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Research Article

MULTIVARIATE ANALYSIS OF *TRIDOSHAGNA VARGA* OF SIDHHAMANTRA NIGHANTU

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ABSTRACT

Sidhhamantra Nighantu is one such unique lexicon which has a chapter named as *Tridoshaghna Varga* which enlists the drugs which pacify one, two or all the three *Doshas* i.e., *Vata, Pitta* and *Kapha.* Drugs pacifying all the three *Doshas* are unique in their *Rasa Panchaka* in terms of specific combination of *Rasa, Guna, Virya* and *Vipaka*. The *Tridoshaghna* concept and this chapter both stand unique and hence the present chapter was selected for its exploration through multiple correspondence analysis. **Materials and Methods:** All the relevant information about the drugs like their Botanical identity, family, *Rasa, Guna, Virya* and *Vipaka* of *Tridoshaghna varga* was collected with the help of previous and successive texts of *Sidhhamantra Nighantu*. The collected information was subjected to multiple correspondence analysis. **Result:** The chapter *Tridoshaghna Varga* enlists several substances of herbal origin, metallic/mineral origin and animal origin. MCA revealed that the combination of *Sheeta Virya* and *Madhura Vipaka* with the combination of *Tikta* and/or *Katu Rasa* can be the best properties for *Tridoshaghna* action in majority diseased conditions. **Conclusion:** The study data should be considered while clinical practice by clinicians and further studies should be carried out on the nutritional foods included in the chapter for better understanding of *Aahara* (nutritional herbs) as well as *Aushadha* (medicinal herbs) for *Tridoshaghna* action.

INTRODUCTION

Siddhamantra Nighantu is a lexicon written around 13th century AD by *Vaidyacharya Keshava*. The lexicon has been commented by the son of the author, *Vopadeva.* The present chapter of *Sidhhamantra Nighantu* named as *Tridoshaghna Varga* enlists the drugs which pacify one, two or all the three *Doshas* i.e., *Vata, Pitta* and *Kapha.* The group consists of various substances including medicinal plants, minerals, and substances of animal origin. There have been several indications for *Doshaghna* action of drugs across various lexicons and many drugs have been mentioned with the properties of either *Vataghna, Pittaghna, Kaphaghna* or *Tridoshaghna. Sidhhamantra Nighantu* is the first lexicon which has dedicated one whole chapter for *Tridoshaghna Varga* and has mentioned a list of substances claimed to pacify all the three *Doshas*. The end of the chapter also mentions the substances which have no activity on *Tridosha* named as *Tridoshodasina Varga.* It has been well mentioned in the texts of Ayurveda that the action of the drugs depends upon either *Rasa* or *Guna* or *Virya* or *Vipaka* or the combination of any of these[1]. The mode of action of the drugs as per the principles of Ayurveda varies as per different *Prakriti* of the patient, *Dhatu Dushti* (different pathological conditions), Seasonal variation, age of the patient, different *Dosha* condition of the body, chronicity of the disease, *Bala* (magnitude) of the disease and much more. The actions of the drugs are driven either by *Dosha Pratyaneeka* action (actions attributed because of *Rasa Panchaka* of the drug) or *Vyadhi Pratyaneeka* action of the drug (specific action/affinity of the drug for a particular diseased condition). The *Vyadhi pratyaneeka*[2] action of the drugs has been indicated and explained in Ayurveda texts, while the understanding of *Dosha pratyaneeka*

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action of the drugs still lacks the present-day interpretation and explanation in accordance with *Rasa Panchaka* of the drugs. *Dosha pratyaneeka* action of the drugs has been told as *Shreshtha chikitsa* (best treatment modality) by the Ayurveda scientists[3].

The present lexicon chosen for the study categorises the drugs as per their *Dosha Pratyaneeka* action and hence this lexicon was chosen to study the specific pattern of *Rasa Panchaka* of the drug with respect to their therapeutic actions. The study posed the need to visualise and study all the four attributes of drug action namely *Rasa*, *Guna*, *Virya* and *Vipaka*. Multiple correspondence analysis[4] (MCA) is one such mathematical tool which allows the user to visualise multivariate data at various dimensions simultaneously. The basis of MCA lies in reduction of dimensions required to represent the entire data. This is done by assigning a reference value to each data point and then projecting each data point on the chosen dimension (selected by least square distance method) in the sample space. Most of the statistical tools such as SPSS use numerical data tables to determine interdependence between variables in terms of correlation coefficients or regression analysis. However, when the data is purely qualitative, which is the case in this study, standard tools do not help. R-software provides the provision for analyzing such type of data, also called unsupervised data. When there are only two-variables of study, "Correspondence Analysis (CA)" is performed. However, when the number of categorical variables increases, "Multiple Correspondence Analysis (MCA)" is done. Present study aimed at finding the mode of action of the drug for its action on *Dosha* with respect to its *Rasa, Guna, Virya* and *Vipaka* with the help of MCA using R Software.

MATERIALS AND METHODS

1. All the relevant information about the drugs like their Botanical identity, family, *Rasa, Guna, Virya* and *Vipaka* of *Tridoshaghna Varga* was collected with the help of previous and successive texts of *Sidhhamantra Nighantu*.
2. The drugs which were of controversial botanical identity and lacked the textual references of *Rasa*, *Guna*, *Virya*, *Vipaka* were excluded from the computational analysis i.e., multiple correspondence analysis (MCA). Repetitions of the same botanical entity under different herbs were excluded from the MCA and that particular botanical entity was included only once for the analysis to remove the confounding errors.
3. All the English terminologies for Ayurveda terms were taken from NAMASTE[5] portal of Ministry of AYUSH.
4. Various graphical representations were obtained through different projections taken on the data through RStudio[6] Software programme. Two samples were taken for MCA analysis. In Sample 1 (sample size 75), the combination attributes for *Rasa* and *Guna* were kept as single entity under the corresponding columns. In Sample 2 (sample size 255) the combination attributes under *Rasa* and *Guna* were kept separately under the respective rows and columns. The graphical representations of MCA on the data were interpreted and presented in organised manner under result.

RESULTS

The substances that have been told to have *Tridoshaghna* effect are *Kashmari* (*Gmelina arborea* Roxb.) *Vanda* (*Dendrophthoe falcata* L.f Ettingsh.), *Shireesha* (*Albizia lebbeck* L. Benth.), *Aragwadha* (*Cassia fistula* Linn.), *Vanjula* (*Calamus tenuis* Roxb.), *Tuni* (*Cedrela toona* Roxb.), *Ashoka* (*Saraca asoka* (Roxb.) Wilde.), *Saptaparna* (*Alstonia scholaris* (L.) R.Br.), *Palasha* (*Butea monosperma* Koen. ex Roxb.). *Ashmaghna* (*Pashanabheda-Bergenia ligulata* (Wall.) Engl.), *Patala* (*Stereospermum suaveolens* DC.), *Kinihi* (*Careya arborea* Roxb.), *Sariva* (*Hemidesmus indicus* R. Br.), *Patha* (*Cissampelos paerira* Linn.). *Murva* (*Chonemorpha macrophylla* (Roxb.) G. Don), *Soma* (*Sarcostemme brevistigma* W. & A.), *Prasarini* (*Paederia foetida* Linn.).

Tumbi (*Lagenaria leucantha* (Duch.) Rusby.), *Adrikarni* (Blue pea wine-*Clitoria ternatea* Linn.), *Vasanti* (*Jasminum arborescens* Roxb.), *Jivanti* (*Leptadenia reticulata* W. & A.), *Shankhini* (*Euphorbia tirucalli* Linn.), *Visha* (*Ativisha-Aconitum heterophyllum* Wall.), *Guduchi* (*Tinospora cordifolia* (Willd.) Hooknt & Thomson.), *Amlana* (Globe Amaranth-*Gomphrena globosa* Linn.), *Atimukta* (Hiptage Shrub-*Hiptage benghalensis* (L.) Kurz.), *Munja* (Shara-*Saccharum munja* Roxb.), *Tamalaki* (*Bhumiyamalaki- Phyllanthus niruri* auct.non L.), *Bala* (*Sida cordifolia* Linn.).

Sahadeva (Little Iron weed-*Vernonia cineraria* (L.) Less.), *Ambukrishna* (*Jalapippali -Lippia nodiflora* Mich.), *Ibhabala* (*Nagabala-Sida veronicaefolia* Lam.), *Kasaghna* (*Kasamarda-Cassia sophera* Linn.), *Kankata* (*Atibala-Abutilon indicum* (L.) Sweet.), *Kamata* (*Kakamachi-Solanum nigrum* Linn.), *Bakuchi* (*Psoralea corylifolia* Linn.), *Brahmi* (*Bacopa monnieri* (L.)Wettst.), *Chilli* (*Chenopodium album* Linn.), *Jivanta* (*Raktanala- Nymphaea zenkari* Linn.), *Vastuka* (*Chenopodium murale* Linn.).

The vegetative parts of *Satina* (*Pisum sativum* Linn.), the vegetative parts of *Marmari* (*Devadaru-Cedrus deodara* (Roxb.) G. Don.), the vegetative parts of *Susha* (*Cassia occidentalis* (L.) Link. 1829), *Rajakshava* (*Brassica rapa* Linn.), *Shati* (*Hedychium spicatum* Buch.

Ham.Ex. Smith), *Sunishanna* (*Marsilea minuta* Linn.), tender sprouts of *Vari* (*Shatavari-Asparagus racemosus* Wills.), dried tender *Mulaka* (*Raphanus sativus* Linn.), *Sprukka* (*Anisomeles malabarica* (L) R. Br ex Sims.), *Tagara* (*Valeriana wallichi* DC.), *Damana* (*Dhamanaka-Artemesia siversiana* Ehrhex Willd.), *Ushira* (*Vetiveria zizanoides* (L.) Nash.), *Kumkuma* (*Crocus sativus* Linn.), *Jati* (*Jasminum officinale* Linn.), *Mamsi* (*Jatamamsi-Nardostachys jatamansi* DC.), *Shankhapushpa* (*Convolvulus pluricaulis* Choisy), *Tarani* (Totora reed-*Schoenoplectus californicus* (C.A.Mey.) Steud.), *Kunda* (*Jasminum multiflorum* (N. Barman.) Andrews.), *Dhanyaka* (*Coriandrum sativum* Linn.), *Shaliparni* (*Desmodium gangeticum* (L.) DC.), *Prishniparni* (*Uraria picta* (Jacq.) Dev. ex. DC.), *Gokshura* (*Tribulus terrestris* Linn.), *Vrishasaraka* (*Kaundinyaka-Leucas aspera* (Willd.) Linn.), fruits of *Dhatri* (*Emblica officinalis* Gaertn.), fruits of *Abhaya* (*Terminalia chebula* Retz.), fruits of *Kshiri* (*Rajadana-Manikara hexandra* (Roxb.) Dubard.), fruits of *Shatakshaka* (*Anethum sowa* Roxb.), fruits of *Vikankata* (Indian Plum -Flacoutia *indica Burm*. F. Merr.).

Fruits of *Patola* (*Trichosanthes cucumerins* Linn.), fruits of *Nimba* (*Azadirachta indica* A Jass), fruits of *Kutaja* (*Holarrhena antidysenterica* (Roth) A. Dc.), fruits of *Ketaki* (*Pandanus fascicularis* Lam), fruits of *Saraha* (Raja *Jambu-Malabar Plum-Syzygium jambos* (L.) Alston), fruits of *Ingudi* (*Balanites roxburghii* Plachon), ripe fruits of *Kapitha* (*Feronia elephantanum* Correa), ripe fruits of *Kushmanda* (*Benincasa hispida* (Thunb.) Cogn.), ripe fruits of *Prachinaamala* (*Flacourtia jangomas* (Lour) Raeuschert), ripe fruits of *Nipa* (*Anthocephalus chinensis* (Lam) A Rich ex Walp).

Boiled *Puga* (*Areca catechu* Linn.), *Swadu* (Sweet) and *Tikta* (Bitter) variety of *Pilu* (*Salvadora persica* L.), *Swadu* (Sweet) variety of *Dadima* (*Punica granatum* Linn.), *Bola* (*Commiphora myrrha* (Nees) Engl.), *Rala* (*Shorea robusta* Gaertner.), *Silha* (*Silhaka-Altingia excelsa* Noronha.), *Sindhu* (*Saidhava Lavana*-A variety of Rock Salt (Halite) found in Himalayas-Himalayan Crystal Salt), *Suta* (*Parada*-Mercury), *Swarna* (Gold), *Abhraka* (*Abhraka*-Mica) and *Makshika* (Chalcopyrite-CuFeS,).

Among the various types of rice that are available, the varieties that are included under the group are *Raktashali* (Red Rice- *Oryza punctata* Kotschy ex Steud), *Mahashali* (Shaheen rice- A variety of Basmati grown in Pakistan also known as Super Basmati Shaheen Rice (*Oryza sativa* Linn.)). *Kalama* (Bada-Sharad- Rice (*Oryza sativa* Linn.) variety grown in Orissa), *Shakunahrita* (A variety of rice grown basically in Japan- *Oryza sativa* var. japonica Koern.), *Dirghashuka* (Wild rice- *Oryza nivara* S.D.Sharma and Shastry), *Rodhrashuka* (Tinni rice- *Oryza rufipogon* Griff.), *Turna* (Instant Rice- A variety of rice (*Oryza sativa* Linn.) that has been precooked and dehydrated so that it cooks more rapidly), *Ashvayuja* (Kashmiri-Kamad and Mushk bhudj- Varieties of rice (*Oryza sativa* Linn.) grown indigenously in Kashmir valley.), *Shankhamauktika* (Idli rice- A short grain rice found in India-a variety of rice (*Oryza Sativa* Linn.).

Langala (Langi-semi-dwarf long grain, soft jade cooking-an Australian variety of Rice (*Oryza sativa* Linn.), *Kardama* (*Kardhana*- a variety of rice (*Oryza sativa* Linn.) grown in the Rewa district of *Madhya* Pradesh), *Lohawala* (Wild rice- *Zizania palustris* Linn.), *Mahishamastaka* (*Tulsi*- a variety of rice (Oryza sativa Linn.) that is grown in Madhya Pradesh), *Pundra* (Basic Madagascar Pink Rice- *Oryza longistaminata* A. Chev. & Roehrich), *Pandu* (Poornima- a variety of rice (*Oryza sativa* Linn.) cultivated in Madhya Pradesh), *Pundarika* (*Sona Masuri*- A white rice (*Oryza sativa* Linn.)), *Pramoda* (A variety of Basmati Rice (*Oryza sativa* Linn.) known as *Maha sugandh*), *Gaura* (Yellowish tinged grain- A parboiled long grain rice (*Oryza sativa* Linn.) where it is partially boiled in the husk), *Sariva* (Brown rice or unmilled rice a variety of rice (*Oryza sativa* Linn.), rice (*Oryza sativa* Linn.) cultivated in China), *Tapaneeya* (A heat tolerant variety of rice-Saramukha (Chinese black rice (*Oryza sativa* Linn.), *Sheetabheeru* (Yunlu variety of *Orya meridionalis* Ng.), *Sugandhika* (*Seeraga Samba*- A variety of rice (*Oryza sativa* Linn.) grown in the state of Tamil Nadu (India) which has rich aroma), *Pushpagandha* (White Jasmine rice- A variety of rice primarily grown in Thailand (*Oryza sativa* Linn.) with fragrance), *Dirghanala* (With intermittent featured tube- *Oryza longiglumis* Jansen), *Mahadushaka* (Basmati Rice- *Oryza sativa* Linn. with typical pandanus leaf like flavour), *Dushaka* (Patna Rice-a variety of *Oryza sativa* Linn. with long grain and aroma).

Patanga (Kerala Red rice- Rosematta Rice is an indigenous variety of rice (*Oryza sativa* Linn.) grown in Kerala state of India which is paraboiled grown in South India and Srilanka), *Kanchanaka* (Golden-yellow variety of Chennellu rice-a variety of rice (*Oryza sativa* Linn.) cultivated indigenously in Kerala), *Hayana* (Himalayan Red rice-a variety of Basmati rice (*Oryza sativa* Linn.)), etc similar rice grains. The varieties of rice that are grown within a short duration (60 days) are namely *Gaura* (*Gauria Sathi*-a variety of rice (*Oryza sativa* Linn.) that was grown in Gorakhpur), *Mahan* (*Sathi* rice- A variety of Basmati Rice), *Kurubaka* (Red Cargo Rice- A variety of Rice (*Oryza sativa* Linn.)), *Pramoda* (Super Kernel basmati rice-A variety of Rice (*Oryza sativa* Linn.), *Asanapushpaka* (African Rice-*Oryza glaberrima* steud).

Mukunda (Gobindo Bhog- A variety of aromatic rice (*Oryza Sativa* Linn.) grown in the region of West Bengal), *Kalaka* (*Tulsi Manjari*-A black coloured rice

(*Oryza sativa* Linn.) grown in the state of Tamilnadu), *Pita* (Vadan Samba or Samba rice a variety of Rice (*Oryza sativa* Linn.) grown in the state of Tamilnadu and Srilanka), *Kedara* (Deep water rice-A variety of rice (*Oryza sativa* Linn.) grown in the flood affected areas), *Churna* (*Kalijira* Rice- *Oryza sativa* Linn. a variety that is similar to Sushi rice of Japan) and *Kanguka* (Poreiton chakhau-aromatic dark red rice from Manipur) are supposed to produce the said effect. The other cereals or grains that are included under this group are *Mahan* (Mahan Tandula Maize-Zea mays Linn.). *Krishna* (Dark spike-Sorghum *purpureo sericeum* (Hochst. ex A.Rich.) Schweinf.), *Jatumukha* (Northern Wild Rice-*Zizania palustris* Linn.).

Saramukha (Idly Rice-A variety of rice (*Oryza sativa* Linn.) grown in India), *Twarita* (Hardinath-A variety of early rice (*Oryza sativa* Linn.) grown in Nepal), *Lavaksha* (Wild Rice-*Zizania latifolia* (Griseb) Turcz. ex Stapf), *Cheena* (Proso millet-*Panicum miliaceum* Linn.), *Shukara* (Red Amaranth grains-*Amaranthus cruentus* Linn.), *Kukkutanda* (Japanese Rice-Uruchimai or Sushi Rice (*Oryza sativa* Linn.) of Japan), *Ujjala* (Canary grass- *Phalaris canariensis* Linn.), *Sharada* (Grown during *Sharad Ritu*- Rabi Crop of Winter Crop or Mid-Autumn harvest of Cereals), *Dardura* (A rice that is grown whet there is plenty of water available- Kharif crop or monsoon crop).

Kuruvinda (Wall Barley or False Barley-*Hordeum murinum* Linn.), *Nandimukha* (Durra Jowari/ Milo-*Sorghum bicolor* (L.) Moench), *Uddala* (Japanese Barnyard Millet- *Echinochloa esculenta* (A.Braun) H. Scholz.), *Varaka* (Rye-*Secale cereal* Linn.) and *Gandhana* (Joha Rice- A variety of Rice (*Oryza sativa* Linn.) that has aroma and is grow in Assam Region), Water sources namely *Gangambu* (pure rain-water) among the *Antariksha Jala* (rain water or dew that is obtained before the contact of earth), *Asvi jala* (water obtained during *Ashvini nakshatra* or month of *Ashvini*) among the *Samudra* (large water sources present on earth that occur naturally).

The substances that are considered to produce the effect of *Tridoshodasina* are curds with honey, cold water or dew and *Raga khadava* (a preparation with main ingredients as *Dadima* (*Punica granatum* Linn.) and *Draksha* (*Vitis vinifera* Linn.)

Result of MCA analysis

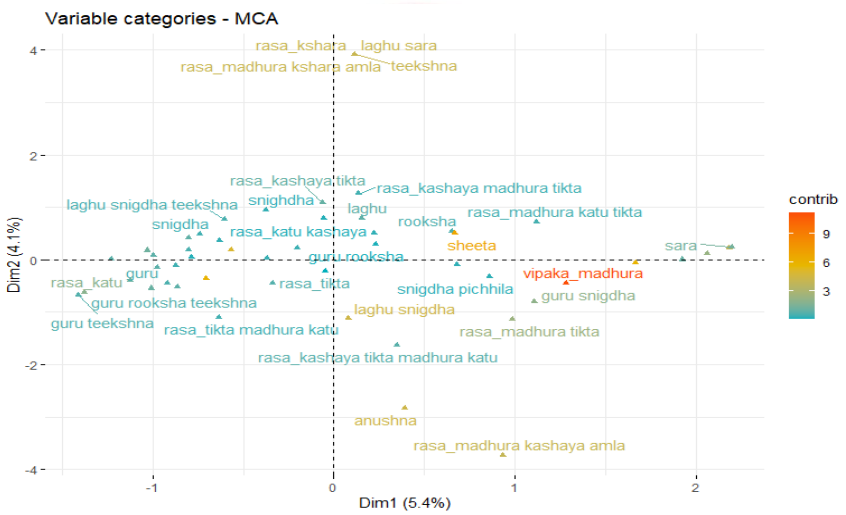

Figure 1: Variable categories - MCA for sample 1

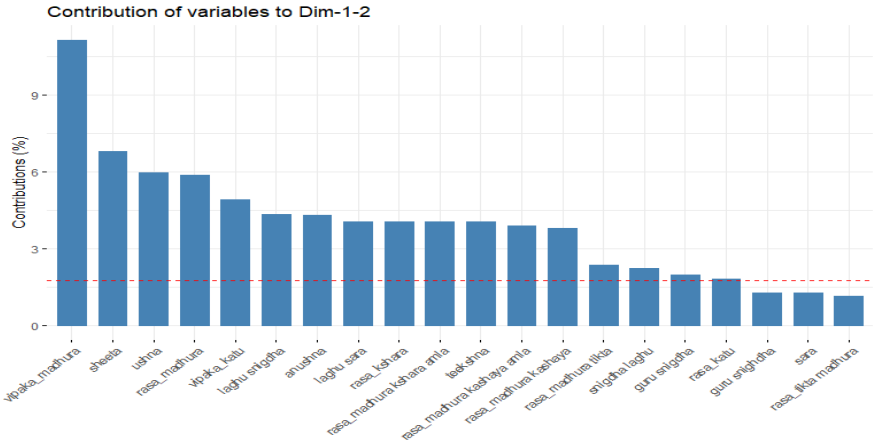

Figure 2: Contribution of variables to Dim 1-2

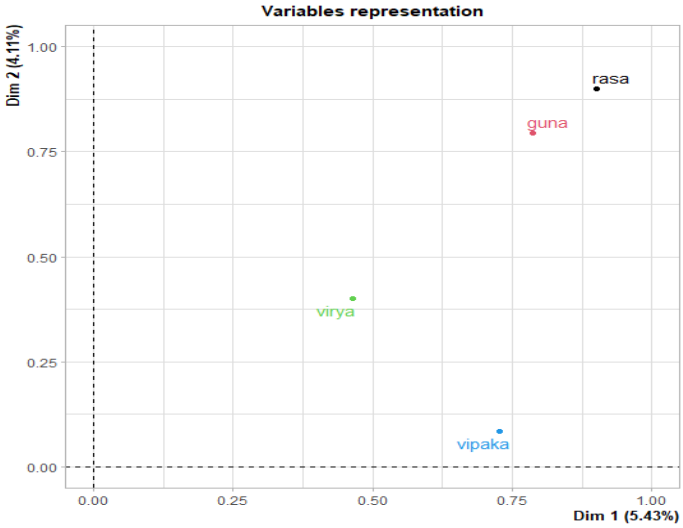

Figure 3: Variable representation for sample 1

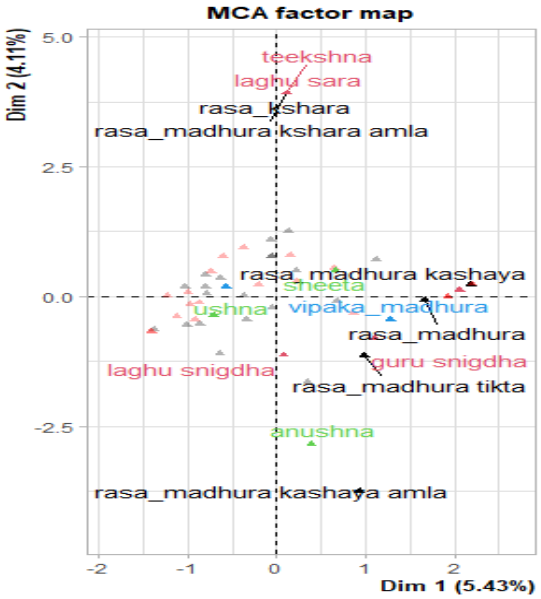

Figure 4: MCA Factor map for sample 2

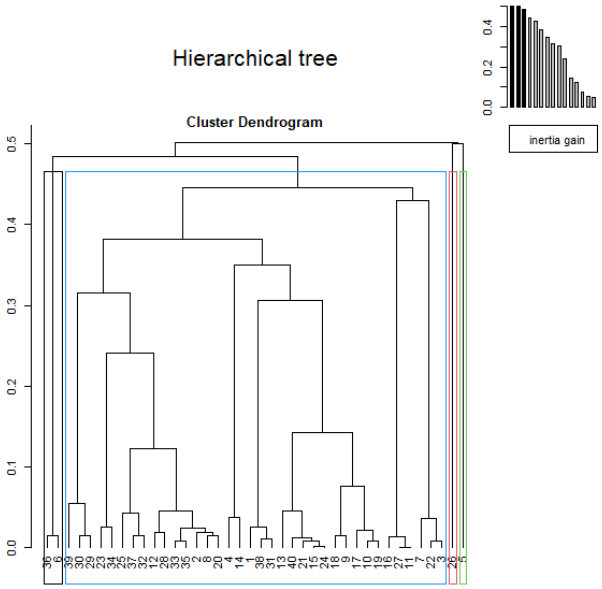

Figure 5: Cluster Dendrogram for sample 1

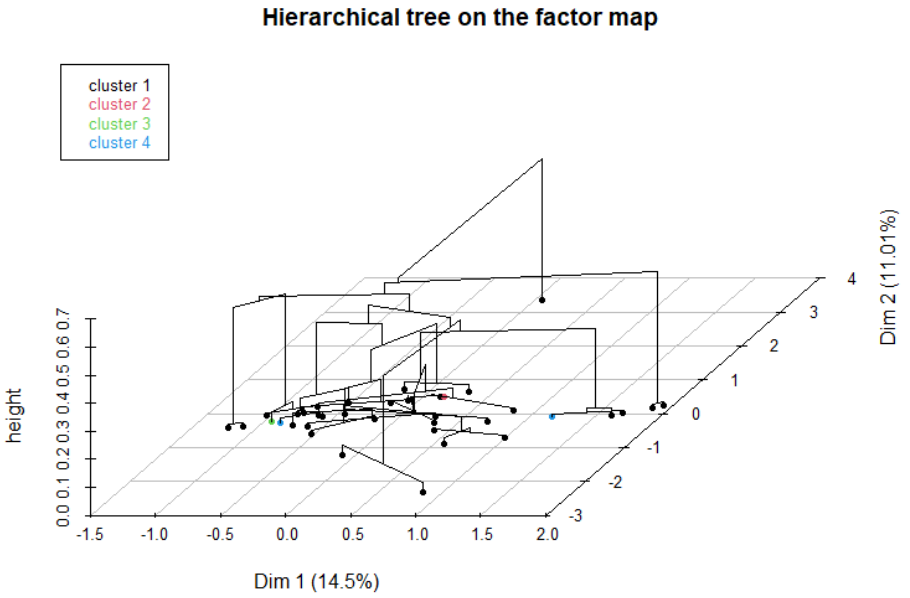

Figure 6: Hierarchical tree on the factor map for sample 1

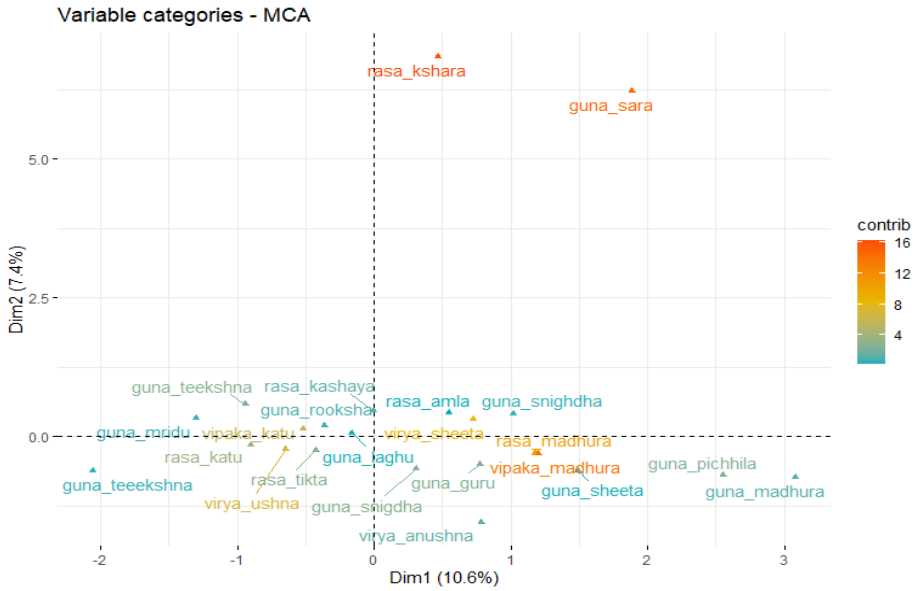

Figure 7: Variable categories – MCA for sample 2

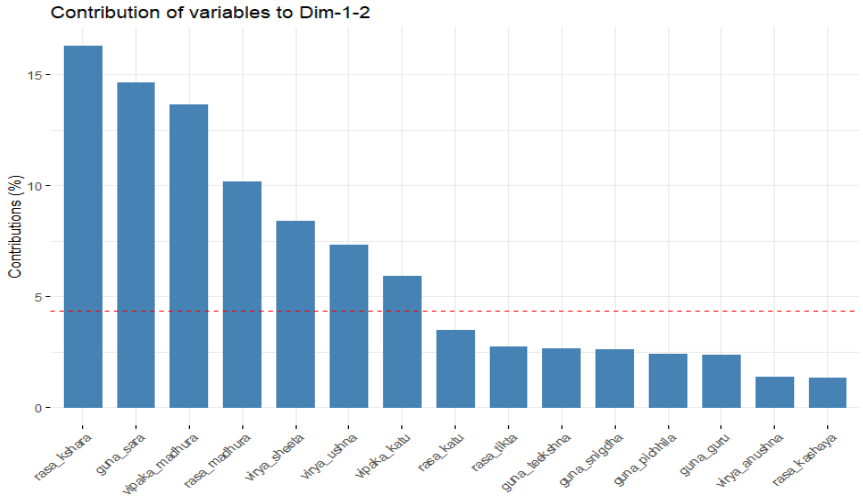

Figure 8: Contribution of variables to Dim 1-2

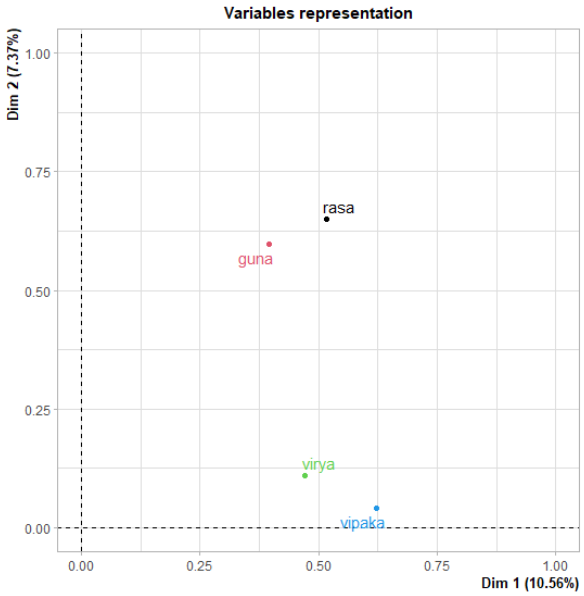

Figure 9: Variable representation for sample 2

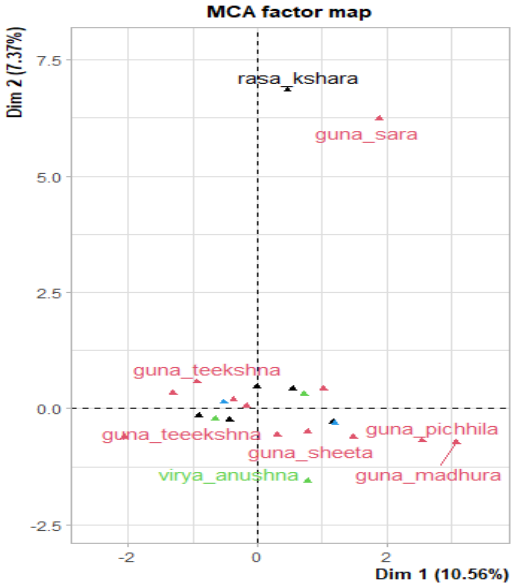

Figure 10: MCA Factor Map for sample 2

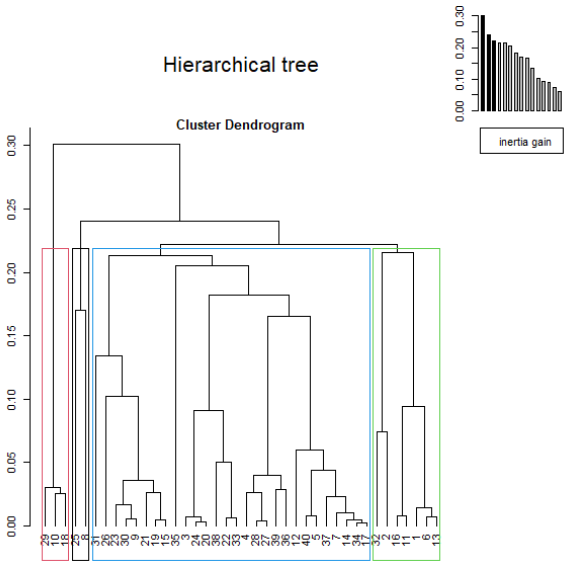

Figure 11: Cluster Dendrogram for sample 2

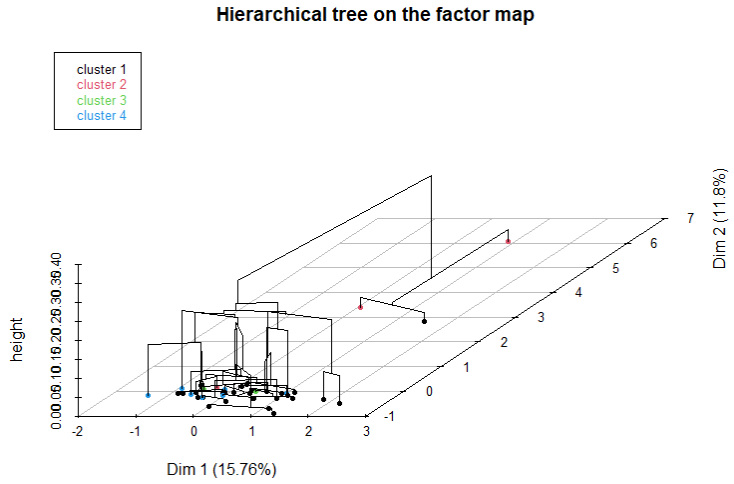

Figure 12: Hierarchical tree on the factor map for sample 2

MCA for Sample 1

MCA revealed that *Madhura vipaka* was the most significant factor for *Tridoshaghna* action as can be inferred from figure 1 and 2. *Sheeta Guna* was the subsequent contributing factor for the mentioned action as can be seen in figure 2. Figure no 3 reveals that *Rasa* was the most significant factor amongst the four variables i.e., *Rasa, Guna, Virya* and *Vipaka.* Figure 1 also helps visualise the closely associated entities amongst the variables like *Madhura Tikta Rasa, Guru Snigdha Guna,* and *Madhura Vipaka.* Cluster analysis (HCPC) as in figure no 5 & 6 also revealed that the drugs like *Palasha, Jivanti, Bala, Sariva, Ashoka* are closely related to each other and share some identical properties.

MCA for Sample 2

MCA for sample 2 revealed that *Kshara Rasa* was the highest significant factor as can be inferred from figure no 7, 8 & 10. *Sara Guna* was the subsequent significant factor for the *Tridoshaghna* action as seen in Figure 7 & 8. *Madhura Vipaka* was found following these variables as can be seen in figure 8. Variable representation through the analysis again revealed that *Rasa* was the most significant factor for *Tridoshaghna* action as seen in figure no 9.

DISCUSSION

A prima facie glance on the substances included under *Tridoshaghna Varga* reveals that there are four subclasses of the substances used in this group, namely medicinal herbs, nutritional herbs/ foods, minerals and animal origin products. The present group contains many varieties of rice which have been grown in different atmospheres and within different soil, environment, and habitat and with different growing irrigation processes and time. Hence a majority chunk of the entities of this group brings our attention towards the nutritional value of the food items which can be used as diet as per specific body constitutions (*Prakriti*). Such varieties of rice being mentioned here draw the attention of the physicians to find a good resort in food for balancing the *Doshas* (maintaining homeostasis).

Another major section of this chapter is formed by different herbs. Herbs like *Gambhari, Patala, Gokshura, Shalparni, Prishniparni* aptly find their place in this group as they are the contents of *Dashmoola,* which is a broad-spectrum combination in Ayurveda. The above-mentioned drugs not only possess *Tridosha Shamaka* property (*Tridosha* pacifying action), but also can be subjected to a wide range of transformations (*Sanskaras*) in terms of dose (*Matra*) and dosage forms (*Kalpana*). The inclusion of the herbs like *Shankshpushpi, Brahmi, Jatamansi,* in this group not only indicates the *Tridoshaghna* action of these drugs, but also indicates that the vitiation of *Satva, Raja* and *Tamas* has to be taken into account while addressing the holistic health of human body. The herbs like *Abhaya, Dhatri, Mishreya, Guduchi* being categorised under this group indicate that *Srotoshodhana* and *Shamana Karma* simultaneously done by the drugs leads to *Tridoshaghna* action. These drugs carry the property of *Deepana, Pachana* (digestives), *Anulomana* as well as *Dhatu samyakrita* (pacifying disturbed *Dhatu*), which makes them unique and hence useful for the vitiation of all the three *Doshas.*

Rationale of the MCA results

Tridoshaghna Karma is the specific action with respect to the therapeutic efficacy of the drugs. *Doshaghnata* of various drugs has been well stated in other lexicons and drugs have been described as per their morphological properties in terms of synonyms, their therapeutic efficacy (*Doshaghnata*) and their clinical indication. It has been well stated in Ayurveda classics that drugs work by either their *Rasa, Guna, Virya* or *Vipaka*[7]. The MCA analysis of present set of drugs revealed that *Rasa* and *Vipaka* are the major

significant entities for the *Tridoshaghna* action. *Tridoshaghna* action can be achieved only if the drug action is balanced in such a way so that the drug performs *Pachana* and *Srotoshodhana*[8] (cleansing the micro-channels) in the body without giving any *Aptarpana* effect (catabolic activity) in the body tissues (*Dhatu*). The drugs selectively performing pacifying action on all the three *Doshas* have a combination of *Pachana* (metabolic correction), *Srotosdodhana* (cleansing of micro-channels) and *Shamana* (pacifying action) property while still keeping the body in adequate health (*Dhatusamya*). *Madhura Vipaka* was the highest significant factor for *Tridoshaghna* action as per MCA which reveals that *Vipaka* being the ultimate action of the drug, promotes *Jivaneeya* (promoting longevity) action and hence dispenses *Tridosha* pacifying activity. *Sheeta Guna* was found the subsequent contributory factor which can be understood by the fact that majority of *Madhura Vipaka* drugs are *Sheeta* in *Virya. Rasa* like *Madhura, Katu, Tikta* were found in close association with the *Madhura Vipaka* and *Sheeta Guna* as per figure no 1. Hence the combination of *Sheeta Virya* and *Madhura Vipaka* with the combination of *Tikta* and/or *Katu Rasa* can be the best properties for *Tridoshaghna* action in majority diseased conditions. The combination of *Kshara Rasa, Sara Guna* and *Madhura vipaka* (as found in sample 2) also dispenses a balanced action of *Deepana, Pachana, Anulomana* and *Srotoshadhana* action while maintaining the homeostasis in the body. *Tridoshaghna* drugs have such combination of *Rasa panchaka* which helps achieve catabolic action and anabolic action accomplished at the same time thereby maintaining homeostasis.

CONCLUSION

Tridoshaghna Varga of *Sidhhamantra Nighantu* not only gives the drugs to be used for *Tridosha* pacification while in clinics, but also gives an insight about the principles of drug action. MCA helped a great deal to analyse the drug action in this regard. It is suggested that the group should be considered while clinical practice by clinicians and further studies should be carried out on the nutritional foods included in the chapter for better understanding of *Aahara* (nutritional herbs) as well as *Aushadha* (medicinal herbs) for *Tridoshaghna* action.

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