



A Medical Anthropological Study on the Use of Digital Technology in Traditional Medicine (Sinhala Medicine) in Sri Lanka

P. N. Abhayasundere^{1*}, G. A. A. N. Srishan^{1,2} and A. A. J. Jayasiri¹

¹Department of Anthropology, University of Sri Jayewardenepura, Sri Lanka; ²Faculty of Graduate Studies, University of Sri Jayewardenepura, Sri Lanka

*praneeth@sjp.ac.lk

Abstract

Traditional Sinhala medicine (TSM), an integral part of Sri Lanka's cultural heritage, has been practiced for centuries. This system, rooted in indigenous knowledge, emphasizes natural remedies, herbal treatments, and holistic approaches to health. However, the advent of digital technology has brought significant changes to various fields, including traditional medicine (TM). This research aims to understand how digital technology is being used in TSM and its effects on this traditional practice. Can TSM be developed using digital technology to suit today's society? is the research question in this research. As both qualitative and quantitative data have been used for this research, the research has been conducted under the mixed research method. Sampling was conducted at the Maharagama and Homagama DSDs (Divisional Secretariat Division) in Colombo district, Buttala and Siyabalanduwa DSDs in Monaragala district, Kahtagasdigiya and Kekirawa DSDs in Anuradhapura district. In order to achieve the objectives of the research, 15 traditional medical practitioners (TMP) and 60 elderly people were selected from the study areas through purposive sampling method, and data were collected through interviews and observation methods. While digital technology has the potential to enhance the practice of TM, it also poses challenges related to authenticity, quality control, and equitable access. The study reveals that digital technology has significantly improved the accessibility of TSM authenticity and equitable access. To maximize the benefits of digital technology while mitigating its drawbacks, it is essential to develop strong guidelines and foster collaboration among practitioners, technology developers, and policymakers. By doing so, Sri Lanka can ensure the continued vitality and relevance of its TM practices in the digital age, preserving its cultural heritage while improving healthcare outcomes for its population.

Key Words: Traditional medicine, Digital Technology, Traditional Sinhala Medicine, Medical Anthropology

1. Introduction

TM has a long history. Knowledge, skills, and practices based on theories, beliefs, and experiences inherent to different cultures can be used to maintain health as well as prevent, diagnose, improve, or cure physical and mental illness (World Health Organization, 2000). TM is an ancient and cultural system of medicine that preceded the use of modern medical science in health. TM varies widely according to the social and cultural heritage of different countries. The development of a medical system in response to the challenge of maintaining healthiness and treating diseases is found in every human community. Thus, it is clear that TM has been practiced to some extent in all cultures (World Health Organization, 2000).

In addition to the English term used to describe Traditional medicine, several other terms have come into use at present. Among them are Ethno medicine, Native medicine, Indigenous medicine, Herbal medicine, Natural medicine, and Folk medicine (Perera, 2000). The existence of Traditional medicine lies in the transmission of knowledge from generation to generation. There is a great deal of literature on some Traditional medicine systems. It also deals with theoretical concepts and practical skills. Others pass on knowledge from generation to generation through oral teachings. Currently, in some parts of the world, the majority of the population relies on their own Traditional medicine to meet their primary health needs (Che et al., 2017).

Most of the medicines used in Traditional medicine are made from natural products. Drugs formulated in Traditional medicine have been 'clinically trials' and tested since ancient times. Thus, folk knowledge related to TM has been built up in the past through clinical trials (Yuan et al., 2016). Many people around the world still use Traditional medicine for health care (Parasuraman et al., 2014). Thus, it is clear that modern medicine and Traditional medicine are using treatment methods for various ailments that are affecting the plant and animal communities, including humans, around the world.

Sri Lanka is an island nation in the South Asian region. It is a well-known fact that in the last two thousand five hundred years of its history, Sri Lanka has been able to create a unique compendium of knowledge in the field of Traditional medicine (Abeyrathne, 2019). There are hardly any records on the state of medicine in pre-historic times. One view is that any knowledge of medicine that the early inhabitants had was confined to an acquaintance with the empirical use of a few drugs, which they knew by experience to cure some of the ailments to which they were subject (Uragoda, 1987). Evidence has revealed that there was an inherited medical system in the Sri Lankan society. It dates back to the time of King Ravana. The literature mentions some medical texts believed to have been written by King Ravana. Among them, *Arka Prakashaya*, *Nādivignananaya*, *Kumāra Thanthraya*, and *Uddhisha Shāsthrasya* take an important place (Uragoda, 1987). It is mentioned that King Maha Ravana was also a local traditional practitioner, and he is said to be a descendant of sages like Vishwaravas, Pulathisi, Dhanwattari, Bharadwaja, and Indra who gifted medicine to the world (Perera, 2011). The traditional medicine of Sri Lanka is known as the indigenous system of medicine that existed before the advent of Ayurveda. This medical practice is called 'Indigenous therapy' (*Desheeya Chikithsa*) or 'Sinhala

medicine' (*Sinhala Wedakama*). *Sinhala wedakama* or *Sinhala beheth*, *Goda wedakama*, *Desheeya wedakama* are some of the terms used by people in Sri Lanka to refer to indigenous medicine, as they understand it (Uragoda, 1987).

Traditional Sinhala medicine, an integral part of Sri Lanka's cultural heritage, has been practiced for centuries. This system, rooted in indigenous knowledge, emphasizes natural remedies, herbal treatments, and holistic approaches to health. The advent of digital technology has brought significant changes to various fields, including traditional medicine. Digital technology refers to the electronic tools, systems, devices, and resources that generate, store, or process data. This includes a wide range of applications and innovations such as computers, the internet, websites, social media, mobile devices, software, and applications. Digital technology has revolutionized various aspects of life, including communication, education, healthcare, and entertainment. According to Oxford Reference (n.d.), digital technology is defined as "the use of digital resources to effectively find, analyze, create, communicate, and use information in a digital context." This encompasses everything from basic computers and software to complex systems and applications that facilitate digital communication and data management.

However, with the advent of digital technology, the landscape of Sri Lankan traditional medical practices is undergoing significant transformation. In recent years, digital technology has permeated various sectors, including healthcare, offering new avenues for the practice and dissemination of traditional medical knowledge. As defined by the World Health Organization (WHO), digital health technology includes "the use of information and communication technology (ICT) for health" and involves the integration of digital technologies into healthcare delivery and management. This includes telemedicine, electronic health records (EHRs), mobile health apps, and health information systems (World Health Organization, 2020). This research seeks to understand how digital tools are being incorporated into Sinhala medicine and their impact on the practice. This research aims to understand how digital technology is being used in Sinhala medicine and its effects on this traditional practice.

2. Materials and Methods

This research is conducted under the medical anthropological approach of beliefs and folk medicine systems that come under the cultural approach of medical anthropological studies. As both qualitative and quantitative data are used for this research, it is exploratory research conducted under mixed research methodology. As study areas, Maharagama and Homagama Divisional Secretary Divisions (DSDs) in Colombo district, Buttala and Siyabalanduwa DSDs in Monaragala district, Kahtagasdigiliya and Kekirawa DSDs in Anuradhapura district were selected through purposive sampling (Figure - 01).

In order to achieve the objectives of the research, TMPs and elderly people were selected from the study areas through purposive sampling method, and data were collected through interviews, discussions and observation methods. Accordingly, the 15 data contributors for the first sample were selected using the purposive sampling method to achieve the objectives of the research to be 05 traditional medicine

practitioners from each district. Also, there are six DSDs selected concerning the three districts of the study area. 60 data contributors were selected under the purposive sampling so that the total sample would be 60 families with 10 families each having elderly people over 50 years of age from one of the DSDs. Accordingly, a sample of 60 data contributors, 20 from each district, is used as the second sample.

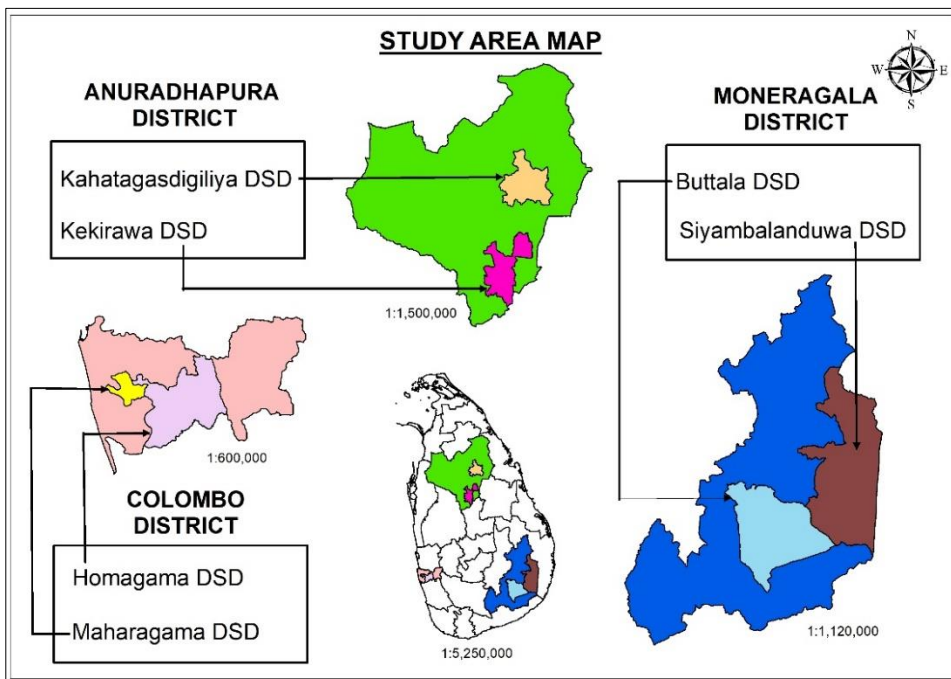


Figure 01: Study area map

3. Results and Discussion

According to the responses of the data contributors in this research, TM in Sri Lanka has undergone some modern adaptations, and several trends in its use have emerged through this research. Accordingly, based on the information obtained through the literature review and the information obtained about the use of various treatments in TM in relation to the various diseases, the adaptations of TM remedies according to modern society are given in detail here. According to modern society, the digital adaptations that have taken place in TM can be described as follows.

In Sri Lanka, technological advancements have begun to play a pivotal role in the modernization and enhancement of TM practices. These advancements aim to preserve the rich heritage of TM while leveraging technology to improve accessibility, efficiency, and effectiveness.

According to the information from the data contributors in the field of study, it is clear that TMPs have taken some approaches to integrate telemedicine services into TM. This facility is mostly provided by TMPs in urban areas. This transformation has taken place according to the needs of modern society.

Accordingly, patients can now consult TMs remotely, making healthcare more accessible, especially for those in remote areas. Also, video consultations, online prescriptions, E-Channeling system, and online follow-ups appear to be facilitated by TMPs in urban areas for the convenience of patients seeking traditional remedies. Data contributors in the first sample of this research were asked about how they screen patients for TM treatments. The data contributors responded by saying that physical patient screening is a practice by all TMPs. The number of TMPs who are facilitated to perform the patient screening online is 33% percent of the total sample. Also, it was stated that the patient examination would be done only in appropriate cases through that method. However, they further emphasized that such online patient screenings are not always suitable for conventional medicine. Also, after analyzing these facts, it can be said that this digital technology use seen today is a basic stage for the digital adaptation of TM.

According to the information provided by the data contributors in the Colombo district, it was stated that mobile applications focused on TM have been developed (Figure 03). According to the data contributors, these mobile applications can be used to know the treatment required for various diseases and to find TMPs for any disease. These apps provide information about medicinal plants, their uses, and recommended remedies. Some apps also offer personalized health advice based on traditional principles, contributing to health awareness and self-care. The development and use of these mobile applications is a new trend in the practice of TM in modern society.



Figure 02: How TMPs in the study area are facilitated for online delivery of medicines to patients and appointment booking with TMPs through the e-channeling system.

Similarly, two of the TMPs who participated in the study have deviated from the concept of TM houses (*sāmpradāyika veda gedara*)/ TM centers and run TM hospitals. These hospitals are run with more modern technical tools and facilities than medical houses or medical centers. This is also a good example of digital and economic development associated with TM. In modern society, these hospitals demonstrate that various TM services are provided to patients using new technology, comfort, etc. Also, it is a new trend that TMPs are currently focusing on the production and sale of TMs. It will also contribute greatly to the economic development of the country. One key aspect of economic development is the promotion and marketing of TM products, including herbal medicines, oils, and

wellness packages. TMPs and entrepreneurs have played a crucial role in creating a market for these products, both domestically and internationally. Accordingly, it was seen that social media pages, websites, etc. are being used for advertising about these hospitals and their services as well as pharmaceutical products (Figure 04).

In addition to this, among the adaptations of TM in a digitalized society, is the use of social media to advertise various medicines and medical centers, and the implementation of awareness programs about traditional treatment methods for various ailments. Social media has become one of the main media in modern society. Thus, people are being informed about the TM treatment to be done for emergency conditions through pages, groups, etc. created on social media. The best examples for this are the awareness activities carried out through social media about the use of TM during the COVID-19 epidemic situation.



Figure 03: Mobile applications that have been developed and used in modern society for TM in Sri Lanka (Weda Seeya, 2021) (Wedawaru, 2022).

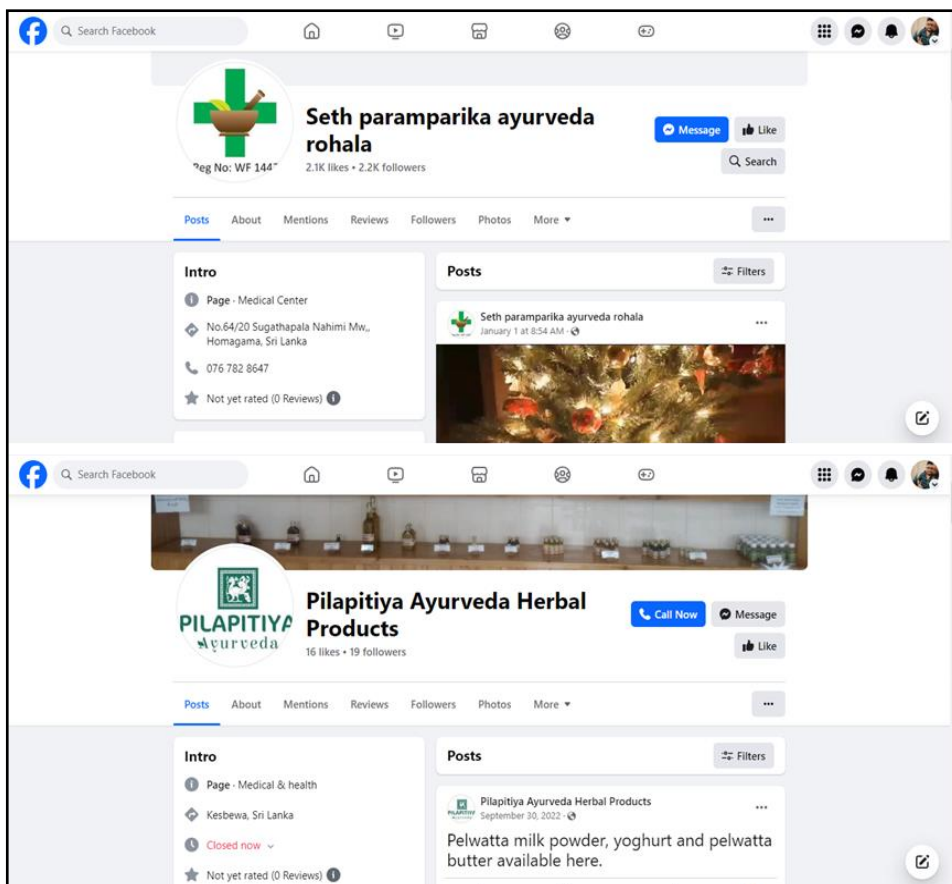


Figure 4: Social media pages are used by TMPs in the study area to advertise their TM services (Seth paramparika ayurveda rohala, 2021), (Pilapitiya Ayurveda Herbal Products, 2022)

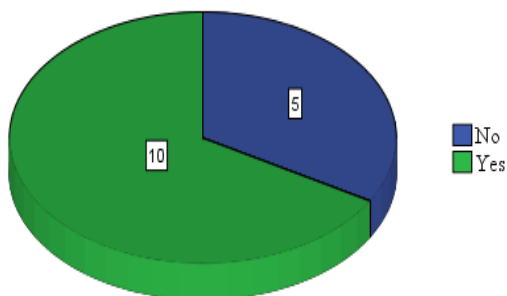


Figure 05: Graph showing information on the use of modern health monitoring equipment by TMPs in the study area.

In the field of TM, TMPs seem to be working to integrate TM with modern health monitoring equipment according to the needs of modern society. In the field of study, many TMPs use stethoscopes, pressure meters, etc. In addition, patient test reports (blood tests, urine tests, SCAN tests, PCR tests, X-ray tests) obtained by modern and smart health devices are used by TMPs to monitor the vital signs of the respective patient. These new test reports provide indispensable facilities for TMPs to closely monitor their patient's progress and make informed decisions about treatment plans. Thus, in the treatment of any disease, are the patient test reports obtained using modern health monitoring equipment used? And instruct the patient to obtain those reports? were asked of the TMPs who participated in the research. Accordingly, the response seen by the data contributors (TMPs) is represented by the graph shown in Figure 05. According to the information in the graph shown in Figure 4.60, it was clear that 10 out of the 15 TMPs who participated in the research are currently using the records obtained using these modern health monitoring devices when treating patients. They said that the reports are useful for ascertaining the condition of the patients and the trend of recovery. Additionally, the TMPs in the study area stated that the modern society community will have trust in the TM system when it comes to using these reports for treatment and verifying that the reports have actually cured the disease. TMPs who do not use these reports stated that they are only familiar with the traditional way of examining patients.

4. Conclusion and Recommendations

The study reveals that digital technology has significantly improved the accessibility of traditional Sinhala medicine. Online consultations, health apps, and digital databases have made it easier for patients to seek treatment and for practitioners to share knowledge. However, concerns about the authenticity of information and the quality of digital consultations persist. Practitioners emphasize the importance of face-to-face interactions and the personalized nature of traditional treatments, which may be compromised in a digital format. Moreover, the digital divide remains a critical issue, with rural populations having limited access to digital resources. Accordingly, it is clear that the integration of digital technology into traditional Sinhala medicine creates both positive opportunities and challenging scenarios. It will improve people's accessibility to traditional Sinhala medicine while contributing greatly to the preservation of traditional knowledge. Developing strong guidelines and fostering collaboration between practitioners, technology developers and policy makers to minimize the drawbacks of digital technology while maximizing its benefits is essential so that Sri Lanka can ensure the continued vitality and relevance of its traditional medicine systems in the digital age to its population. It can improve health care outcomes while preserving its cultural heritage.

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