



## Short Review

Concepts of body constitution in traditional *Siddha* texts: A literature reviewKannan Muthiah <sup>a,\*</sup>, Kiruthiga Ganesan <sup>a</sup>, Manickam Ponnaiah <sup>b</sup>, Sathiyarajeswaran Parameswaran <sup>a</sup><sup>a</sup> Siddha Central Research Institute, Chennai, Tamil Nadu, India<sup>b</sup> ICMR-National Institute of Epidemiology, Indian Council of Medical Research, Ayapakkam, Chennai, Tamil Nadu, India

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## ABSTRACT

Analysis of body constitution has been in practice in most complementary and alternative systems of medicine. *Siddha* system of medicine practiced in South India consists of fundamental classical literature that stress on the importance of tri-humoral makeup of individuals. Guidance has been given in the classics for identifying specific types of body constitution, various dietary recommendations and disease susceptibility. In validating such important traditional fundamental aspects, analytical systematic literature framework is the first robust step. The present study has been conducted to provide an updated integrative framework of information about body constitution given in various *Siddha* literatures in quantitative systematic method by using Whittemore and Knaf's five stage approach. This descriptive account may be useful to construct a suitable questionnaire for Siddha based udaliyal assessment.

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## 1. Introduction

Indigenous systems of medicine in India has been long playing its vital role in serving the public health in various parts of India and in recent times, all over the world. *Siddha* system is one of the six recognized streams of Indian systems of medicine. It is well received among the masses of South India. It resembles *Ayurveda* in certain aspects; there is a fine distinction between the two streams of medicine and have their own strengths. The objective of this study in to provide deep descriptive information on *Udaliyal* (body constitution/physique) features of *Vali* (*Vatham*), *Azhal* (*Pitham*) and *Aiyam* (*Kabam*) predominance as given in *Siddha* literature. This descriptive account may be useful to construct a suitable questionnaire for Siddha based *udaliyal* assessment.

2. *Uyirthaadhu* (tri-vital life forces) and *Udaliyal*

*Siddha* system rests on the conceptual framework formed by 96 *thathuvams* (philosophies) which includes *Muthodam*, *Vayus*,

*Panchabhootham*, *Gunam*, *Ragam*, *Kanmendhiriyam*, *Gnanendhiriyam*. They connect the physical and inert energies of human body facilitating its existence at subtle and gross levels.

The *Muthodam-Uyirthaadhu* (synonymous with *Tridosha*) comprises of *Vali* (*Vatham* - Airy), *Azhal* (*Pitham* - Fiery) and *Aiyam* (*Kabam*- Watery/Cool). These three vital life forces govern the physical, physiological and psychological components of an individual thus forming the individual *Udaliyal/Yakkai Ilakkanam*, - Body constitution. The 7 specific types of *Udaliyal* are classified on the basis of difference in the dominating levels of *Vali*, *Azhal*, *Aiyam* as per the genomic influences [1]. The *Udaliyal* types occur by various combinations, permutations of the three vital life forces. The signature of the dominant *Thodam* (*Dosham*) is apparent in the attributes of a person.

3. Need for *Udaliyal*

*Siddha* ideology of *Udaliyal* is portrayed through the information collected from ancient literature, and arranged in a concise format to identify the key aspects of the three *Vali*, *Azhal* and *Aiyam* influenced personality traits. It is a key to understand dietary allergies, pharmacokinetic variations, drug interactions and environmental hypersensitivities.

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**Table 1**  
Features of the *Vali, Azhal, Aiyam* (*Vatham, Pitham, Kabam*) Udaliyal as given in Siddha classical texts.

S.no.	Parameters	<i>Vali – vatham</i>	<i>Azhal – pitham</i>	<i>Aiyam – kabam</i>
1.	General	Heavy [3,8,9,16], dry, easily fatigable [7,8,10], easily emaciating [7]	Moderate build tends to lose weight easily	Bulky, heavy, fatty, tends to gain weight easily
2.	Site [5]	From perineum to umbilicus	From umbilicus to chest	From chest to top of the head
3.	<i>Panchabootham</i> [5] (principal element)(dominant)	<i>Vayu</i> (air)	<i>Theyu</i> (fire)	<i>Appu</i> (water)
4.	<i>Dhathus</i> [9,11,13] (seven body constituents)	Plasma ( <i>saaram</i> ) reproductive tissue ( <i>venneer</i> ) muscle ( <i>oon</i> ) fat ( <i>kozhuppu</i> ) bone ( <i>elumbu</i> ) reduced	Bone ( <i>elumbu</i> ) bone marrow ( <i>majjai</i> ) muscle ( <i>oon</i> ) Reduced	Plasma ( <i>saaram</i> ) muscle ( <i>oon</i> ) fat ( <i>kozhuppu</i> ) reproductive tissue ( <i>venneer</i> ) bone ( <i>elumbu</i> ) increased
5.	<i>Gunam</i> [13] (psychological attributes)	<i>Thamo</i>	<i>Rajo</i>	<i>Saathveegam</i>
6.	Pulse [3]	Pulse [3,10] – slow, regular [12], gait of an elephant [8,16], like a ball [16], pulse like gait of a peacock [21,24], peacock, hen, swan, like that of a woman [25]	Pulse- fast [8], exceeds the speed of a furling flag more than 1000 times [12], pulse is faster, trails like leech, turtle [19,24], pigeon, cock [24]	Pulse- irregular [3,12], weak of frog, eel [3,8], pounds like frog, snake [21,24]
7.	Weight	Emaciates easily/becomes bulky [3,6,8,9]	Tends to lose weight with mild effort	Difficult to lose weight
8.	Temperature	Feels cold [3,7,8,15,22] in most places, in few hot & pulsatile [7,8,18] and dry	Feels hot [3,22]	Feels normal, cold [3,22] (sweaty)
9.	Fatigability	Easily fatigable after kinesis [7–10]	Variable in fatigability	Tolerates, feels strong
10.	Body parts	Nil	Nil	Broad (umbrella) forehead, chest and shoulders, long arms up to the joints [9]
11.	Complexion	Dark [7,8,10,17,18,20] in complexion, easily sun tanned [16,22], dark [7]	Like that of <i>Murugan</i> (pinkish red) [7], yellowish/reddish/mixed [16,18,20,22], more on face, soles, palms, get wrinkles easily [21]	Like that of <i>Brahma</i> [7], pale, whitish [16,18,20,22]
12.	Epidermal appendages [11]	Nil	Extensive dark moles, pimples	Nil
13.	Hair	Blackish hair with split ends (from dryness)	Red tips of hairs [8], premature greying [6]/balding [3,11]	Abundant [6,12], wavy, shiny dark [6] elongated [12] (adequate moisture)
14.	Eyes	Small [3,4], narrow, circular [16], watery, blackish [3,4,16,18] with thick eyelids [22]	Red/yellowish/greenish [16,18] tinge (bloodshot from hunger, heat, anger, alcohol), at the angle of the eye, thin eyelids burning sensation [16,22]	Clear, broad, bright, oily, shiny, sensual with bright long vision/pale-whitish sclera [16,18], rheum accumulates [16,22]
15.	Ears [14]	Wax in ears	Itching & burning sensation	Swelling & bleeding
16.	Tongue [18]	Clear tongue, if coated bitter/greyish, fissures with raised papilla [3,17,22] blackish [16,22]	Yellow colored tongue, yellowish or reddish coated, sour taste [16,22]	Frothy, thick sweetish taste with white coating [16,22]
17.	Teeth	Dirty white/black [3]/greyish tinge [17]	Yellowish tinge [17]	White teeth [17]
18.	Salivation	Watery [7] salivation	Dry, excessive [8] salivation [7,18], tongue	Small quantity of thick [7], dense saliva [17]
19.	Voice	Normal pitched voice [3,16,17,20], voice like sound from that of iron [7,23]	High pitched/as though from well/ sharp [16,17,20,22], resembles voice from a well [7]	Hoarse, low - pitched mellifluous voice [16,17,20,22], hoarseness of voice [7]
20.	Speech	Enthusiastic speech [6] before doing things, talkative, speaks lie as truth for victory & fame [12] sometimes unclear [24] speech	Sharp, penetrative, speaks of valour/ distorted facts/don't speak much/sweet words	Can't lie/no double speak/ warm & friendly speech/calm complacent words
21.	Food intake [13]	Most days without hunger/eats much but poor stamina	Eats little to moderate quantity	Eats good quantity of clean food
22.	Gaseous nature	Mostly gaseous [3,10]; quickly reacts to gassy foods	Nil	Nil
23.	Taste and food priorities	Taste prior: sweet, sour, salt [13] hot foods; frequent	Sweet, astringent, bitter. Cold foods [13]	Bitter, astringent, pepperish. hot foods [13] feels satisfied even with small quantity
24.	Stools [16,22]	Mostly constipated [3,9,18], blackish tinged stools	Freely passing, yellowish tinged stools [16,18,22]	Whitish/pale colored stools, bulk /mucous [16,22]
25.	Body odor	Nil	Foul odor of sweat +	Oily odor of sweat +
26.	Body hair	Nil	Absence of body hair/very less quantum	Nil
27.	Urine odor	Nil	Nil	Obnoxious odor of urine [11] +
28.	Sleep	Frequent small naps with half-closed eyes (premature ejaculation), variable sexual intensity, reduced frequency of sex [12]/ less number of offspring	Little sleep [3,10]	Excessive/good sleep [9]
29.	Sexual desires		Intense sexual desires [12]	Moderate steady sexual desire/ abstinence from sex [12] more no. of offspring/
30.	Urine passage [4,17]	Small quantity of painful, blackish tinged urine passed with effort and sound [3,4,14,16,20], clear [22]	Pricking pain, burning sensation, reddish/yellowish [4,14,16] small quantity [21,22]	Clear pale whitish (not of much discomfort), dense, frothy [4,14,16,19,22] turbid [3]
31.	Dreams	Dreams of walking in space, forest, mountains (kinetic dreams) [6] frequent dreams weaken body	Dreams of yellow/red flowering trees/ lightning, sun, gaseous, bright lit lamps (fiery dreams) [13]	Dreams of birds filled lily ponds, damp places like gardens (cool dreams) [13]
32.	Mindset	Restless, unstable, hate, stingy, wanting to take other's things, not thoughtful of glory	More of a goal driven, success oriented, thoughtful [18]	Economically sound and happy in hoarding [6,11]
33.	Interests	Interested in sports, massage, music, hunting (kinesis) [6,12]	Scents, perfumes, garlands, sandal paste likes snow(self-nurturing), learning more books, new things, discrete fact from fiction (scholar), valor, might [6,12]	Listening to good music, maintain cleanliness, scents-perfumes [6,12]

Table 1 (continued)

S.no.	Parameters	Vali – vatham	Azhal – pitham	Aiyam – kabam
34.	Intolerability	Intolerable to cold [9,11]	Intolerable to thirst, anger, hunger, heat and fear [9,11]	Intolerable to sun's direct heat/ tolerable to hunger, thirst, grief, fear, heat [9,11]
35.	Intellect	Dull, repeated thoughts about the same thing [6], learnedness	Tendency for erudite scholar, learnedness, intelligent, courageous, perseverant, disciplined, good discretion power [6]	More disciplined, intelligent, scholar, knowledgeable, is appreciated even by scholars, faithful, easily trusting [6]
36.	Memory [13]	Dunce memory	Good memory, quick learner but temporary memory	Excellent memory, slow but strong retention
37.	Childhood	Nil	Nil	Childhood phase -characterized by absence of much Crying, anger, harsh words, confusion, excessive thirst [13]
38.	Passion	Nil	Valor, hate, strength, philanthropy, respects elders, loving to others, caring to those who are dependent [6,12]	Spiritual, puritanism, pious, away from stealth and lies, loving, respect to elders, warm and caring and friendly, calm, complacent [6,12]
39.	Detest	Nil	Easily detests things, hot headed quick to lose temper [6,12]	Withstanding, tolerant to criticism, deep & stable faith [6,12]
40.	Bones & joints [13]	Cracking joint sounds present while walking	Less amount of muscles around joints and bones	Well lubricated, strongly, built joints well covered with muscles & fat
41.	Immunity to diseases	Nil	Three fourths strength and immunity present	Good strength and immune to diseases
42.	Walking	Nil	Nil	Slow and steady like that of an elephant [13]
43.	Neikuri [14] (oil on urine test)	Oil drop elongates	Oil drop splits into smaller drops	Oil drop scattered as a sieve
44.	Animals that share same qualities [13]	Dog, fox, camel, rat, hawk, crow, night owl	Tiger, bear, monkey, cat, snake	The Deities - Brahman, Sivan, Indiran, Varunan Animals - Male lion, elephant, horse, bullock, cow, kite, swan
45.	Frequent diseases [23]	Colic & gas problem (flatulence)	Gastritis & related problems	Bronchial related problems

Udaliyal assessment becomes essential to premonitorily diagnose any vitiation of the three vital humors. For example, a miniscule level of Vitiation of Vali (Vatham) can be observed either through hyperpigmentation of the skin, hyperreactivity to stress or extreme fatigability.

Upon identifying Udaliyal, balancing of Uyirthaadhu (vital life forces), Sadaragni (digestive fire), Sapthadhathu (seven physical constituents), Malakriyai (excretory), Gnanendriyam (sensory) and Anthakaranam (elements of mind) under the influence of Unavu (diet), Audatham (Medicines) and Seyal (behavior) maintains the state of Sugam (Health). While in Rogam (diseases), the choice of panacea and aspects are given in Siddha treatises.

Realizing the phenotypes and exporing the role of genomics through targeted interventions by traditional systems may help disease prevention efforts. This will promote the personalized approach of preventive care via Siddha system of medicine.

#### 4. Review methods

The review of literature carried out is the systematic quantitative review of Siddha literature using Whittemore and Knaf's five stage approach [1]: Problem Identification [2], Literature search [3], Quality appraisal [4], Data analysis and [5] Presentation of findings [2]. This method was selected because of its suitability in organizing large volumes of raw information from various sources into an organized format. This method ensures that the integrative literature review is done in a systematic manner. The extracted data can be compared item by item so that similar data can be categorized and grouped together.

#### 5. Data sources

The traditional Siddha books including works of Theraiyar, Agathiyar were searched between June 2017 to April 2018 at Siddha Central Research Institute (SCRI) Library, Chennai. Keywords searched were: Udaliyal, Dhega illakanam, Yakkai illakkanam

and Pirakruthi. The books included were Agathiyar 2000, Theraiyar Kaapiyam, Theraiyar Vagadam, Theraiyar Maha Karisal, Pathinen Siddhar Nadi Nool, Angaadhi Paadham, Raja Vaidhya Bodhini to name a few. The sources were from original texts and compilations.

#### 6. Features of Udaliyal as per Siddha Classical Texts

Although there is a striking similarity between the Siddha Udaliyal and Ayurvedic Prakriti, there are subtle differences between the conceptualization of Siddha Vali, Azhal, Aiyam with that of Ayurvedic Vath, Pith and Kaph. The Predominant age of each vital humors tend to differ between the two streams, wherein Siddha the childhood is predominated by Vali (Vatham), adulthood by Azhal (Pitham) and senility by Aiyam (Kabam) which is not so in Ayurveda. This difference guides the physiology and pathological aspects of the vital humors theory [26]. The primary objective of this paper is to bring out the identity of Siddha System of Medicine in presenting its own principles of Udaliyal (which though similar to Prakriti) as an important contribution of Siddha towards personalized treatment (Table 1).

#### 7. Traits and domains

During the review, about 25 Siddha books provided moderate to strong evidence of information. The traits under domains were grouped together as they belonged to physical, physiological or psychological domain. The physical domain includes general, site occupied, thaddhu, weight, body parts, complexion, eyes, ears, tongue, teeth and epidermal appendages, bones & joints, scalp and body hair. The physiological domain includes panchabhutham, naadi (pulse), temperature, fatiguability, salivation, voice, food intake, gaseous nature, stools, body odor, urine odor, passage of urine, immunity to diseases, walking pattern, neikuri (oil on urine diagnosis) and frequent diseases. The psychological domain includes gunam, speech, sleep, sexual desires, dreams, mindset, interests, intolerance, intellect, memory, childhood, passions, detesting things,

animals that share the same qualities, taste and food priorities. Thus, by quantifying the reviewed features in *Siddha* literature:

There are 45 characters in total. Physical, physiological and psychological domains have 14, 16, and 15 characters respectively.

Three major themes emerged from the analysis.

1. Assessing persons as *Vali* (*Vatham*), *Azhal* (*Pitham*), *Aiya* (*Kabam*) *Udaliyal* on traditional lines is possible through a validated tool that is user-friendly.
2. Physical, physiological and psychological domains emerged.
3. A comprehensive personality-based inventory (both self-addressed & physician examined) can be devised based on the items pooled from various sources (N = 45).

Regarding balance or imbalance of the three components of the *Muthodam*, two *Vali dhegis* will tend to differ in the percentage of *Vali* disposition. These changes are governed by the genomic influence (Amorphous forms of *Vali*, *Azhal* and *Aiyam* during embryonic formation). These miniscule changes can be apprehended through *Nadi-Sodhanai* (Pulse diagnosis).

## 8. Limitations

Identification of any changes in *Udaliyal* with respect to third factors (eg. aging and environmental effects) cannot be ascertained through this approach.

## 9. Recommendations

By keeping the item review table as the source (Table 1), an *Udaliyal* inventory can be constructed through appropriate measures of validity, and reliability tests and confirmation by large scale field tests. Assessing the validated tool (Inventory) among large samples of population alongside measurement of clinical outcomes will enable public health researchers to justify the use of the tool.

## 10. Conclusion

A physician well acquainted with the traits of *Udaliyal* can clinically approach with treatments tailor-made to the patient alongside dietary, behavioral modifications which in itself helps to document the versatility of the *Udaliyal* in *Siddha* system through prospective cohort studies. Evaluating *Udaliyal* besides conventional diagnostics in analyzing the current physical, mental state of a person will bear fruits for his/her future course of health and disease prevention.

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## Conflict of interest

None.

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