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The Diversity of Indigenous Medicine of Sri Lanka: A Cross Sectional Study

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Abstract

Traditional Medical System in Sri Lanka comprises Ayurveda, Siddha, Unani, and *Deshiya Chikitsa*. *Deshiya Chikitsa* is a purely native kind of medicine that has been practicing since pre-historic period of Sri Lanka. The general objective of this study was to investigate diversity of indigenous medicine (IM) in the Moneragala District. Ninety registered physicians were selected from the population using purposive sampling method. Qualitative data collection methods were used for collecting primary data. The Moneragala District has rich diversity of IM and eighteen medical genealogies and 325 indigenous physicians were identified. The majority of physicians are unregistered with the Ayurvedic Medical Council. *Sarpavisha wedakama* and *Kadumbindum wedakama* are the wide spread branches that prevail in the Moneragala District. The other identified branches are demonology (*Bhutavidya*), treatment for stray-dog bite (*Jalabhitika*), abscess and sore (*Gedivana*), common ailments (*Sarvanga*), eye-diseases (*Akshiroga*), psychiatric disorders (*Manasaroga*) and skin diseases (*Charmaroga*).

Keywords: Diversity, Medical Genealogies, Indigenous Medicine, *Deshiya Chikitsa*

Introduction

Indigenous Medicine (IM) "*Sinhala Wedakama*" is a unique heritage of Sri Lanka coming over centuries based on a series of ancient indigenous medical literature handed down from generation to generation. In fact, Sri Lanka is proud to claim to be the first country in the world to have established systematic hospitals[1]. Some ancient cities of Sri Lanka; Polonnaruwa, Medirigiriya, Anuradhapura and Mihinthale still have the ruins of what many believe to be the first hospitals in the world[2]. Historically, indigenous physicians enjoyed a noble position in the country's social hierarchy due to the royal patronage granted to them by ancient kings. From this legacy, it was stemmed a well-known Sri Lankan saying: "be a physician if you could not be the king"[3]. Indigenous medicine of Sri Lanka comprises various indigenous healing systems that have been developed within societies before the time of modern medicine were forcefully introduced to Sri Lanka. Even today, Sri Lanka has numerous branches of Indigenous medicine such as traditional form of fracture healing, treatment of snake bites, ophthalmology, psychiatry and treatment of abscesses, wounds and cancers etc. which are said to be still effective and accepted by the community. Sarartha Samgraha, Vatika Prakaranaya, Deshiya Chikitsa Samgrahaya, Oushadha Samgrahaya and various Ola leaf manuscripts are some key written materials related to Sri Lankan indigenous medicine. In addition, there are many valuable medicines, treatment methods, beliefs and techniques in some families coming from generations which are still un-documented[4].

Sri Lanka had diverse forms of indigenous medicine for preserving well-being of the ancient society and has a rich intangible cultural heritage associated with traditional knowledge coming from throughout the history which bears features of native culture and protects the biodiversity of the natural habitats

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of the country.

Sri Lankan Indigenous Medicine (IM) is not merely a system of alternative medicine or health care system, but is a vast area of cultural heritage. It not only cares ailments, but it deals with culture, religion, norms, customs, values, ethics, rituals and also beliefs all of which fabricate Sri Lankan lifestyle. Indigenous medicine coined with traditional knowledge is complete knowledge systems with its own philosophy and logical validity which can only be understand by means of pedagogy traditionally employed by the people themselves.

There are several ritualistic practices performed personally as well as collectively for expelling out ill cause and gaining blessings of the God to maintain health. Every phase of therapeutic process is strengthened by a ritual or sorcery and personally monitored by the physician. He ensures the safety and efficacy of the treatment where most of the treatments are customized and individualized in accordance with patient's humoral uniqueness. Traditional physicians use minimum medicines to get optimal relief with the diversified use of medicinal preparations. They use same medicine with different forms of vehicles for various ailments[5].

Unfortunately, due to various reasons, the most of indigenous healing practices are not currently practiced. However, all these indigenous healing practices irrespective of the fact that they are documented or not, are to be investigated, studied, conserved and used sustainably for the benefit of future generations.

Research Problem

The Moneragala District is believed have rich heritage of indigenous medicine. People are still depending on indigenous healing practices for their primary health needs. Being an uncongested area, the Moneragala District has abundance of medicinal plants. Considering all the above facts, the research problem of this study has been formulated as follows. What are the diversities of indigenous medicine in the Moneragala District?

Objectives

The general objective of this study was to investigate diversity of indigenous medical practices including various healing practices, indigenous medical genealogies, techniques, medicines and beliefs in the Moneragala District and to study the challenges in conservation of indigenous medical practices. Specific Objective is to investigate different branches and genealogies (*Weda parampara*) available in the research area.

Methodology

The cross-sectional study was carried out from 2017 to 2019 in all divisional secretariats of the Moneragala District of Sri Lanka. The list of indigenous medical practitioners of various branches living in the Moneragala District was obtained from the Ayurvedic Medical Council (AMC). Further details were obtained from the divisional secretariats of the Moneragala District through *Ayurveda Sanrakshana Sabha* and the provincial Ayurveda department of the Uva province.

Ninety (90) registered indigenous physicians irrespective of their age, sex, ethnicity and the branch of indigenous medicine were incorporated in the study. Purposive sampling methods was used because of the fact that it can be logically assumed that the sample represent the population. The sample size was determined according to Cochran's (1977) formula[6].

Qualitative data collecting techniques such as in-depth interviews, field notes, key informant interviews, direct observations and questionnaire were used for collecting primary data. Key informant like provincial Ayurveda commissioner of the Uva province, Registrar of the Ayurvedic Medical Council, and chairperson of Ayurveda Conservation Councils of each divisional secretariat were interviewed[7]. The aim of the research was explained to the interviewees before they were interviewed and obtained prior informed consent verbally. The interviews and observations were initiated after receiving verbal approval from them.

The interviews were done at a time and place chosen by the interviewees which enables them to express

their perspectives and knowledge independently. The rationale for using multiple sources is triangulation of evidences which increase reliability of data and their collection. Secondary data were collected from manuscripts, Ola leaves, books, journals, research papers, internet, dissertations and theses. Qualitative data analyzing methods were used for the interpretations of data. The collected data were analyzed for themes from which conclusions were made. Data were analyzed by using SPSS software.

Results and Discussion

The Moneragala District is the second largest of 25 Districts of Sri Lanka with an area of 7133 km². The main occupation of those who live here is farming. Cultivation of land is linked to the monsoon. The savanna like plain has its share of wildlife such as elephants, peacock, fox, buffalo, deer and elk.

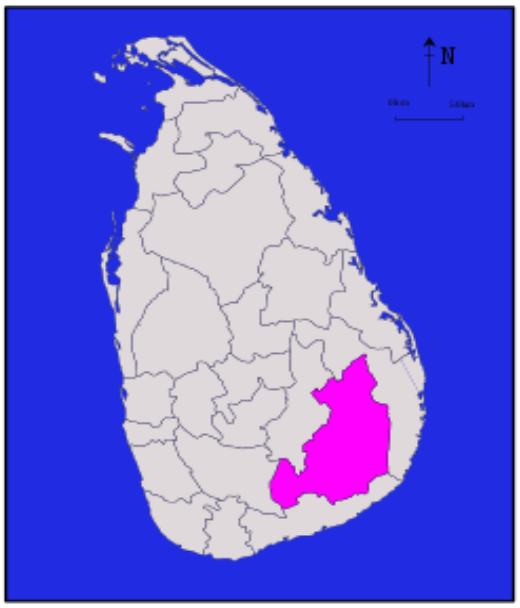

Fig. 1: The map of Sri Lanka and the Moneragala District (Source: Internet)

Total population of the Moneragala District was 451,058 at the census conducted in 2012 which is 2.22 % of the total population of Sri Lanka (DCS, 2012). The male population was 224,168 whereas the female population was 226,890. Population Density is 83/km^2.

Fig. 2: Divisional Secretariats of the Moneragala District (Source: Internet)

Table: 1: Registration, sex and family lineage (*Weda parampara*) wise distribution

Registration	%	Sex	%	Family lineage	%
Registered	48.30	Male	80.55	Yes	7.01
Not registered	51.70	Female	14.78	No	92.99

The total number of indigenous physicians belong to different branches living in the Moneragala District were 325. Out of them, 157 (48.30%) physicians were registered with the Ayurvedic Medical Council whereas the rest of the healers (168) (51.70%) were unregistered. Among the total population of indigenous physicians (325), 80.55% were males and 14.78% were females. The only 7.01% of physicians has direct relationship of family lineage of indigenous medicine (*Weda parampara*) whereas 92.99% of physicians have no such inherent genealogy of indigenous medicine. Therefore, it is concluded that very few numbers of physicians have been studying indigenous medicine from their own successors and their own family lineage of indigenous medicine is being gradually faded. Contrary, a large number of people are interested to

study indigenous medicine to become physicians who have no any relation to indigenous medicine. (Table-1)

Table: 2: Ethnicity, nature of practice and occupation wise distribution

Ethnicity	%	Nature of practice of IM	%	Occupation	%
Sinhala	99.23	Full-time	05.44	Physician	05.44
Muslim	0.77	Part-time	94.56	Farmer	92.44
Tamil	0.00	-	-	Clerk	0.38
-	-	-	-	Teacher	0.38
-	-	-	-	Postman	0.38

When considering the ethnicity, the majority of physicians was Sinhala (99.23%) followed by Muslim (0.77%). There was no single Tamil physician in the Moneragala District. The 94.56% of physicians were not doing treatment as their sole occupation whereas only 05.44% of physicians were engaged in full-time treatment as their occupation. By foregoing, it is concluded that males are predominantly involved in practicing indigenous medicine and Sinhala people are more dominating in indigenous medicine of Sri Lanka that is the reason to use "*Sinhala wedakama*" synonymous to indigenous medicine. The vast majority of physicians practice indigenous medicine part-time which may be multi-factorial (table-2). The actual occupations of the majority of persons were agriculture (92.99%), followed by clerical work (0.38%), teaching (0.38%), trading (0.38%), postman (0.38%) and full-time clinical practice (05.44%).

Considering the way of gaining knowledge of indigenous medicine (mode of transmission of indigenous medical knowledge), 5.44% of physicians learnt from father, followed by from uncle (0.77%), mother (0.38%) and grandfather (0.38%). The, only 7.01% of physicians has direct relationship of family lineage of indigenous medicine (*Weda Parampara*), whereas 92.99% of physicians has no such inherent genealogy of Indigenous Medicine.

Table: 3: Age and educational status wise distribution of data

Age	%	Educational status	%
20-30	4.66%	Below O/L	62.25%
31-40	17.50%	O/L passed	34.63%
41-50	19.84%	Up to A/L	05.09%
51-60	26.45%	Graduated	0.00%
61-70	17.89%	-	-
71-80	10.11%	-	-
81-90	03.11%	-	-
91-100	0.38%	-	-

Considering educational status, the majority of physicians (healers) had educated below the ordinary level of General Certificate of Education (GCE O/L) (62.25%) followed by O/L passed (34.63%), up to GCE A/L (05.09%) and no graduated (0.00%). When considering age of the total population, majority of physicians were within the age range of 51-60 (26.45%), followed by 41-50 age group (19.84%), 61-70 (17.89%), 31-40 (17.50%), 71-80 (10.11%), 20-30 (4.66%) and 81-90 (3.11%). The least percentage of physicians was belonged to 91-100 age group (0.38%). By forgoing, it clear that majority of indigenous physicians have no proper educational qualifications. (Table-3)

Diversity of Indigenous Medicine

Diversity is the term used to describe the state of being diverse or the range of different things. There are many fields of practices of indigenous medicine available in the Moneragala District.

Table 4: Registered/Unregistered indigenous physician in the Moneragala District

Divisional Secretariat	Registered	Un-registered
Sewanagala	12	07
Kataragama	02	06
Thanamalvila	04	03
Wellawaya	25	18
Buttala	09	10
Moneragala	21	13
Sayambalanduwa	21	09
Madulla	21	23
Medagama	14	36
Bibile	17	29
Badalkumbura	11	14
Total	157	168

Source: Survey Data

The table shows that 157 (48.31%) 'physicians' were registered with Ayurvedic Medical Council whereas 168 (51.69%) persons were unregistered. The table also shows the number of physicians in each divisional secretariat in the Moneragala District. The indigenous physician: patient ratio is nearly 1:2873. Unregistered physicians are also recognized as physicians by villagers where they live. In that context physician: patient ratio is nearly 1:1388. (Table 4)

Related to registered physicians *Sarpavisha wedakama*, and *Kadumbindum wedakama* were the wide spread branches that prevails in all eleven divisional secretariats in the Moneragala District. Other branches of indigenous medicine identified were *Sarvanga wedakama* (treatment for snake bite), *Gedi-wana-pilika wedakama* (treatment for abscess and wounds), *Akshiroga wedakama* (treatment for eye disease), *Manasikaroga wedakama* (treatment for mental disorders), *Pissubalu* or *Jalabhitika wedakama* (treatment for rabies), *Charmaroga wedakama* (treatment for skin disease), and *Bhutavidya wedakama* (treatment using intangible forces).

Table 5: Proportion of each different field wise distribution

Fields of IM	Number	Percentage
Sarpavisha	68	43.31
Kadumbindum	46	29.30
Bhuthavidya	02	1.27
Jalabhithika	02	1.27
Gediwana	03	1.91
Sarwanga	31	19.74
Akshiroga	01	0.64
Manasikaroga	02	1.27
Charmaroga	02	1.27
Total	157	100

Source: Survey Data

Among registered physicians, the majority of physicians in the Moneragala District belong to the field of *Sarpavisha* (43.31%) followed by of *Kadumbindum* (29.30%). The least number of physicians are in the field of *Akshiroga* (0.64%). The physicians related to the fields of *Bhutavidya*, *Jalabhithika*, *Manasikaroga* and *Charmaroga* are in equal number (1.27%) (Table-5).

Table 6: Proportion of each different fields (*parampara*) wise distribution

Divisional Secretariat	Registered physicians	Un-registered healers	Total	Percen-tage %
Sewanagala	12	07	19	5.84
Katharagama	02	06	08	2.46
Thanamalvila	04	03	07	2.15
Wellawaya	25	18	43	13.23
Buttala	09	10	19	5.84
Moneragala	21	13	34	10.46
Siyambalanduwa	21	09	30	9.23
Madulla	21	23	44	13.53
Medagama	14	36	50	15.38
Bibile	17	29	46	14.15
Badalkumbura	11	14	25	7.69
Total	157	168	325	100

Source: Survey Data

Irrespective of registration, the majority of physicians are living in the Medagama divisional secretariat (15.38%) whereas Thanamalvila is the divisional secretariat (2.15%) where the least number of physicians are living in the Moneragala District. Bibile (14.14%), Madulla (13.53%), Wellawaya (13.23%), Moneragala (10.46%), Siyambalanduwa (9.23%), Badalkumbura (7.69%), Sewanagala (5.84%), Buttala (5.84%) and Katharagama (2.46%) divisional secretariats reported to have moderate to a smaller number of physicians in reducing manner (table 6). It was observed by the researcher that a considerable number of "healers" who do treatments are not registered at Ayurvedic Medical Council (AMC) and reason for which is many-fold. The majority of both registered (48.30%)) and unregistered (51.70%)) "physicians" (healers) are related to *Sarpavisha* (snake bites) *wedakama* (43.31%).

Even the majority of registered indigenous physicians are not engaged full-time treatment having well established dispensary (*Wedagedara*). They have not exact time period assigned for treating patients. In spite of being registered as indigenous physicians; the majority of them doing other occupations such as farming, carpentry and iron work for living other than indigenous medical practice, all of which are labour dominant.

Although majority of healers do not do treatment, they are popularly engaged in rituals such as *Yantra*, *Mantra* and *Dehi-kepeema* (lime cutting) etc. which are exclusively not for curing ailments, but for other worldly needs. Though they are physicians, a majority of them does not appear to have an organized way of treatment that is expected from registered physicians. They are doing just a kind of home remedies using few nearby medicinal plants. Among the sample physicians, only one or few were examining or doing treatment when the researcher visited them. The majority of physicians live in very remote villages in the divisional secretariats where they belong to.

Although the majority of physicians do not appear to have an organized way of treatment that is expected from registered physicians, a handful of them have well established treatment centers (*wedagedara*) with necessary infrastructure. For example, physicians of *Galabedda weda paramparawa* are appear to be busy with treatments for *Kadumbindum* who have their own 'hospital' having both OPD and IPD sections. Their hospital is well-equipped and manned with trained workers, most of them being their own family members and close relations. Average of 20-30 patients of orthopedic casualties consult physician at Galabedda hospital that is situated at Dambagalle near Kodayana 12 km away from Moneragala.

RM Kalubanda, is a well reputed physician for fracture healing (*Kadumbindum*) who treats at his home (*Wedagedara*) at Dambakenella nearby Medagama. DHM Gunasekara, who is a physician of Sarvanga registration with AMC conducts his treatment centre at his home at Kumbukkana, 10 km on the way from Moneragaala to Buttala and who is a popular physician for treating *Grahani* and *Mandam* diseases (malnutrition in children). DM. Gunasekara is a physician having two registrations (*Akshiroga* and *Sarpavisha*) who does treatment at Badalkumbura. Almost all others do just a kind of home remedies and use a few nearby medicinal plants only. It was also seen that a number of physicians are registered in Ayurvedic Medical Council more than one branch of treatment.

Indigenous Medical Genealogies (*Weda parampara*)

In this study, eighteen (18) indigenous medical genealogies (*Weda parampara*) were identified. They are namely *Gamgoda Arawegedara paramparawa, Wellasse Kelekorala paramparawa* (*Sarwanga*), *Uva-wellassa Kelekorala Medagama Patthuwe paramparawa* (*Sarwanga*), *Tangalwatta paramparawa, Weligamarala paramparawa* (*Sarwanga*), *Danigala paramparawa* (*Charmaroga*), *Galabedda paramparawa* (*Kadumbindum*), *Rattanapitiya paramparawa, Thuttana paramparawa* (*Sarpavisha*), *Sapugolla Thapodanarama paramparawa* (*Sarpavisha*), *Wewethenna paramparawa, Pillegoda paramparawa* (*Sarwanga*), *Wellassa*

Ithanawatthegedara paramparawa (*Sarpavisha*), *Thalagangoda paramparawa* (*Sarpavisha*), *Hakmana Denagama Munasinghe paramparawa* (*Sarpavisha*), *Kamburugamuwe paramparawa* (*Eswedakama*), *Matara Yatiyana paramparawa* and *Neluwa paramparawa* (*Kadumbindum*).

When analyzing the above indigenous medical genealogies (pedigrees), it is seen that some of them having village names which are not in the Moneragala District. They are *Weligamarala paramparawa* (*Sarwanga*), *Hakmana Denagama Munasinghe paramparawa* (*Sarpavisha*), *Kamburugamuwe paramparawa* (*Eswedakama*), *Matara Yatiyana paramparawa* and *Neluwa paramparawa* (*Kadumbindum*). The ancestors of these indigenous medical families might have migrated to the Moneragala District from the Southern province. The ancestors of *Danigala paramparawa* is related to native people of Sri Lanka they are living in the Moneragama, Badulla and Puttalam Districts.

Conclusion

This study reveals that 325 indigenous physicians are living in the Moneragala District. The majority of healers are un-registered with the Ayurvedic Medical Council. The males dominate the total population within the age range of 51-60. Only very few physicians have studied indigenous medicine from their own successors. The majority of physicians are Sinhalese and farmers in full-time occupation. The majority of physicians possess educational qualification up to the Ordinary Level of General Certificate of Education.

The treating poisonous snake bites (*Sarpavisha wedakama*) and orthopedic casualties (*Kadumbindum wedakama*) are the wide spread branches.The other identified branches of indigenous medicine are; *Gedi-Wana-Pilika*, *Akshiroga, Manasikaroga*, *Pissubalu* or *Jalabhitika*, *Charmaroga, Sarvanga* and *Bhutavidya*. Many physicians widely use rituals complimentary to the indigenous medical treatment. The majority of physicians do not have organized ways of treatment that is expected from registered physician. The eighteen indigenous medical genealogies (*Weda parampara*) were identified in the Moneragala District; they do treatment on common ailments (*Sarwanga*), orthopedic casualties (*Kadumbindum*), skin diseases (*Charmaroga*), psychological diseases (*Bhutavidya*), snake-bites (*Sarpavisha*), and eye-diseases (*Es-wedakama*).

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