A Medical Anthropological Study of Traditional Disinfection Practices Used in Traditional Medicine in Sri Lanka during Epidemics

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Abstract
Traditional medicine has long been an integral part of Sri Lankan healthcare, and its role in managing epidemics is of particular interest due to its historical and cultural significance. This research seeks to shed light on the traditional disinfection methods and rituals employed by traditional healers and communities during epidemic crises, while also exploring the sociocultural factors that influence these practices. Disinfection is unique among the strategies adopted to control the disease in an epidemic situation. This makes it possible to control the spread of pathogens. In Sinhala medicine, Sri Lanka's traditional medicine, are traditional disinfecting techniques employed for the prevention and control of epidemic diseases? If so, what are the disinfection practices used? Based on these research questions, this research was conducted. The aim of this research is to study the traditional disinfection practices recommended by Sinhala medicine to protect against the epidemic disease as well as to control the spread of the disease during the epidemic season. As an exploratory research using the mixed method based on qualitative data and quantitative data, the Pragmatist paradigm was utilized by the researcher with a phenomenological research design. There, the study area covering the 03 districts of Colombo, Monaragala, and Anuradhapura was selected purposefully and 2 samples were selected from the study area as a sample of 15 traditional medicine practitioners and a sample of 60 elderly people over 50 years of age. Traditional medicine in the country has long been a repository of knowledge that reflects an intricate understanding of the environment, disease ecology, and societal well-being. During epidemics, such practices gain prominence, not only as therapeutic interventions but also as community-driven preventive measures. The study revealed many traditional disinfection methods used by the Sri Lankan community during the epidemic. Many practices such as the use of water mixed with turmeric and lime, steam capture, fumigation etc. could be identified here. The special thing here is that only natural ingredients obtained from the surrounding environment are used for these methods. It could be concluded that this disinfection process is carried out in an environmentally friendly and humane manner.

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Keywords: Traditional Medicine, Disinfection Practices, Epidemics, Sri Lanka

Introduction

This study aims to clarify the traditional disinfection techniques and rituals used by traditional healers and communities during epidemic crises, while also investigating the sociocultural factors that influence these practices. Disinfection is a unique strategy adopted to control the disease in an epidemic situation, and its role in managing epidemics is of particular interest due to its historical and cultural significance. Traditional medicine has long been an integral part of Sri Lankan healthcare. In the field of epidemic prevention, many traditional disinfection practices are deeply rooted in the cultural heritage built on Sri Lanka's traditional medicine. Disinfection is unique among the strategies adopted to control the disease in an epidemic situation.

This makes it possible to control the spread of pathogens. Epidemics are spread by infection with a virus or bacteria. Therefore, to control any epidemic, the relevant virus or bacteria must be controlled; must be destroyed. The use of disinfectants is very important for this. Since ancient times, traditional medicine practitioners have been advising people on the use of disinfection practices in the prevention and control of epidemics. This makes it possible to control the spread of pathogens. In Sinhala medicine, Sri Lanka's traditional medicine, are traditional disinfecting techniques employed for the prevention and control of epidemic diseases? If so, what are the disinfection practices used? Based on these research questions, this research was conducted. The aim of this research is to study the traditional disinfection practices recommended by Sinhala medicine to protect against the epidemic disease as well as to control the spread of the disease during the epidemic season.

The significance of this study lies in its exploration of the sociocultural and historical dimensions of traditional disinfection practices in Sri Lanka. Traditional medicine in the country has long been a repository of knowledge that reflects an intricate understanding of the environment, disease ecology, and societal well-being. During epidemics, such practices gain prominence, not only as therapeutic interventions but also as community-driven preventive measures. The scope of this research is commendable, as it delves into the specific methods, materials, and rituals employed for disinfection. By contextualizing these practices within the framework of medical anthropology, the study provides insights into how cultural beliefs and ecological knowledge shape healthcare behaviors. Furthermore, it examines the efficacy, sustainability, and relevance of these methods in the face of contemporary challenges such as antimicrobial resistance and the increasing threat of pandemics.

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 an exploratory research using the mixed method based on qualitative data and quantitative data, the Pragmatist paradigm was utilized by the researcher with a phenomenological research design. There, the study area covering the 03 districts of Colombo, Monaragala, and Anuradhapura was selected purposefully and 2 samples were selected from the study area as a sample of 15 traditional medicine practitioners and a sample of 60 elderly people over 50 years of age.

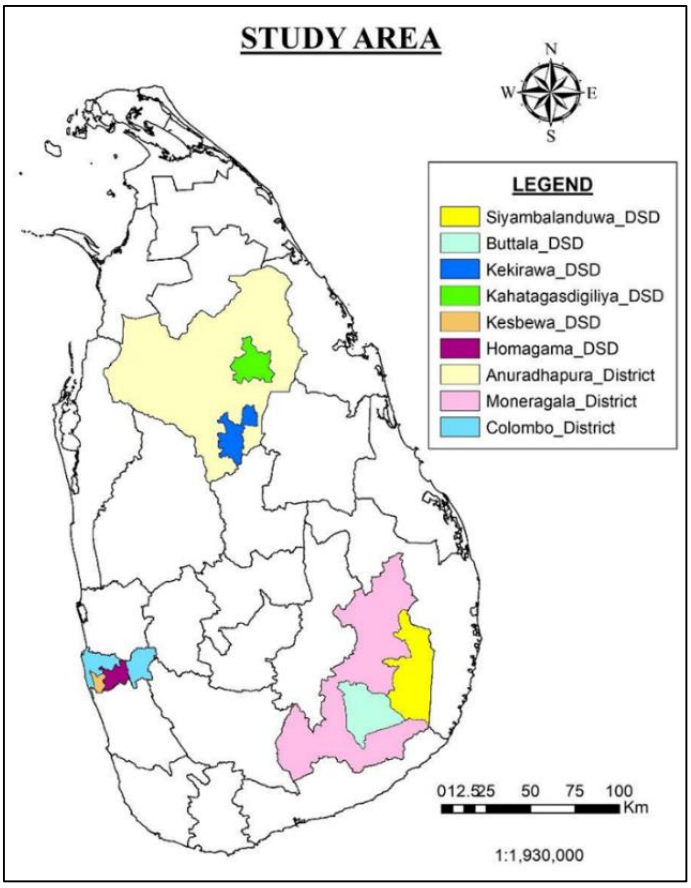

Fig 1: Map showing the study areas of Monaragala and Anuradhapura and Colombo Districts

Accordingly, 15 *sarvānga* traditional medicine practitioners were selected from the Divisional Secretariat Divisions purposely selected in the Anuradhapura, Colombo & Monaragala districts as the study areas, as the first sample required for data collection related to this research. Five *sarvānga* traditional medicine practitioners who could provide information and gave their consent for the research were chosen using the purposive sample method from among the *sarvānga* traditional medicine practitioners in the two Divisional Secretariat Divisions that were chosen as the study

area in one district.

Also, there are six Divisional Secretariat Divisions selected concerning the three districts of the study area. 60 respondents 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 Divisional Secretariat Divisions. Accordingly, a sample of 60 respondents, 20 from each district, is used as the second sample.

Conducting in-depth interviews with these respondents was essential in obtaining the data required for this research. The qualitative data needed for the research had to be collected through extensive discussions with their experiences. For this reason, the size of the sample was determined so that the qualitative data needed for the research could be obtained rather than choosing the size of the sample in a way that is numerically suitable for the population. Accordingly, the two sample categories and the respective sample sizes needed for the research were selected under the purposive sampling method.

Results and Discussion

Disinfection practices are very important during epidemics. An epidemic disease is mainly caused by a virus or bacteria. Therefore, to control the disease, the relevant virus or bacteria must be destroyed. According to the information obtained from the respondents related to the field of study, it is possible to identify some traditional disinfection practices that are used with traditional medicine during epidemics. They are described below.

Kohomba (Neem) leaves are used as a disinfectant in epidemic diseases like smallpox and measles. Kohomba can be called a unique medicine that is popular as a traditional disinfectant medicine among the people of Sri Lanka. In all three districts of the study area, it was stated that people use Kohomba as a disinfectant during epidemics. There, when infected with smallpox and measles, the patient is laid on Kohomba leaves (with or without a soft blanket over) that are spread over bana leaves spread on a mat. Similarly, some pieces of Kohomba branches are hung above the mat where the patient is sleeping. Also, after 14 or 21 days, when the patient takes a bath, before the bath, ground Kohomba leaves and raw turmeric are applied to the body. Bathing is also done with medicinal water boiled with Kohomba leaves etc. They state that the patient will be bathed in this way for 7 days. By doing this, the patient gets relief, and germs are destroyed. Modern technology has proven the medicinal properties of Kohomba (neem) leaves in particular.

Accordingly, immunomodulatory, anti-inflammatory, antihyperglycemic, antiulcer, antimalarial, antifungal, antibacterial, antiviral, antioxidant, antimutagenic, and anticarcinogenic qualities have all been shown for neem leaf and its constituents. Correspondingly, various traditional medicinal liquids are used for disinfection during epidemics. In any epidemic situation, these medicated liquids are sprayed to eliminate the spread of germs in the house. Especially Kohomba leaves are ground and mixed with water and sprinkled at home and in their garden. Also, ground turmeric is mixed with water and lime juice and sprinkled in the house and garden with a piece of lime or Kohamba branch. Similarly, dung and ground Kohomba leaves are mixed with water and sprinkled in the house and garden.

Fig 2: Sprinkle turmeric and lime water in the house with a piece of lime branch

Fig 3: Preparation of medicated boiled water for bathing during epidemics

As well, during various epidemics, the boiled water of Kohomba leaves, Venivelgeta, turmeric, and lime leaves are used to bathe the patients. In an epidemic situation, people are concerned about the concept of '*Killa*' (impurity). If a person is infected with *Killa*, they are cleansed by bathing in boiled water of Nika (*Vitex negundo*) leaves, Kohamba leaves, and turmeric. Also, if a person comes home from a place with *Killa* (Eg: a funeral), before entering the house, it is customary to wash the body with water mixed with lime and turmeric, then take a bath and enter the house. Also, in the event of an epidemic spreading in the village, when a person goes away from the house and returns, a bowl of water mixed with lime or turmeric is placed near the entrance of the house to wash the face, hands, and feet. It has been mentioned in Dalupotha (2020) [2], that this is used as '*pā diya baňdun tæbīma*'. Thus, a person who has gone away from home follows these practices to remove the germs from the body when returning home. Also, it is customary in villages to dry clothes, pillows, mattresses, and mats in the strong sun during the epidemic season. Also, if a patient is at home, his clothes, used pots, cups, etc. are also disinfected by boiling them in hot water.

Fig 4: Fumigation to home by putting lime leaves in a pan

Another remedy for disinfection during epidemics is fumigation. Medicinal fumigation is done here. According to the information of the respondents related to the three districts of the study area, different drugs are used for this fumigation. Especially the leaves of Kohomba leaves, Yakinarang leaves, Nika leaves, Bim Kohomba,Vetahiriya (*Gliricidia sepium*) five citruses (Lime, Orange, Narang - Mandarin, Yaki Narang (*Atalantia ceylanica*), Pudalu lime (*Citrus hystrix*), Pavatta, etc. are put in a fire pan and smoked to spread well throughout the house. These medicines have antiseptic properties. The respondents stated that the pathogens in the surrounding environment are destroyed by the fumigation of the medicines.

Fig 5: Mee-Mahua (*Madhuca longifolia*) Seeds and *Mee Murumutu*

In addition to these leaves, the people of the study area are fumigated to their homes using Agil, Guggul, Sambrani, Frankincense, Dry Turmeric, White Sandalwood, and Dry Chilli pods.

A torch soaked in Kohomba oil is lit and extinguished. The smoke from the extinguished Kohomba oiled torch is carried into the house. This is also a method of disinfection. Also, lighting a lamp prepared with Kohomba oil in the house whenever possible is also a disinfection method carried out by the respondents in the study area during the COVID-19 epidemic.

According to the responses of the respondents in the study area, pillows, mattresses, and mats used in homes for disinfection during the COVID-19 epidemic are dried in the strong Sunlight. Also, the clothes worn to go out of the house and if there is a patient in the house, the used clothes and equipment are washed in hot water. It aims to kill germs.

Similarly, in addition to these substances, the people of Anuradhapura district use another unique drug for fumigation in their homes. That medicine is '*Mee Murumutu*'. *Mee murumutu* is the residue left after extracting the oil from the Mee - Mahua (*Madhuca longifolia*) seeds. Respondents from the Anuradhapura region stated that the use of this *Mee murumutu* for fumigation is done especially during the epidemic season. Thus, it is clear from the above that there are traditional medicines and remedies used in traditional medicine for disinfection during an epidemic.

Conclusions

Medicines alone are not enough to protect against disease during epidemics. An epidemic is spread by the spread of pathogens. The use of disinfectants can be pointed out as the most suitable measure to prevent the disease. Accordingly, this research was able to uncover many traditional disinfection methods used to protect against epidemics based on the traditional medicine of Sri Lanka. These traditional disinfection methods are based on simple raw materials found in the environment such as plant parts. Among them, methods such as medicinal fumigation, using turmeric and lime water as cleansers, bathing with medicinal water, catching steam etc. have been done. They are methods that still produce successful results today.

Accordingly, empowering local communities to actively participate in preventing health crises that affect the entire community, such as epidemics, is critical. The researcher's recommendations include community-based initiatives that leverage traditional medicine with modern healthcare practices. This awareness of traditional medicine helps the community to keep the people calm during an emergency health crisis, provide first aid until necessary medical treatment, avoid related disasters, and solve primary health problems in rural areas. Also, The researcher recommended that efforts should be made to systematically document and preserve the healing practices of traditional medicine. According to the information obtained in the study, the valuable medical practices that many traditional medicine practitioners had until now have also died with the death of those traditional medicine practitioners. The researcher suggests that universities and health departments should launch research projects for the exploration of this knowledge and document the traditional medicine knowledge specific to each region. The researcher has shown through hands-on experience that although not all information is available, a significant level of knowledge can be discovered. The researcher points out that as a more important step to preserve these intangible and tangible cultural heritages. This archival effort not only preserves cultural heritage but also provides a valuable resource for future research and public health initiatives.

This research brings to the forefront the value of traditional knowledge in addressing contemporary health challenges and advocates for a more holistic approach to epidemic management. By integrating cultural, ecological, and biomedical perspectives, the study enriches our understanding of healthcare systems and their potential for innovation. The research not only contributes to academic discourse but also has practical implications for policymakers, healthcare practitioners, and

communities. It serves as a reminder that the solutions to modern health crises may lie in the wisdom of the past and that fostering dialogue between traditional and modern medicine is essential for building resilient and inclusive healthcare systems. Future research could build on these findings by exploring the scalability of traditional practices and their potential for adaptation in diverse cultural contexts.

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References

1. Abeyrathne RM. Current Trends in the Popular Sector Traditional Medicine in Sri Lanka. Proceedings of the Pakistan Academy of Sciences B. Life and Environmental Sciences (Special Issue). 2019;56(3):27-36. Available from: https://www.paspk.org/proceeding/proc-of-the-pas-b-56-no-3-special-issue/
2. Dalupotha MK. Infectious Disease Epidemics and Our Folklore (Bōwana Rōga Wasangatha Ha Ape Janashruthi). Fast Publishing (Pvt) Ltd.; c2020.
3. Fabricant DS, Farnsworth NR. The Value of Plants Used in Traditional Medicine for Drug Discovery. Environmental Health Perspectives. 2001;109:69-75. https://doi.org/10.1289/EHP.01109s169
4. Jayasiri AAJ, Premarathne MGLM. Medical Sociology and Medical Anthropology 1 (Waidya Samaja Widyawa Saha Waidya Maanawa Vidyawa 1). Author Publication; c2011.
5. Perera DL. Ayurvedic Exploration (Ayurveda Gaweshana). Induru Printing; c2000.
6. Perera DL. Let's do 'Vedu' the right way without being fooled by the fake 'Dum Hatti' (Boru Dum Haṭṭi Valaṭa Mulā Novī Niyama Kramayaṭa Vēduvak Allamu). Facebook; c2020. Available from: https://web.facebook.com/112104493780085/photos/a.120426346281233/183663959957471
7. Perera WS. Indigenous Medicine Must Be Preserved (Deshiya Waidya Kramaya Rekagatha Yuthuya). 7th ed. Sarathee. Sarathee Publication; c2011.
8. Uragoda GC. A History of Medicine in Sri Lanka. Sri Lanka Medical Association; c1987.