

DEVELOPMENT AND INITIAL STANDARDIZATION OF KASHYAPA PSYCHOPHYSIOLOGICAL STATE INVENTORY

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ABSTRACT

Among the fundamental concepts of Ayurveda, are the ‘three *doshas*’, systems concepts controlling major systems functions at every level of organism organization. Ayurveda maintains that health corresponds to balance in *dosha* functioning. Every organism has a natural state, where one or more *doshas* are in dominance. Disease develops as *doshas* depart from balance in successive stages. Determining the *Prakriti*, natural state of *doshas*, and their imbalanced states, *Vikriti*, is central to diagnosis and treatment in Ayurveda. Here we present an inventory for adolescents to assess states of *Tridosha*, which are neither exactly *Prakriti*, nor *Vikriti*. It aims to assess participants’ present state of mind, interpreting that as states of *tridosha*, because *doshas* influence the mind, and, in turn, are reflected in states of mind. The Inventory was developed as follows. Items from classical Ayurveda texts were selected to assess appropriate properties of each *dosha*, in accordance with the above aim of the inventory. The first draft of the inventory was sent to ten Ayurveda experts for a Delphi round of consultation. After reducing questions, the final draft contained six items. The Inventory was then administered to 450 students aged 13-18 at the Vivekananda Education Centre in Jayanagar, Bengaluru. Data analysis used SPSS-10.0. Analysis of consistency and reliability found the following Cronbach’s alpha for each *dosha*: *Vata* 0.806; *Pitta* 0.825; *Kapha* 0.768. Correlations between *dosha* pairs were: *Vata* / *Pitta* negative; *Pitta* / *Kapha* negative; *Kapha* / *Vata* negative. The small number of questions precluded factor analysis; similarly, for Split-Half analysis of consistency. Comparison with the State Trait Anxiety Inventory shows that criterion validity cannot be obtained either. Nor is Inter-rater reliability-consistency appropriate for a self-report questionnaire. We suggest that, nevertheless, the Kashyapa Psychophysiological State Inventory is consistent and reliable, and that it can assess mood-states.

Keywords: Inventory; *Tridosha*; *Prakriti*; *Vata*; *Pitta*; *Kapha*

INTRODUCTION

India boasts many traditional health sciences that have been found relevant to solving problems created by modern civilization such as the plague of chronic diseases^[1] that are now the scourges of our times.^[2] Among the traditional sciences, Ayurveda^[3] and Yoga^[4] stand out as having extraordinarily profound and well-developed knowledge to offer that can help solve the problem^[5,6], improving both health^[7,8] and the quality of life.^[9,10] Their evidence basis makes them leading practices in the Indian government's Department of AYUSH (<http://ayush.gov.in>).^[11] Yoga in particular has been adopted for spreading its benefits to other countries in the world via the International Day of Yoga (<http://yoga.ayush.gov.in/> See also <https://peacekeeping.un.org/en/Indian-peacekeepers-organize-group-yoga-session>.)

Ayurveda, India's traditional Vedic system of medicine, dating back some 5,000 years or more^[12], is of importance to treating otherwise incurable non-communicable diseases (NCDs). So much so, that its wide adoption is being promoted internationally. To enable other countries to adopt Ayurveda and reap its benefits, its fundamental concepts, Ayurveda Padartha Vigyana, need placing on well-established scientific basis^[13], by explaining how they fit into modern concepts of biology, such as Systems Biology^[14] and Complexity Biology.^[15] This paper reports the development of an inventory aiming to assess states of *Tridosha* in the physiology and associated psychological states in adolescents as understood by Ayurveda.

Among the fundamental concepts of Ayurveda are the 'three *doshas*'^[3,14], systems concepts controlling major systems functions^[14] at every level of organization of any organism. More precisely SushrutaSamhita defines: *Vata* is movement, *Pitta* gives warmth, *Kapha* provides binding.^[16] Ayurveda maintains that health corresponds to balance in the functioning of *doshas*.^[17] The natural state is known as the '*Prakriti*': either one or more *doshas* are in dominance, or more rarely all three are in balance.^[17] Disease develops as *doshas* depart from their natural state of balance.^[18] Determining the state of *doshas*, the *Prakriti*, and details of their

imbalanced states, *Vikriti* (also known as *Dosha Avastha*^[19]), is central to diagnosis and treatment in Ayurveda.

In Ayurveda, *Vikriti*^[20] may be defined as imbalances leading to pathology, primarily of *doshas*, systems control functions, but also of tissues, *Dhatu Dushya*, and waste products, *Malas*. Imbalances develop in six successive stages known as *Shadkriyakala*.^[21] Here we present an inventory designed to assess states of *Doshas* in adolescents. The inventory adopts a unique approach: it is not directly concerned with states of the physiology. Rather, it is designed to identify states of situational variations in emotions, which can then convey the state of *Tridosha*.

The reasoning behind this can be traced to medical statements in Yoga Vasishtha.^[22] Yoga medicine^[23] regards fluctuations of mind as the cause, '*Adhi*', of disease, '*Vyadhi*'. Each '*Adhi*' thus has a corresponding *dosha* imbalance. By determining fluctuations in a person's mental state, their '*Adhis*', inferences can be made about their *dosha* imbalances, '*Vyadhis*'. Such fluctuations, though temporary, can have long-lasting implications. Yoga medicine translates this idea into the language of the *Panchakoshas*.^[24] Mental fluctuations in *Manomayakosha* lead to imbalances in the body of subtle energy, the *Pranamayakosha*, and thus to susceptibility to disease in the physical body, the *Annamayakosha*^[22,23], i.e. imbalances in *doshas*. This inventory's aim is to assess participants' current mental state, which is interpreted using the above reasoning, in terms of states of the three *doshas*.

Previous studies have developed various kinds of questionnaire for measurement of *Prakriti* and *Vikriti*. Among the first, was one developed at CDAC, the famous computing laboratory at University of Pune. (https://www.cdac.in/index.aspx?id=hi_dss_prakriti_vichaya) That included hundreds of questions to be answered on computer. Though comprehensive, it was found too unwieldy to be of practical value to G.P.'s and Ayurvedic doctors, Vaidyas. Others were conceived.^[25] One such inventory to measure *Prakriti*, the Sushruta Prakriti Inventory (SPI), was developed by Ramakrishna^[26]. But *Prakriti* is inclusive of

physical, physiological, psychological, intellectual and spiritual characteristics. Using this kind of understanding, Shilpa developed a similar inventory^[27] to assess psychological aspects associated with a person's *Pra-kriti*. Patil has developed a questionnaire to assess *Pra-kriti* in children aged 6-12 years^[28], younger than those aimed for in this study. Since adolescents require a different approach, this new questionnaire was formulated.

Since pediatrics in Ayurveda is comprehensively described in Kashyapa Samhita^[29], the name proposed for the questionnaire described here is Kashyapa Psycho-physiological State Inventory, KPSI. The 20 items initially comprising the inventory were reduced to six during development as described in the next two sections. The KPSI is designed to assess states of a person's *Tridosha*.

Study Rationale: Previous attempts to determine *Pra-kriti* of patients have focused on adults, and developed questionnaires for them. However, questions in such questionnaires may not be appropriate for non-adults. In recognition of this, Suchitra Patil developed a questionnaire for children aged 6-12.^[28] But the questions in that questionnaire may not be ideal for adolescents. This study therefore developed a questionnaire specifically for that age group.

What is here being attempted is analogous to the highly respected State-Trait Anxiety Test, STAI. Anxiety states can, when extreme, develop into Anxiety Neurosis, causing a person to score highly on the Subscale of the Big Five Personality Inventory known as Emotionality, originally called 'Neuroticism'. That name, being potentially pejorative, was changed. Here, by measuring fluctuating states in the psychology, we identify potential fluctuations in the physiology characterizing particular states of *Tridosha*. Such states obviously exist, if only as responses to biorhythms, diurnal, menstrual, seasonal, and annual biorhythms etc., all of which are recognized by Ayurveda. In fact, failure to take such fluctuating states into account is recognized by Ayurveda to lead to disease states at times of change^[30], Ayurveda intrinsically recognizes their relevance to health care and wellbeing.

2. METHODS

2.1 The study was conducted at the Vivekananda Education Centre, and M.E.S. College, Bangalore. Its aim was to yield a descriptive analysis the state of subjects' *doshas*. As background, the properties of *Vata*, *Pitta* and *Kapha* imbalances were studied in Ayurveda's main texts, CharakaSamhita^[31], SushrutaSamhita^[32], and Vagbhata's Ashtanga Hridaya^[33] and Ashtanga Sangraha^[34], and the Madhavanidhana^[35]; Sharangadhara Samhita^[36]; Yogaratnakara^[37], and Harita Samhita.^[38] All kinds of lakshanas, symptoms, were listed, with repetitions omitted. Twenty items seeming most apposite were selected from the list, and carefully translated into English (this will be discussed in detail in later work).

The list was then sent for refining to a set of five modern psychologists (Table1a), and ten Ayurveda experts Table1. The Ayurveda experts all had MDs and post graduate degrees in Kayachikitsa, MoolaSiddhanta, or Kaumaramrtya depts. with over a decade of teaching and research experience. Experts' opinions resulted in elimination of 14 items, reducing the list to six items supported by all. It was agreed that only having two items for each *dosha* would appropriately simplify the scale and make it more similar to a psychological scale. The six items fell in three pairs, each pair for one *dosha*: 1 & 2 for *Vata*, 3 & 4 for *Pitta*, 5 & 6 for *Kapha*. (Table 2)

As shown, each item has a five-point Likert Scale, with values indicating degree of agreement:

1. Not at all;
2. A little;
3. Moderately;
4. Mostly;
- and 5. Completely.

The right-hand column labeled '*Dosha* Clarification' is not part of the Inventory. It is included to make the concern of each question clear to the reader. The inventory was first tested for comprehensibility in a Pilot Study. Fifty adolescent students took the test and gave feedback on ease of understanding so that quantitative difficulty of items (answerability) could be assessed. They found no difficulty. The scale with the Item validity is seen in Table2.

Study Participants: Selected by purposive sampling, participants were residents of Jayanagar 4th Block in South Bangalore or Maleshwaram 13th Cross area in

North-West Bangalore. Those in Jayanagar were 7th-10th grade students at Vivekananda Education Centre; those in Maleshwaram students were 11th & 12th grades, studying at M.E.S. Pre-University College. See Table 4.

Inclusion Criteria: both genders; aged 13 to 18 years old; either residents of Jayanagar or residents of Maleshwaram; healthy.

Exclusion Criteria (by Teachers' opinion): mentally or physically challenged. Not understanding English.

Data Acquisition: After consent from school / college management and parents had been obtained, the inventory was administered to the 485 adolescents at the educational institutions named above, in July, 2014 in Jayanagar, and July-August, 2014, for Maleshwaram.

Data Analysis: Used the IBM Statistical Package for Social Sciences, SPSS, version 10.

Content Validity: had been performed through the expert consultation described above.

RESULTS

Demographic data of the two groups is presented in Table 4.

When the inventory questions in Table 3 were marked, 35 were found to have problems, such as not answering one of the six questions, or circling two possible responses.

Reliability statistics with these problems allowed for are presented in Table 5. Cronbach's Alpha for *Vata-Dosha*, was 0.806; for *Pitta Dosha*, it was 0.825; and for *KaphaDosha*, 0.768.

Mutual Correlations are presented in Table 6. Results for all *dosha* pairs were negatively correlated, significant at the $p < 0.01$ level (2-tailed).

DISCUSSION

The Questionnaire presented here is new in two ways: it is the first for the age-group concerned; second, it is the first to try and simplify the measurement of *Tridosha*, by making use of Ayurveda's stated connections between mind and body. It thus assumes that *dosha* states influence the mind, so that physiological states are reflected in the state of mind. But, precisely speaking, what the mind reflects is neither *Prakriti*, nor *Vikriti*. In order to assess *Prakriti*, the original state of

Tridosha in health, many questions are needed: on physical, physiological, and mental levels, as in the Trait paper (e.g. 84 questions). In contrast, *Vikriti* is a different, pathological concept, allowing diagnosis of disease conditions by assessing each *dosha's* *Vridhhi*, *Kshaya*, and *Sthana*, etc., i.e. its progressive imbalance within the stages structuring *Shadkriyakala*. In this paper, the inventory aims to assess the present 'State of each *Dosha*', in a sense that is neither exactly its *Prakriti*, nor its *Vikriti*.

Cronbach's alpha analysis of the test, Table 5, found the Kashyapa Psychophysiological State Inventory (KPSI) both consistent and reliable. As regards content validity, the consultations with Ayurveda experts and psychologists established that the questions are appropriate.

Table 3 shows that all items in the KPSI describe emotional states or tendencies. These had been selected as psychological characteristics of *Dosha* states in the physiology, a unique approach to measuring *Doshas*, a physiological concept, which had not been tried previously. Rather than being directly concerned with states of the physiology, the KPSI approach uses the fact that any Ayurvedic imbalance in the physiology tends to be associated with a related psychological imbalance on the mental plane. Thus, by assessing a person's state, the KPSI obtains indications of which *Doshas* have moved out of balance. It thus infers the state of a person's physiological balance or imbalance from their self-perceived state of psychological imbalance.

The whole point of this inventory is to assess the participant's current state of mind and interpret that state in terms of states of each *dosha*, on the assumption that those *dosha* states influence the mind and are reflected in the state of mind. But what the mind reflects is neither exactly *Prakriti*, nor *Vikriti*. In order to assess *Prakriti*, the original state of *Tridosha* in health, many questions are needed: on physical, physiological, and mental levels, as in the Trait paper (e.g. 84 questions). In contrast, *Vikriti* is a different, pathological concept, allowing diagnosis of disease conditions by assessing each *Dosha's* *Vridhhi*, *Kshaya*, and *Sthana*, etc., i.e. its progressive imbalance within the stages structuring *Shadkriyakala*. In this paper, we attempt to assess the

present 'state of each *dosha*', in a sense that is neither exactly its *Prakriti*, nor its *Vikriti*.

However, the personality characteristics of an individual are not measured by this instrument. It makes no assessment of the Big Five. It only measures mood states in given situations. Also, the six items selected by the experts are mutually exclusive.

Although this paper describes the assessment of Cronbach's α (alpha), test-retest reliability has yet to be performed. That will be reported at a later date.

Strengths: The KPSI is the first Ayurveda inventory to assess mood states. Its Cronbach's alpha values were good, above 0.7, indicating good internal consistency. Also, its ability to assess a person's *Dosha Vikriti* can help a patient's physician to combat such states of imbalance. The KPSI should help diagnosis in adolescent patients suffering from physical or mental problems, e.g. surgical etc. Shilpa and Murthy's related test [27] has even been used to assess clinical anxiety. The inventory can also be used for research, e.g. physicians and researchers can administer the inventory to assess the immediate effect of yoga or other interventions on a subject's state of mind.

Weaknesses: The idea behind this research program lies in S-VYASA's use of the *Panchakosha* model of disease generation, i.e. that problems in the emotional body, the *manomaya kosha* cause problems in the *pranamaya kosha*, and then in the physical body or *annamaya kosh*. While this seems a sufficient basis for administering Yoga therapy programs, it does not encompass every element of Ayurveda's *Shadkriyakala*, which therefore means that the inventory cannot be used for a full physiological assessment of a patient's *dosha* imbalances. Also, Test-Retest Reliability was not performed and should be done at the earliest opportunity.

Future Research: Developing a scale specific to the adolescent age-group was because agitation, unsteadiness, etc. are seen in initial stages of adolescence onset. The inventory could also be used for young adults, but only after validating it on such an adult sample. The scale's usefulness to practicing Ayurveda physicians should also be tested. Its accuracy in diagnosing *Prakriti* should be compared with other modes of

assessment, notably *NadiVigyanaYantra*, which is used accurately and reliably by many of India's top experts in the field. Also, as stated above, the scale's test-retest reliability must be assessed. Criterion Validity on the other hand, suffers from the same weakness as for STAI: it is very difficult to establish for self-assessment tests of any kind, simply because those being assessed are asked questions about themselves. Finally, this research has the potential to be developed into a study of disease susceptibility and strategies of prevention in the age group concerned.

CONCLUSION

The Kashyapa Psychophysiological State Inventory, KPSI, is designed to assess the state of the three *doshas* in adolescents. It has been shown to be a consistent instrument for identification of an individual's *Dosha-Prakriti* and changes in mood-state imbalances.

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Statement of Ethics: Ethical Approval was obtained through the S-VYASA University Vice-Chancellor's Office.

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REFERENCES

1. Davis R.M. Wagner E.H. Groves T. (1999) Managing chronic disease: Presents such challenges that the BMJ is devoting a special issue to it. *BMJ*: 1090-1091.
2. Wagner EH. Chronic disease management: what will it take to improve care for chronic illness?. *Effective clinical practice: ECP*. 1998;1(1):2.
3. Pandey GS (1997). *Charaka Samhita: Hindi commentary*, fifth edition: Sutrasthana Chapter1, verse 58,

- Page:25, Chaukhambha Sanskrit Sansthan Publications, Varanasi.
4. Patanjali M. Yoga Sutras (Shearer A. Trans. The Yoga Sutras of Patanjali.) Crown Publishing, London, 2010.
 5. Hankey A. (2010) Ayurveda and the battle against chronic disease: An opportunity for Ayurveda to go mainstream?. *J AyurvedIntegr Med*;1(1):9.-10
 6. Nagendra H.R. Nagarathna R. (2012) Yoga for common ailments. SVYP, 2012.
 7. Mishra L. Singh BB. Dagenais S. (2001): Healthcare and disease management in Ayurveda. *Altern Ther Health Med*. Mar; 7(2):44-50.
 8. Patil NJ, Venkatarathnamma PN, Ramchandra Rao S. 'Yoga for Lifestyle Diseases': Conference held on 2nd International Day of Yoga-2016 at Kolar, India. *Journal of Ayurveda and integrative medicine*. 2016;7(4):261.
 9. Moadel AB. Shah C. Wylie-Rosett J. Harris MS. Patel SR. Hall CB., et al. Randomized controlled trial of yoga among a multiethnic sample of breast cancer patients: effects on quality of life. *Journal of Clinical Oncology*. 2007 Oct 1;25(28):4387-95.
 10. Lin KY, Hu YT, Chang KJ, Lin HF, Tsao JY. Effects of yoga on psychological health, quality of life, and physical health of patients with cancer: a meta-analysis. *Evidence-Based Complementary and Alternative Medicine*. 2011; 2011.
 11. Rudra S, Kalra A, Kumar A, Joe W. Utilization of alternative systems of medicine as health care services in India: Evidence on AYUSH care from NSS 2014. *PloS one*. 2017 May 4;12(5): e0176916.
 12. Sharma PV. Development of Ayurveda from Antiquity to ad 300. *Science, Philosophy, and Culture: Multi-disciplinary Explorations*. 1997; 2:127.
 13. Hankey A. (2005) The Scientific Value of Ayurveda. *J Altern Complement Med*. 11(2), 221-225.
 14. Hankey A. (2001) Ayurvedic physiology and etiology: Ayurvedo Amritanaam. The doshas and their functioning in terms of contemporary biology and physical chemistry. *J Altern Complement Med*;7(5):567-74.
 15. Hankey A. A new approach to biology and medicine: an expanded role for regulation. *Journal of Scientific Healing Outcomes*. 2015 Jul;7(2):13-8.
 16. Shastry A (2002). Sushruta Samhita: Hindi Commentary, fifteenth edition: Sutrasthana, XXI, v. 4, Page:87, Chaukhambha Sanskrit bhavana Publications, Varanasi.
 17. Joshi RR. (2005). A biostatistical approach to Ayurveda: quantifying the tridosa. *Journal of Alternative and Complementary Medicine*; 11(2):221-225.
 18. Manohar PR, Sorokin O, Chacko J, Nampoothiri V. An exploratory clinical study to determine the utility of heart rate variability analysis in the assessment of dosha imbalance. *Journal of Ayurveda and integrative medicine*. 2018 Apr 1;9(2):126-30.
 19. Shastry K (1997). Charaka Samhita: Hindi commentary, fifth edition: Vimanasthana, Chapter VIII, verse101, Page:664, Chaukhambha Sanskrit Bhavana Publications, Varanasi.
 20. Murthy S. K.R. Ashtanga Hridayam (2007) English translation, fifth edition Sutrasthana Chapter1, verse 20, Page:12, Chaukhambha Krishnadas Academy, Varanasi.
 21. Shastry A (2002). Sushruta Samhita: Hindi Commentary, fifteenth edition: Sutrasthana XXI.18-19, 27, 32-36, Page:63, Chaukhambha Sanskrit Samsthana Publications, Varanasi.
 22. Venkateshananda S (2010). The Supreme Yoga: Yoga Vasishtha, English commentary, ChapterI, Page:1-20, Motilal Banarsidass Publishers Pvt Ltd, Delhi.
 23. Dr. Nagarathna and Dr. Nagendra (2001). Yoga for Promotion of Positive Health, first edition: SVY Publications Bangalore, 2. 18
 24. Taittiriya Upanishad in Radhakrishnan S. The Principal Upanishads. OUP, Oxford, 1953.
 25. Rastogi S. Development and validation of a Prototype Prakriti Analysis Tool (PPAT): Inferences from a pilot study. *Ayu*. 2012 Apr;33(2):209.
 26. Ramakrishna BR. (2014) Development of Sushrutha Prakriti Inventory- SPI, an Ayurveda based personality assessment tool. *J Ayurveda Holistic Med*. 2(8).
 27. Shilpa S. Murthy CV (2011). Understanding personality from ayurvedic perspective for psychological assessment: a case. *Ayu*.Jan;32(1):12-9.
 28. Suchitra SP. (2014) Development and Initial Standardization of Ayurveda child personality inventory. *J Ayurveda Integr Med*. 2014, 5(4):205-208
 29. Tewari P.V. (2002) Kashyapa-Samhita or Vrddhajivakiya Tantra, English Translation and commentary, Chaukhambha Visvabharati, Varanasi.
 30. Murthy S.K.R. (1997) Sharangadhara-Samhita: English commentary, Third edition: Prathama khanda Chapter7, verse 24-25, Page:30, Chaukhambha Orientalia, Varanasi.
 31. Pandey GS (1997). Charaka Samhita: Hindi commentary, fifth edition, Chikitsasthana Chapter30 verse326, Page:766, Chaukhambha Sanskrit Publications, Varanasi.

32. Shastry A (2002). Sushruta Samhita: Hindi Commentary, fifteenth edition: Sutrasthana Chapter XXI verse 3, Page:87, Chaukhambha Samskrita Samsthana Publications, Varanasi.
33. Vaghabhata V (2007). (Trans. Murthy K.R.S.) Ashthanga Hrdayam: English commentary, Fifth edition: Sutrasthana Chapter 1, verse 6, Page:5, Chaukhambha Krishnadas Academy, Varanasi, U.P.
34. Murthy S.K.R(2002). Ashtanga Sangraha: English commentary, Sixth edition: Sutrasthana Chapter 19, verse 14b-15, Page:360, Chaukhambha Orientalia Publications, Varanasi.
35. Murthy S.K.R(2003). Madhava Nidanam: English commentary, fifth edition: Chapter 1, verse 14-20, Page 5, Chaukhambha Orientalia Publications, Varanasi.
36. Murthy S.K.R (1997). Sharangadhara Samhita: English translation, Third edition: Chapter 2, verse 2d7-36, Page:14, Chaukhambha Orientalia Publications, Varanasi, U.P.
37. Tripathi I. Tripathi D (1998). Yogaratnakara Chikitsa Prakaranam Hindi commentary, Fifth edition: Versa1,2, Page: 93, Chaukhambha Krishnadas Academy, Varanasi, U.P.
38. Hariprasad Tripathi (2005). Haritasamhita: Hindi vyakhya: first edition: Chapter5, verse 50- 67, Page:36, Chaukhambha Krishnadas Academy, Varanasi.

State Paper Tables:

Expert	No. of Items Approved
01	06
02	06
03	06
04	06
05	06
06	06
07	06
08	06
09	06
10	06

Expert	No. of Items Approved
01	06
02	06
03	06
04	06
05	06

Number	Questions	Ratings	Item Validity
1.	I am Perceptive	a. Not at all b. A little c. Moderately d. Mostly e. Completely	0.6 VATA
2.	I am Unsteady	a. Not at all b. A little c. Moderately d. Mostly e. Completely	0.5 VATA
3.	I am Energetic	a. Not at all b. A little c. Moderately d. Mostly	0.7 PITTA

		e. Completely	
4.	I am Agitated	a. Not at all c. Moderately e. Completely	b. A little d. Mostly
5.	I am Calm	a. Not at all c. Moderately e. Completely	b. A little d. Mostly
6.	I feel Lethargic	a. Not at all c. Moderately e. Completely	b. A little d. Mostly
			0.5 PITTA
			0.6 KAPHA
			0.5 KAPHA

Table 3: Kashyapa Psychophysiological State Inventory

Number	Questions	Ratings	
1.	I am Perceptive	a. Not at all c. Moderately e. Completely	b. A little d. Mostly
2.	I am Unsteady	a. Not at all b. Moderately e. Completely	b. A little d. Mostly
3.	I am Energetic	a. Not at all c. Moderately e. Completely	b. A little d. Mostly
4.	I am Agitated	a. Not at all c. Moderately e. Completely	b. A little d. Mostly
5.	I am Calm	a. Not at all c. Moderately e. Completely	b. A little d. Mostly
6.	I feel Lethargic	a. Not at all c. Moderately e. Completely	b. A little d. Mostly

Table 4: Demographic Data

Gender	Number	Mean Age	St. Dev
Jayanagar Group			
Boys	52	13.81	0.69
Girls	37	14.22	0.79
Maleshwaram Group			
Boys	195	16.87	0.56
Girls	166	16.96	0.45
Both Groups Together			
Boys	247	16.23	1.38
Girls	203	16.46	1.18

Dosha	No. of Items	Cronbach's Alpha
Vata	02	0.806
Pitta	02	0.825
Kapha	02	0.768

Scale: The Content Validity among the ten Ayurveda experts who served as judges agreed upon the number of items after discussion and refinement. The Psychologist agreed on the item and advised on the format of the scale and the scorings. A 5-point rating (**a.** Not at all, **b.** A little, **c.** Moderately, **d.** Mostly, **e.** Completely) was selected on their advice.

The Kashyapa State Personality Inventory is Consistent and Reliable with Cronbach's Alpha of Vata being (0.806), Pitta (0.825), Kapha (0.768) (Table-03) 0.7, since the Cronbach's alpha values are above 0.7, the scale has a very good Internal consistency. Correlation between Vataja, Pittaja and Kaphaja was negative which is suggesting of the discriminative validity. The Split- half and the factor analysis cannot be done

because of a smaller number of questions. When compared with STAI questionnaire, it won't be a criterion validity. Inter-rater cannot be done because it is self-reporting. Further, this is the first attempt to develop a scale to assess the mood states, according to Ayurveda in adolescents. It helps to predict the dosha – Avastha in an individual, in order to combat that particular state for e.g.: Anger which can be situational, seasonal or temperamental. It can be used by the clinicians in clinical settings. It is also helpful to diagnose clinical anxiety in surgical and other medical patients as well as in mental health patients. This inventory can be used in research projects. Also, the Test- Re-test is not done. It doesn't predict the personality in an individual, instead it measures only the mood state in a given condition.

DOSHA	Vata	Pitta	Kapha
Vata Pearson Correlation	1.000	-0.562**	-0.129**
Signif (2-tailed)	N/A	.000	.006
Pitta Pearson Correlation	-0.562**	1.000	-0.654**
Signif (2-tailed)	.000	N/A	.000
Kapha Pearson Correlation	-0.129**	-0.654**	1.000
Signif (2-tailed)	0.006	0.000	N/A

** All Correlations significant at least at the 0.01 level (2-tailed)

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