Research Article

www.ijrap.net (ISSN:2229-3566)

ASSESSMENT AND CLINICAL CHARACTERIZATION OF PRAKRITI IN CHILDREN: A CROSS SECTIONAL SURVEY

Kulkarni Reena ^{1*}, Manoj C. S ², Sri Lakshmi ³

¹ Professor and Head, Department of Kaumarabhritya, SDM Institute of Ayurveda and Hospital, Anchepalya, Kumbalgodu Post, Bangalore, Karnataka, India

² BAMS Scholar, SDM Institute of Ayurveda and Hospital, Anchepalya, Kumbalgodu Post, Bangalore, Karnataka, India

³ Assistant Professor, Department of Kaumarabhritya, SDM Institute of Ayurveda and Hospital, Anchepalya, Kumbalgodu Post, Bangalore, Karnataka, India

Received on: 20/02/20 Accepted on: 15/03/20

*Corresponding author

E-mail: drreenakulkarni@gmail.com

DOI: 10.7897/2277-4343.110358

ABSTRACT

Prakriti describes individual constitution at physical, mental, social and performance spheres. 7 types of Prakriti are Vataja, Pittaja, Kaphaja, Dvandvaja and Sannipataja. Each of them has unique physical status, strength and activities influenced upon respective dosha. This study aims to assess the Prakriti in children aged 5 to 10 years and to clinically characterize individual prakriti. Children aged 5 to 10 years attending the OPD of SDMIAH for routine health checkup were screened with standard prakriti questionnaire. Characteristics were categorized and attempts were done to correlate with Nutritional status using BMI. Amongst 573 screened, 22 children (3.8%) were vata prakriti, 3 children (0.5%) were pitta prakriti, 31 (5.4%) were kapha prakriti, 97 (16.9%) were vata pitta, 260 (45.3%) were vata kapha and 160 (27.9%) were of pitta kapha prakriti. Most of the prakriti presented with clinical features in accordance with respective dosha guna. Dvandvaja prakriti had combination of features. Kapha dominance prakriti was seen more in children. On BMI 85 were malnourished (14.8%), 125 were underweight (21.8%) 215 were normal nutritional status (37.5%), 62 were overweight (10.8%) and 86 were obese (15.1%). Kapha prakriti were well nourished as compared to others. Kapha dominance in Prakriti could be because of the kapha vata avastha. Kapha dominant prakriti were well nourished, Pitta predominant Prakriti were moderately nourished as compared to vata. Features characterized with individual prakriti correlates well with the classical Prakriti descriptions. Clinical characterization of Individual Prakriti in children was developed.

Keywords: Ayurveda, constitution, Prakriti, Shareerika prakriti, Manasika Prakriti

INTRODUCTION

Prakriti refers to Constitution or genetic makeup of individual.¹ Prakriti is an unique body constitution of the individual which includes both Physical and Mental entities.² Prakriti is denoted based on predominant dosha namely vata, pitta or kapha identified at the time of conception and development.^{3,4} Proportion of these dosha is further influenced by genetic factors (Shukra and Shonita), environment, maternal diet and regimen, Ethnicity (Jati), Familial traits (Kula), Ecology (Desha), Age (Vaya) and specific nature (pratyatmaniyata)⁵. Further, the expression of the traits physically and mentally makes the individuality of human beings. The sum total of these factors expressed physically determines Shareera Prakriti (Phenotypic variation) and Manasika Prakriti (Psychic variation). Each of them is further classified into 7 and 3 types respectively. The 7 types of Shareera Prakriti are based on relative predominance of dosha namely Vata, pitta, kapha, vata-pitta, vata-kapha, pitta-kapha and tridoshaja. The three types of Manasika Prakriti are satwika, rajasika and tamasika Prakriti.⁶⁻⁸ The knowledge of Prakriti can serve as a basis in promotive and preventive health of society through personalized prescriptions. This also can predict probable diseases and means to prevent them. Specific prescriptions could be designed based on individual traits to treat diseases.⁹

Though Prakriti is determined at conception, the fullest manifestation and determination of the same may be easy as the child attains vivardhamana avastha (16 years) or paripurnata of dhatu (30 years).¹⁰ Clinically, Prakriti can be assessed in children during aparipakva avastha (below 16 years) also for knowing the core strength, aptitude, skills and capabilities. This has further scopes in designing future profile for children with regards to Academics, job profile, sports, art and cultural achievements based on their Prakriti. Such handpick of children can excel in respective fields and contribute maximum to the society.

Table 1 summarizes strength and weaknesses of individual in accordance with Prakriti.

A lot have been discussed on Prakriti and its standardization in adult population. Only a few evidences based document on Prakriti assessment in children is available. Thus, to establish the assessment of Prakriti and relative characteristics in children present study is undertaken.

Objectives

- To Assess various Prakriti in children aged 5-10 years
- To characterize related features of Prakriti in children

Table 1: Strength and Weaknesses in accordance with Prakriti

Characteristic	Vataja	Pittaja	Kaphaja
Body size	Lean	Medium built	Large
Body built, strength and Activities	Hyposthenia Less strength Swift and uncertain	Normosthenic Moderate strength Swift and determined	Hypersthenic Good physical strength Slow and goal oriented
Memory	Less memory, short memory, quick grasping	Sharp memory and retention	Good memory and longer retention
Mental traits	Reduced concentration Unstable mind Flight of thoughts and decision	Impatient Anger, hate, jealousy	Calm greedy, attachment
Special skills	<ul style="list-style-type: none"> • Dancing • Athletics • Trade • Good in field activities 	<ul style="list-style-type: none"> • Swimming • Singing • Fine art works • Dancing • Interested in new inventions • Good in orations 	<ul style="list-style-type: none"> • Painting • Singing • Fine art works • Managerial skills and leadership • Good in orations
Education skills	Lesser educational status	Moderate educational status	Excellent educational accomplishments
Sports skills	Excellent sports skill	Moderate achievement	Poor sports skill
Weakness	<ul style="list-style-type: none"> • Poor educational ability • Inability for persistent goal-oriented activity • Fickle minded • Poor decision making • Prone for musculoskeletal disorders of vata origin 	<ul style="list-style-type: none"> • Poor control over emotions • Tendency to make hasty decisions. • Intolerant to variations in climate, food and regimen • Prone to disorders of skin, hair and sweat, acid peptic disorders, stress related disorders 	<ul style="list-style-type: none"> • Lazy and require persistent motivation to initiate • Probability of missing opportunities owing to slow initiation. • Prone to diseases of respiratory, obesity and other lifestyle disorders. 11-13

MATERIAL AND METHODS

Study Setting

Kaumarabhritya outpatient department of Shri Dharmasthala Manjunatheshwara Institute of Ayurveda and Hospital, Bangalore

Source Population

School children attending regular yearly health checkup between October to December 2019 at Kaumarabhritya outpatient department of Shri Dharmasthala Manjunatheshwara institute of Ayurveda and Hospital, Bangalore

Study Population

School Children aged 5-10 years visiting S.D.M.I.A.H hospital for regular yearly health checkup.

Research Design and Sample Size

Cross sectional survey, observational study in 573 apparently healthy children aged between 5-10 years

Inclusion Criteria

Children aged 5-10 years from various schools of Bangalore visiting S.D.M.I.A.H hospital for health checkup were included in the study.

Exclusion Criteria

Children suffering with chronic systemic illnesses, debilitating disorders, inborn errors of metabolism and endocrinal diseases were excluded from the study.

Recruitment

Apparently healthy children visiting outpatient section of SDMIA hospital and those studying in nearby schools of Bangalore fulfilling the inclusion criteria were screened and recruited for the study.

Informed Consent

Informed Assent was taken from the Parent/ Guardian/ Teacher

Procedures and Data Collection

573 Children aged between 5-10 years were screened and interrogated for general health status. Those fulfilling the inclusion criteria were assessed for Prakriti using a predesigned and pretested standard Prakriti assessment questionnaire.⁹⁻¹⁰ Prakriti and the characteristic features of each Prakriti in children were assessed by direct clinical examination. Relevant anthropometric data required was measured using standard instruments and noted in assessment form.

IEC No: SDMIAH/IEC/O2/2019

CTRI Ref No: REF/2020/02/032016

Statistical Analysis

The inferences for the Prakriti in children were analyzed by assessing means, Standard deviation, standard error and cross tabulations using SPSS software vs-20.

RESULT

Among 573 children participated in the study, a majority 56% were male while 44% were female. All of them were health volunteer children aged between 5-10 years from various schools in and around SDM institute of Ayurveda and Hospital Bangalore. Amongst them 24% were between 10- 11 years, 15% were of 9-10 years, 12% were 8-9 years, 24% were 7-8 years, 17% 6-7 years and remaining and % belonged to 5 to 6 years. Majority of them 45.3% belonged to vatakapha prakriti, pitta kapha prakriti (27.9%) and vatapitta prakriti (16.9%) next to follow. Least belonged to pitta prakriti (0.5%) (Figure 1). In the skin features oily skin was seen in kapha (27), vatakapha (40) and pittakapha (31) while dry skin was more predominant in vata (21) and vatapitta (75). Seasonal variation was more in vatapitta and vatakapha prakriti. Kapha predominant prakriti like kapha and vatakapha prakriti and also pitta prakriti had more soft nature skin

while roughness was more in vata and vatapitta prakriti. Most of kapha and pitta variants had fairer skin than others. Wheatish complexion was more in vatapitta prakriti (Table 2). Kapha dominant Prakriti presented with dense scalp hair, grey hairs were seen in vata-pitta and pitta-kapha children. 2 children of vata-pitta and pitta-kapha had relative hairfall. Black hair was seen more in kapha and vata-kapha Prakriti while brown hairs was more in pitta and vata-pitta Prakriti (Table 3). Perspiration was high in vata-pitta and pitta-kapha Prakriti, while it was lowest in vata, kapha and vata-kapha Prakriti. Strong body odor was seen in pitta dominant Prakriti (Table 4). Quick memorizing power was seen in vata related Prakriti's while it was moderate in Pitta and Kapha people were slow in memorizing, while retention was better and longer in children with Kapha and pitta related Prakriti's. Pitta dominant Prakriti's presented with more anger and irritability. Vata Prakriti was quick in making new friends while pitta Prakriti had a greater number of friends. Pitta and Kapha dominant people

exhibited good mental strength (Table 5). Kapha dominant Prakriti children had good physical strength, while it was moderate in pitta and least in Vata Prakriti (Table 6). Vata dominant Prakriti had Krura Koshta, Pitta dominant Prakriti had Mridu Koshta while Majority of Kapha, vata-kapha and pitta-kapha presented with Madhyama Koshta (Table 7). Assessment of dream and sleep quality revealed that frequent dreams with flight of content was more in Vata Prakriti while Kapha Prakriti had least dreams. Sleep was disturbed more in Vata, followed by vata-pitta and Pitta Prakriti. While it was sound in Kapha, pitta-kapha followed by Vata-kapha Prakriti (Table 8). Majority children with vata Prakriti were malnourished, 50% children in Pitta and vata-pitta Prakriti were undernourished, while majority with Kapha, vata-kapha and kapha-pitta Prakriti were well nourished. Overweight was more seen related to Kapha and vata-kapha Prakriti (Table 9).

Figure 1: Baseline Characteristics

Table 2: Distribution of children based on skin features in different Prakriti

Skin Nature Oily * Prakriti Cross tabulation							
Feature		Prakriti			Vata Pitta	Vata Kapha	Pitta Kapha
		Vata	Pitta	Kapha			
Oily skin	Yes	1	1	27	6	40	31
	No	21	2	4	91	220	128
Dry skin	Yes	21	1	0	75	37	33
	No	1	2	31	22	222	127
Seasonal variation	Yes	0	0	0	1	5	2
	No	22	3	31	96	255	158
Soft	Yes	0	2	20	5	76	58
	No	22	1	11	92	184	102
Roughness	Yes	21	0	5	74	58	26
	No	1	3	26	23	202	134
Colour	Fair	0	3	25	39	147	121
	Dark	20	0	5	21	78	6
	Wheatish	0	0	0	24	1	21
	Others	2	0	1	13	34	12

Table 3: Distribution of children based on hair features in different Prakriti

		Vata	Pitta	Kapha	Vata Pitta	Vata Kapha	Pitta Kapha
Nature	Thick	6	2	18	58	147	105
	Thin	11	1	7	17	12	36
	Coarse	2	0	0	2	7	3
	Hard	2	0	0	0	1	0
	Smooth	0	0	1	14	83	7
	Soft	0	0	3	2	5	7
	Straight	1	0	0	1	3	1
	Wavy	0	0	0	2	1	0
	Fizzy curly	0	0	2	1	1	1
	Graying	0	0	0	2	0	3
	Falling	0	0	0	6	3	12
	Breaking	2	0	0	1	8	3
	Dry	4	1	1	12	9	10
	Oily	1	1	4	6	17	16
Growth	Dense	7	1	21	45	123	74
	Scanty	3	1	1	3	24	10
	Moderate	12	1	10	48	100	75
	Bald	0	0	0	1	13	1
Colour	Black	22	0	31	58	260	90
	Dark brown	0	1	0	24	0	24
	Light brown	0	2	0	15	0	44
	Dusky	0	0	0	0	0	2

Table 4: Distribution of children based on perspiration and body odor in different Prakriti

		Vata	Pitta	Kapha	Vata Pitta	Vata Kapha	Pitta Kapha
Perspiration	Low	14	0	31	16	173	40
	Medium	7	0	0	18	82	31
	High	1	3	0	59	0	85
	Variable	0	0	0	4	5	4
Body odor	Strong	0	0	0	5	0	5
	Mild	1	3	0	20	7	42
	Very less	21	0	31	72	253	113

Table 5: Distribution of children based on mental characteristics in different Prakriti

		Vata	Pitta	Kapha	Vata Pitta	Vata Kapha	Pitta Kapha
Memorizing and retention	Quickly	7	1	14	19	82	44
	Moderately	13	2	11	58	137	84
	Slowly	1	0	6	20	39	30
	Variably	1	0	0	0	2	2
Anger quality	Good stable	6	1	6	14	44	27
	Medium	13	1	17	61	160	99
	Poor unstable	3	1	8	22	56	34
Making new friends	Quickly	8	2	10	21	89	52
	Moderately	11	1	18	66	154	92
	Slowly	1	0	3	10	16	15
	Variably	2	0	0	0	1	1
Irritability	Quickly	2	3	4	28	37	32
	Moderately	9	0	12	59	129	69
	Slowly	8	0	15	5	84	55
	Variably	3	0	0	5	10	4
Mental strength	Low	5	0	3	34	79	46
	Moderate	15	2	18	48	153	97
	Good	2	1	10	15	28	17

Table 6: Distribution of children based on Physical characteristics in different Prakriti

		Vata	Pitta	Kapha	Vata Pitta	Vata Kapha	Pitta Kapha
Physical strength	Poor	17	0	0	24	98	59
	Moderate	5	3	13	71	130	81
	Good	0	0	18	2	32	20
Body buildbulk	Small weakly developed	5	1	3	32	82	42
	Medium moderately developed	17	2	25	62	163	105
	Large/big well developed	0	0	3	3	15	13

Table 7: Distribution of children based on Agni and Koshta in different Prakriti

		Vata	Pitta	Kapha	Vata Pitta	Vata Kapha	Pitta Kapha
Bowel tendency towards	Krura Koshta	9	0	0	3	9	0
	Mridu Koshta	0	2	0	0	0	5
	Madhyama Koshta	13	1	31	94	251	155
Digestive power	Low	13	0	20	6	54	30
	Medium	2	0	11	17	33	32
	High	0	3	0	65	166	95
	Variable	7	0	0	9	7	3

Table 8: Distribution of children based on dream and sleep quality in different Prakriti

		Vata	Pitta	Kapha	Vata Pitta	Vata Kapha	Pitta Kapha
Dream	Low	1	0	30	33	72	55
	Medium	2	3	1	9	36	18
	High	19	0	0	52	144	80
	Variable	0	0	0	3	8	7
Sleep quality	Disturbed	11	0	0	2	2	11
	Medium	11	3	8	30	91	53
	sound	0	0	23	63	164	92
	Variable	0	0	0	2	3	4

Table 9: BMI in different Prakriti

	Vata	Pitta	Kapha	Vata Pitta	Vata Kapha	Pitta Kapha	Total
less than 13	18	0	2	32	15	18	85
13.1-15	4	3	1	53	37	27	125
15.1-22	0	0	9	12	94	100	215
22.1-25	0	0	8	0	46	8	62
More than 25	0	0	11	0	68	7	86
Total	22	3	31	97	260	160	573

DISCUSSION

Prakriti is a special endowment of individuals which determines the characteristics of body, psyche, social skills, metabolic activity and achievements. This is further influenced by the environment exposure and training. A cross sectional survey on 573 children to assess and characterize the various Prakriti yielded results that were co relating majority with the classical description of respective Prakriti. Majority of children belonged to Dwandwa Prakriti that too Kapha dominant Prakriti. This could be as a result of predominance of kapha in the childhood age that masks the features of other dosha physically and metabolically. Less number of individualized Prakriti identified because of this reason. Sama Prakriti could not be elicited due to hardship in assessing all the characteristics of Prakriti. Most of the children with Kapha dominance were well nourished and presented with tendency of overweight as compared to others. Pitta predominant Prakriti were moderately nourished and had excellent metabolic activity leading to less chance for overweight.

CONCLUSION

Characterization of Individual Prakriti was done in children. Children seem to present with more of kapha dominant features. Prakriti determines type of nourishment and metabolism in children. This study can serve as a basis for further detailed evaluation of Prakriti in children with more standardized assessment parameters.

ACKNOWLEDGEMENT

The Authors whole heartedly acknowledge the constant support and guidance of Dr. B. Yashoverma, Secretary SDM Educational society, Ujire, Dr. Jagadeesh Kunjal, Principal and Dr. Sarbeswar Kar, Medical superintendent, SDMIAH, Bangalore. Cooperation extended by Principals of Various schools and the children participated in the study are great fully acknowledged.

REFERENCES

1. Acharya Trikamji Yadavji editor, Ayurveda Dipika Commentary Charaka Samhita, Varanasi, India. Chaukhamba Orientalia; 2013. p. 277.
2. Sharma Ravindra, Malviya Reeta, Saraswat Vipin, Shenoy Sumanth, Rama Murthy A. Prakriti (Human constitution) - An individual identity of a human. Ayurpharm Int J Ayur Alli Sci 2012; 1(7): 151-158.
3. Shastri Ambikadutta editor, Ayurveda Tatva Sandipika Hindi commentary Sushruta Samhita Part 3, Varanasi, India. Chaukhamba Sanskrit Samsthan; 2001.
4. Kashinath Shastri. Editor, Vidyotini Hindi Commentary Charaka Samhita, Varanasi, India. Chaukhamba Bharati Academy; 2001. p. 772.
5. Kashinath Shastri. Editor, Vidyotini Hindi Commentary Charaka Samhita, Varanasi, India. Chaukhamba Bharati Academy; 2001. p. 968.
6. Ambikadutta Shastri. Editor, Ayurveda Tatva Sandeepika Hindi Commentary Sushruta Samhita, Varanasi, India. Chaukhamba Bharati Academy; 2003. p. 37.
7. Trikamji Yadavji editor, Ayurveda Dipika Commentary Charaka Samhita, Varanasi, India. Chaukhamba Surabharati Prakashan; 2013. p. 52.
8. Kashinath Shastri. Editor, Vidyana Manoranjini Hindi Commentary Ashtanga Hridaya, Varanasi, India. Chaukhamba Krishnadas Academy; 1194. p. 6.
9. Spear BB, Heath-Chiozzi M, Huff J. Clinical application of Pharmacogenetics. Trends Mol Med 2001; 7: 201-4.
10. Kashinath Shastri. Editor, Vidyotini Hindi Commentary Charaka Samhita, Varanasi, India. Chaukhamba Bharati Academy; 2001. p. 280.
11. Kulkarni Reena. Impact of Prakriti on academic stress manifestations and coping styles in children - a randomized controlled trial. Arya vaidyan. XXIX; 2016. p. 15-19.
12. Dey S and Pahwa P. Prakriti and its associations with metabolism, chronic diseases, and genotypes: Possibilities

of new born screening and a lifetime of personalized prevention. Journal of Ayurveda and integrative medicine 2014; 5(1): 15–24. <https://doi.org/10.4103/0975-9476.128848>

13. Tripathi Piyush Kumar, Gehlot Sangeeta. Critical analysis of concept of Prakriti and challenges in its assessment: A review. Int. J. Res. Ayurveda Pharm 2016; 7(3): 1-4. <http://dx.doi.org/10.7897/2277-4343.07399>

Cite this article as:

Kulkarni Reena *et al.* Assessment and Clinical Characterization of Prakriti in Children: A Cross Sectional Survey. Int. J. Res. Ayurveda Pharm. 2020;11(3):46-51 <http://dx.doi.org/10.7897/2277-4343.110358>

Source of support: Nil, Conflict of interest: None Declared

Disclaimer: IJRAP is solely owned by Moksha Publishing House - A non-profit publishing house, dedicated to publishing quality research, while every effort has been taken to verify the accuracy of the content published in our Journal. IJRAP cannot accept any responsibility or liability for the site content and articles published. The views expressed in articles by our contributing authors are not necessarily those of IJRAP editor or editorial board members.