.

**Response Scaling:**

Each subject yielded one reading of systolic and diastolic blood pressure. This reading was taken further for analysis. High blood pressure is also taken as an index of bodily/sympathetic arousal (metabolism), hence, a typical characteristics of *pitta dosha*.

12. **PULSE RATE:**

One of the defense reactions (cardiovascular component) of the body consists of increased heart rate. Whereas the normal pulse rate of an adult is 72 beats/min.
Setting and Apparatus:

The recording of pulse rate was done continuously through the pulse monitor. It is a digital display instrument in which the ongoing pulse rate in beats/min. is continuously displayed. It consists of a thermo sensitive cell, which is attached to the finger of the subject. The apparatus was positioned in such a way that the Ss were not able to read the ongoing display.

Procedure:

After the required setting of the apparatus the Ss were thus instructed. "Relax and sit comfortably. This Velcro band will be tied to your finger on the left hand. Then you are supposed to sit quietly, without talking while readings are taken." Then the thermo active electrode was attached to the first finger of the left hand. The instrument was switched on by pressing the ON/OFF switch. The instrument started displaying the ongoing pulse. Once the reading had stabilized, recording was begun. A total of 60 readings with fixed interval schedule were taken with a time gap of 10 Sec. between each reading. After that the instrument was switched off and sensor was removed from the S’s finger. Data on this were obtained only on 100 Ss owing to certain technical snag with the apparatus.
Response Scaling:

Sixty pulse readings were noted down for each subject. Mean and standard deviation were computed from these readings. These were taken as the final scores for each subject. High pulse rate also indicates sympathetic arousal and therefore, *pitta dosha* predominance.

13. **BODY MASS INDEX: A MEASURE OF PHYSIQUE.**

Height and weight of the subject was taken for the purpose of BMI. Standard metric scale and weighing machine were used. The index was scaled as popularly and accepted notion (Levinthal, 1996) High BMI is indicative of *kapha dosha* whereas, low of it loads on *vatta*.

\[ \text{BMI} = \frac{\text{Weight (Kg)}}{(\text{Height}) \, \text{M}^2} \]

Ratio of weight in kg divided by the square of the height in meter.

14. **GENERAL HEALTH QUESTIONNAIRE (GHQ-12):**

For measuring general health of the subjects GHQ-12 (Goldberg & Hillier, 1979) was used. Mohal (1991) has prepared the Hindi version of this questionnaire. This is a self-administered screening test designed for detecting non-psychotic psychiatric disorders (Goldberg, 1972, 1978). It is concerned with two major phenomena: the inability to carry out one’s normal healthy functions and the appearance of new phenomena of distressing nature. GHQ-12 has been described (Goldberg & Hillier,
Methodology

1979) as a set of questions, which forms a ‘lowest common multiple’ of symptoms that will be encountered in various differentiated syndromes of mental disorders. The questionnaire contains 12 statements with four alternative responses. The reliability and validity of GHQ-12 are well established (Banks, Clegg, Jackson, Kemp, Stafford & Wal, 1980, Goldberg & Hillier, 1979 & Goldberg, 1972). Moreover, Banks et al (1980) have also demonstrated the psychometric properties of GHQ-12 in work and occupational set-ups.

Hindi version of GHQ-12 was used. Subject was provided the questionnaire (Appendix) to fill up and was asked to answer freely without any pressure. Instructions were given on the questionnaire. Filled questionnaire was taken back.

Response Scaling:

12 Statements were to be rated on a four-point scale with scoring weight 0 to 3, higher scores indicated increased level of psychological distress and poor mental health.

15. Temperature (Skin)

Setting and Apparatus: Digital temperature monitor was used for measuring the skin temperature of the subject. It was Medicaid system. It
had a provision of digital display. It consists of a thermosensitive cell, which is attached to the arm of the subject.

**Procedure:** After the required setting of the apparatus, the Ss was thus instructed, “Relax and sit comfortably. This sensor will be put on your right hand. You are supposed to sit quietly without making any movement while readings are taken”. When the sensor was attached to the right arm of the subject. The instrument was switched ON by pressing ON/OFF switch. The instrument started displaying the temperature. Once the reading had stabilized single reading was noted down in between the testing session.

**Response Scaling:** Single reading in ‘Celsius’ was noted down for each subject. This was taken as a final score for all subject. High temperature is the indicative of *pitta dosha* predominance.

**Analysis**

First of all obtained scores (Appendix II) were run for the testing of assumptions for multivariate analysis. It was found that the shape of the distribution of measures was non-normal, therefore, the monotonic transformation in terms of T-scaling was done. Certain statistics for description of data e.g. $\bar{X}$, $\sigma$, Sk, Ku intercorrelations etc. were also done with the aid of computerized programme (Appendix III). Finally, the scores were subjected to Principal Component Factor Analysis and cluster analysis through SPSS Package.
Table 3.1: Hypothetical *Dosha* Loading of Various Measures

<table>
<thead>
<tr>
<th>Variable</th>
<th>Measure</th>
<th>Dosha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Activity</td>
<td>Mean Finger tapping per unit of time</td>
<td>Vatta</td>
</tr>
<tr>
<td>Variability in physical activity (trial to trial)</td>
<td>SD of Finger Tapping</td>
<td>Kapha when low variability, pitta when high SD variability</td>
</tr>
<tr>
<td>Chronometric activity</td>
<td>Mean simple reaction time</td>
<td><em>When small RT Vatta</em></td>
</tr>
<tr>
<td>Variability in chronometric activity</td>
<td>SD of simple reaction time</td>
<td>Vatta,</td>
</tr>
<tr>
<td>Chronometric Activity</td>
<td>Mean complex reaction time</td>
<td>Vatta, pitta (chronometric functions of intelligence)</td>
</tr>
<tr>
<td>Variability in chronometric activity</td>
<td>SD of complex reaction time</td>
<td>Vatta</td>
</tr>
<tr>
<td>Muscle tone</td>
<td>Mean electromyography</td>
<td>Pitta, kapha</td>
</tr>
<tr>
<td>Variability in muscle tone</td>
<td>SD of electromyography</td>
<td>High of pitta and low of kapha</td>
</tr>
<tr>
<td>Skin conductance level</td>
<td>Mean skin conductance level</td>
<td>Pitta (high SCL)</td>
</tr>
<tr>
<td>Variability in skin conductance level</td>
<td>SD of skin conductance level</td>
<td><em>When high pitta, low SD – kapha</em></td>
</tr>
<tr>
<td>Memory</td>
<td>PGI memory scale</td>
<td>Vatta/pitta (memory as a factor of intelligence)</td>
</tr>
<tr>
<td>Intelligence (g)</td>
<td>Culture Fair Intelligence Test Scale 3 (Form A) raw score</td>
<td>Pitta</td>
</tr>
<tr>
<td>Attention</td>
<td>Span</td>
<td>Pitta</td>
</tr>
<tr>
<td>Personality</td>
<td>Cattell's 2nd order factors</td>
<td>Vatta</td>
</tr>
<tr>
<td>i) Introversion/Extroversion</td>
<td></td>
<td>Vatta</td>
</tr>
<tr>
<td>ii) Anxiety (low/high)</td>
<td></td>
<td>Vatta</td>
</tr>
<tr>
<td>iii) Tender minded Emotionality / Tough poise</td>
<td></td>
<td>Pitta</td>
</tr>
<tr>
<td>iv) Subduedness / Independence</td>
<td></td>
<td>Vatta</td>
</tr>
<tr>
<td>Speed (Walking)</td>
<td>Self paced walk-time</td>
<td>Pitta</td>
</tr>
<tr>
<td>Body Mass Index</td>
<td>Physical (Kg/m²)</td>
<td>Kapha, pitta when moderate BMI, Vatta when low BMI</td>
</tr>
<tr>
<td>Health Psychological Distress</td>
<td>GHQ-12</td>
<td>Kapha, Vatta when low GHQ</td>
</tr>
<tr>
<td>Systolic Blood Pressure</td>
<td>Sphygmomanometer meter Hg/mm</td>
<td>Pitta</td>
</tr>
<tr>
<td>Diastolic Blood Pressure</td>
<td>Sphygmomanometer meter Hg/mm</td>
<td>Pitta</td>
</tr>
<tr>
<td>Reading Speed</td>
<td>Reading-number of lines</td>
<td><em>Vatta when high reading output</em></td>
</tr>
<tr>
<td>Loudness of voice</td>
<td>dB</td>
<td>Kapha when loud voice / vatta when low dB</td>
</tr>
<tr>
<td>Skin temperature</td>
<td>Temperature °C</td>
<td><em>Pitta when high and vatta when low temperature</em></td>
</tr>
</tbody>
</table>
Further analysis was done by rotating the data with varimax rotation (Michael, 1994). Profile description was done between the clusters. Profile comparisons by ‘t’-test were done between the clusters (Michael, 1994). Between sex comparisons within clusters were also done by t-test (Garrett, 1981).