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Ethnomedical survey on poisonous bites by traditional practitioners in the eastern province of Sri Lanka

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ABSTRACT

Background: Poisonous bites remain one of the significant public health concerns in rural Eastern Province of Sri Lanka, where traditional medical practices by traditional healers using indigenous knowledge passed down through generations, play an important role in the management of venomous animal bites, notably those caused by snakes, scorpions and venomous insects. **Objective:** This study aims to document the knowledge regarding the traditional treatment practices, herbal remedies and medicinal plants used for the management of poisonous bites by selected traditional practitioners in Eastern province and it may be helpful to improve knowledge regarding the efficient management for poisonous bites and to practice them in future as well. **Materials and Methods:** An ethnomedical descriptive survey was conducted among 32 selected Visha kadi Traditional practitioners in Eastern province. Convenience sampling technique was used for this study. The data was collected through the interviews and researcher oriented open-ended questionnaire developed for this survey. The analysis was carried out by using Microsoft Excel **Results:** The ethnomedical survey conducted in Eastern province, has successfully identified 52 medicinal plants among 32 families, utilized by traditional practitioners for the treatment of Poisonous bites. Fabaceae family plants were identified as having the highest representation with 11.54%. **Conclusion:** The study emphasizes the importance of geographically specific medicinal plants and treatment practices. Accordingly, it is concluded that the diagnostic methods like *Thoothan Kuri*, along with the use of medicinal plants and herbal remedies by traditional practitioners, are highly effective in identifying and treating poisonous bites.

Keywords: Poisonous Bites, Traditional Practitioners, Medicinal Plants, Treatment Practice, Eastern Province.

INTRODUCTION

Poisonous animal bites are one of the significant medical problems that affect the public health due to the high rate of considerable morbidity and mortality worldwide. Especially the venomous snake bite causes the serious disabilities and life-threatening health issues in the victims all over the world particularly in the tropical countries like Sri Lanka. Poisonous bites from various other creatures such as scorpion, spider, centipede, bee, wasp, insects and marine animals also represent a notable health threat to the individuals around the rural areas and semi-urban settings of this country. The health impacts of these bites can range from mild local symptoms to severe systemic reactions depending on the type of venom, amount of venom delivered, the immune response of an individual and accessibility to appropriate health care [1].

In Sri Lanka, the Poisonous bites, particularly snakebites, are a major public health concern, with the country having one of the highest occurrence rates worldwide. An estimated 30,000-40,000 snakebites occur each year, causing significant illness and mortality, especially in rural agricultural areas [2,3]. With its dense paddy fields, forests and proximity to wildlife habitats, the Eastern Province is a hotspot for encounters with medically significant venomous species, including the Russell's viper, Indian cobra and hump-nosed viper which collectively account for over 90% of envenomation cases nationwide [4]. Epidemiological studies show that agricultural communities in this region have disproportionate risks and limited access to immediate modern healthcare services due to occupational exposure, poor healthcare infrastructure and delayed access to antivenom medication [5].

Ethnomedical surveys, such as this type of research on poisonous bites, can identify safe and effective practices that can be integrated into national health policies [6] However, integrative approaches, which combine Traditional Medicine with evidence-based medicine, are increasingly being advocated by organizations like the World Health Organization (2013) to improve healthcare equity. Documenting ethnomedical methods for venomous animal bites is thus critical, both to protect cultural legacy and to uncover the fresh herbal treatments and new therapies that could supplement or improve traditional antivenoms [7].

This study fills these gaps by undertaking a systematic ethnomedical survey of traditional procedures for treating poisonous bites by traditional practitioners in the Eastern Province. This study aims to preserve endangered knowledge, identify potential candidates for biomedical validation and inform context-specific public health strategies to reduce the burden of envenomation in marginalized communities by documenting and evaluating plant-based therapies for their cultural and pharmacological relevance.

Trincomalee, Batticaloa and Ampara districts are belonging to Eastern province, Sri Lanka. Based on a national survey, the 2nd highest incidence of snakebites and envenoming are experienced in Eastern province, particularly in rural and agricultural areas, where the modern medical facilities are limited or difficult to access on time. Most of the people in rural area of this province depend on the traditional treatment and herbal remedies for all poisonous bites. And also, to compensate this situation most of the patients seek first aid and medical help from their nearby Traditional practitioners. Therefore, an Ethnomedical survey study on traditional treatment practices for poisonous bites among the Traditional practitioners in Eastern province can help to identify the medicinal plants, herbal remedies and Traditional Treatment Practices for poisonous bites and to find out the challenges they face and success rate of their treatment. This makes the study significant and beneficial, not only to the next generation but also for pharmaceutical industries for the development of new drugs.

MATERIAL AND METHODS

Study design

A descriptive survey (Ethnomedical survey) was carried out over a three-month period of study duration from January to March 2025 in the study area of Batticaloa, Trincomalee and Ampara districts of the Eastern Province of Sri Lanka, focusing on selected Traditional Practitioners. The study population consisted of *Visha kadi* Traditional Practitioners in Eastern province of Sri Lanka, and the sample size included 32 selected *Visha kadi* Traditional Practitioners of both genders, as the entire study population was considered as the sample due to its limited size.

Data collection

Address and contact details of the Traditional practitioners were collected from DS records of each district and Directory of Registered Traditional Practitioners issued by the Department of Ayurveda. Convenience sampling technique was used for this study. From the 32 selected *Visha kadi* Traditional Practitioners in Eastern province, the data was gathered by visiting their home and private practice places and the ethnomedical survey was clearly explained to every selected traditional practitioner. The data was collected through the interviews and researcher oriented open-ended questionnaire developed for this survey. The questionnaire is clear, concise, relevant and developed in English language. For the convenient of the *Visha kadi* Traditional Practitioners, the questionnaire was translated and explained through Tamil language. Before the interview started, the written consent was taken from each Traditional Practitioners using written consent letter separately.

Inclusion criteria

Recognized, Registered and non-registered *Visha kadi* Traditional practitioners who practice their jobs as at the time of the study were recruited in Batticaloa, Trincomalee and Ampara districts of Eastern province.

Exclusion criteria

Traditional practitioners who migrated from Eastern province. Traditional practitioners who were refused to cooperate. Traditional practitioners who were mentally ill and not currently practicing their jobs at the time of the study were not enrolled.

Withdrawal criteria

Withdrawal criteria were included the Traditional Practitioners who were not giving full details, hiding their details and negotiate the questions and refuse to participate in this study. The participant has the ability to freely out of this study at any time for any of their personal reasons. But none of them are reluctant to withdraw from this study.

Ethical consideration

The study prioritized ethical consideration to protect the rights, identity and wellbeing of the participants. Informed consent was taken from Traditional Practitioners in a written form in English and translated in to Tamil. This study ensure that they would understand about the purpose of study and there is no risk in this survey. Confidentiality measures were rigorously implemented to protect the privacy of participant personal information with data is anonymised and securely stored. The approval for this study was obtained from supervisor before commencing the data collection activity. This study was conducted with the primary aim regarding Traditional Treatment Practices for poisonous bite among Traditional Practitioners in Eastern province.

Statistical analysis

The primary data collected through questionnaire and interviews were analysed. This data analysis was carried out by using Microsoft Excel program (Microsoft office professional plus 2024). The botanical names and families of the collected plants species were verified by using the series of book titled “Medicinal plants used in Ceylon”, “Dictionary of medicinal plants” and “Siddha Materia Medica” (Medicinal Plants Division). As well as Botanical names were checked with the Ayurvedic medicinal plants of Sri Lanka compendium version-3 available at http://www.instituteofayurveda.org/plants/plants_list.php. The medicinal plants cited in this survey were organized in a table format in an alphabetical order by their family names and scientific names and other following data will list; as vernacular Tamil name, habit, parts used and Therapeutic uses. The analysed data were organized and presented through frequency tables, figures, pie chart and bar chart to facilitate the interpretation and discussion.

RESULTS

Socio-demographic information

Table 1 indicates the number and percentage of selected Traditional Practitioners in Eastern Province of Sri Lanka. Overall, the registered and non-registered groups were evenly dispersed, with each contributing 50% of the overall survey population.

The demographic characteristics of participated traditional practitioners in Eastern Province are summarized in Table 2. The data also highlights that *Visha kadi* (Toxicology) is the primary treatment category among both registered and non-registered practitioners.

Plant family distribution

Based on this survey, totally 52 medicinal plant species belonging to 32 families were reported in Table 3 and Figure 1. The selected plant species were presented in alphabetical order by their family, botanical name, Tamil name, habit, parts used and therapeutical uses.

Pharmacognostic aspects of medicinal plants

Based on the data provided in Figure 2, the plant habits used by traditional practitioners for treating poisonous bites are categorized into five groups: Herb, Shrub, Climber, Creeper and Tree. The plant parts most frequently used in the preparation of remedies are presented in Figure 3.

Based on the data provided in Table 4, the prepared medicines used by Traditional practitioners for treating poisonous bites are categorized into various forms including: *Chooranam, Mathirai, Kuzhambu, Thailam, Mai, Anjanam, Kalikkam and Akkiranam*. The frequency of medicinal plant use for different categories of poisonous bites is illustrated in Figure 4. The various methods of preparation of medicinal plant remedies used by traditional practitioners are shown in Figure 5.

Challenges faced by traditional practitioners

Based on the data provided in Table 5, it implies the key challenges faced by the Traditional practitioners while treating the patients from poisonous bites. It includes the limited availability or unavailability of certain plants, high raw material cost or expensive dry herbs, patient not fully reliable on herbal treatment, due to side effects, patient not supportive and not following proper dietary regimens.

Table 1: Number and percentage of participated traditional practitioners

	Male	Percentage	Female	Percentage	Total	Percentage
Registered	13	40.63%	3	9.38%	16	50.00%
Non-Registered	11	34.38%	5	15.63%	16	50.00%
Total (n)	24	75.00%	8	25.00%	32	100.00%

Table 2: Socio demographic profile of participated traditional practitioners

Parameters of Participated Traditional practitioners									
		Registered				Non-Registered			
		Male	%	Female	%	Male	%	Female	%
Age	Below 35	0	0.00	0	0.00	1	3.13	0	0.00
	36-45	1	3.13	0	0.00	0	0.00	0	0.00
	46-55	4	12.50	0	0.00	1	3.13	1	3.13
	56-65	4	12.50	1	3.13	3	9.38	0	0.00
	66-75	2	6.25	2	6.25	4	12.50	4	12.50
	76-85	2	6.25	0	0.00	2	6.25	0	0.00
Religion	Hinduism	9	28.13	3	9.38	11	34.38	4	12.50
	Christianity	1	3.13	0	0.00	0	0.00	1	3.13
	Islam	3	9.38	0	0.00	0	0.00	0	0.00
Educational level	Traditional Practice only	4	12.50	1	3.13	8	25.00	4	12.50
	Traditional Practice and Diploma level	7	21.88	2	6.25	3	9.38	1	3.13
	Traditional Practice and Degree level	2	6.25	0	0.00	0	0.00	0	0.00
	Others	0	0.00	0	0.00	0	0.00	0	0.00
Treatment category	*Visha kadi* (Toxicology Practitioners)	11	34.38	3	9.38	9	28.13	4	12.50
	Sarvangam (General Practitioners)	2	6.25	0	0.00	2	6.25	1	3.13
Years of Experience	Less than 10 years	0	0.00	0	0.00	1	3.13	0	0.00
	11-20	1	3.13	0	0.00	1	3.13	0	0.00
	21-30	1	3.13	1	3.13	1	3.13	1	3.13
	31-40	5	15.63	2	6.25	4	12.50	3	9.38
	41-50	2	6.25	0	0.00	3	9.38	0	0.00
	More than 50 years	2	6.25	0	0.00	1	3.13	0	0.00

Table 3: Botanical description of medicinal plants used for poisonous bites

Family	Botanical name	Tamil name	Habit	Parts used	Therapeutic uses
Acanthaceae	*Andrographis paniculata*	*Nilavembu*	Herb	Leaves	All poisonous bite
	Dipteracanthus patulus	*Kiranthi nayagam*	Herb	Leaves	Snakebite
	Rungia parviflora	*Thavasu murungai*	Herb	Leaves	Dog bite
Acoraceae	*Acorus calamus*	*Vasambu*	Herb	Rhizome	Snakebite
Aizoaceae	*Trianthema portulacastrum*	*Saaranai*	Herb	Root	Spider bite
Amaranthaceae	*Achyranthus aspera*	*Nayuruvi*	Herb	Root	Wasp poison
Amaryllidaceae	*Allium sativum*	*Vellulli*	Herb	Bulb	Snakebite
Apiaceae	*Ferula asafoetida*	*Perungaayam*	Herb	Dried latex	Snakebite
	Cuminum cyminum	*Natseeragam*	Herb	Seeds	All poisonous bite
Apocyanaceae	*Calotropis gigantea*	*Erukku*	Shrub	Leaves	Snakebite
	Gymnema sylvestre	*Natkurinja*	Climber	Leaves	Scorpion sting
Aristolochiaceae	*Aristolochia bracteolata*	*Aadu theendapalai (Pangam paazhai)*	Herb	Root	All poisonous bite
	Aristolochia indica	*Perumarunthu*	Creeper	Leaves	All poisonous bite
Asclepiadaceae	*Pergularia daemia*	*Velip paruththi*	Climber	Leaves	All poisonous bite
	Tylophora indica	*Nanjaruppan*	Climber	Seeds	All poisonous bite
Boraginaceae	*Heliotropium indicum*	*Thelkodukku*	Herb	Leaves	All poisonous bite
	Trichodesma indicum	*Kavilthumbai*	Herb	Leaves	All poisonous bite
Capparaceae	*Crateva religiosa*	*Maavilangu*	Tree	Leaves, Bark	Centipede bite
Caricaceae	*Carica papaya*	*Pappasi*	Tree	Leaves	Snakebite
Cucurbitaceae	*Momordica charantia*	*Paahal*	Climber	Leaves	All poisonous bite
Euphorbiaceae	*Acalypha indica*	*Kuppaimeni*	Herb	Leaves	Snakebite
	Croton tiglium	*Nervalam*	Shrub	Seeds	Snakebite
Fabaceae	*Abrus precatorius*	*Kuntri mani*	Climber	Seeds	Snakebite
	Cassia fistula	*Konrai*	Tree	Tender leaves	Snakebite
	Clitoria ternatea	*Neela kaakkanam*	Climber	Leaves, flower	All poisonous bite
	Erythrina variegata	*Mull murukkam*	Tree	Leaves	Snakebite
	Indigofera tinctoria	*Avuri*	Shrub	Root	All poisonous bite
	Tamarindus indicus	*Puli*	Tree	Leaves	All poisonous bite
Lamiaceae	*Leucas aspera*	*Mudithumbai*	Shrub	Leaves	All poisonous bite
	Ocimum sanctum	*Karunthulasi*	Shrub	Leaves	Snakebite
Lilliaceae	*Allium parvum*	*Sinna vengayam*	Herb	Bulb	All poisonous bite
Loganiaceae	*Strychnos nux-vomica*	*Eddi*	Tree	Bark	Snakebite
Lythraceae	*Punica granatum*	*Mathulam*	Tree	Flower	All poisonous bite
Malvaceae	*Gossypium herbaceum*	*Paruthi*	Tree	Leaves	Marine animal bite
	Thespesia populnea	*Poovarasu*	Tree	Leaves	Snakebite
Meliaceae	*Azadirachta indica*	*Vembu*	Tree	Leaves, Bark	All poisonous bite
Molluginaceae	*Mollugo lotoides*	*Serupadai*	Herb	Leaves	Dog bite
Moringaceae	*Moringa oleifera*	*Murungai*	Tree	Leaves	All poisonous bite
Musaceae	*Musa acuminata*	*Vaazhai*	Herb	Stem	Snakebite
Piperaceae	*Piper betle*	*Vettrilai*	Climber	Leaves	All poisonous bite
	Piper longum	*Thippili*	Climber	Fruit	All poisonous bite
	Piper nigrum	*Milagu*	Climber	Seeds	All poisonous bite
Poaceae	*Bambusa vulgaris*	*Moongil*	Tree	Shoots	Lizard bite
	Cynodan dactylon	*Arukampul*	Herb	Whole plant	All poisonous bite
Polygalaceae	*Polygala elongata*	*Periyaal nangai*	Herb	Leaves	Snakebite

	Polygala glabra	*Siriyaal nangai*	Herb	Leaves	Snakebite
Rutaceae	*Citrus limon*	*Elumichai*	Tree	Fruit	All poison bite
Sapindaceae	*Cardiospermum helicacabum*	*Mudakoththan*	Climber	Leaves	Snakebite
Sapotaceae	*Madhuca longifolia*	*Iluppai*	Tree	Leaves, seeds	Snakebite
Solanaceae	*Solanum tuberosum*	*Urulai kilangu*	Herb	Tuber	All poisonous bite
Zingiberaceae	*Curcuma longa*	*Manjal*	Herb	Rhizome	All poison bite
	Zingiber officinale	*Sukku*	Herb	Rhizome	All poisonous bite

Table 4: Prepared medicines used for poisonous bites

Form of Medicine	Prepared Medicine	Indication
Choornam	*Milahu choornam*	*Onan,* other insect bite
Mathirai	*Jeeva ratchanathi kuligai* *Kadivayil kattu mathirai* *Kakkanam kovvai kuligai* *Korosanai mathirai* *Paranchothi mathirai* *Perum sivappu mathirai* *Sanjeevi mathirai* *Soodamani mathirai*	All poisonous bite
Kuzhambu	*Maha sinthamani kuzhambu* *Paranchothi kuzhambu* *Sanjeevi kuzhambu*	All poisonous bite
Thailam	*Ramayana thailam* *Sanjeeva karani thailam*	All poisonous bite
Anjanam	*Adakkam eluppa anjanam* *Akora ruthra anjanam* *Karuda anjanam*	All poisonous bite
Mai	*Paranchothi mai* *Sanjeevi mai* *Sooran mai*	All poisonous bite
Akkiranam	*Adakkam eluppa aakiranam*	All poisonous bite

Table 5: Challenges during the treatment of poisonous bites

Key challenges	Frequency (n=32)	Percentage (%)
Limited availability of the plants	23	71.88
Expensive dry herbs	18	56.25
Patient not fully reliable on herbal treatment	12	37.50
Due to side effects	2	6.25
Patient not supportive	5	15.63

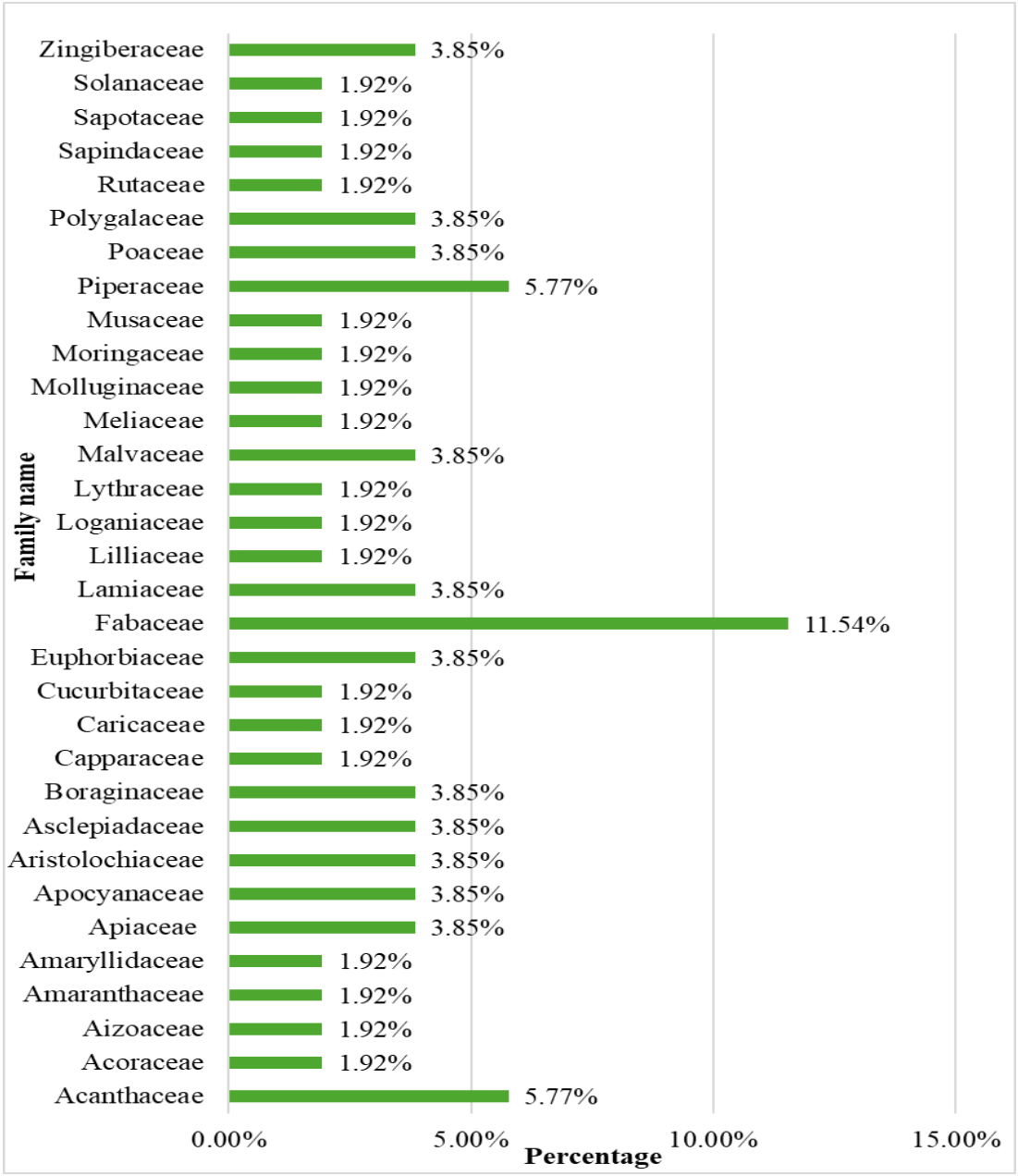

Figure 1: Plant Family Distribution. The common distribution of plant families used by traditional practitioners for treating poisonous bites in Eastern province of Sri Lanka

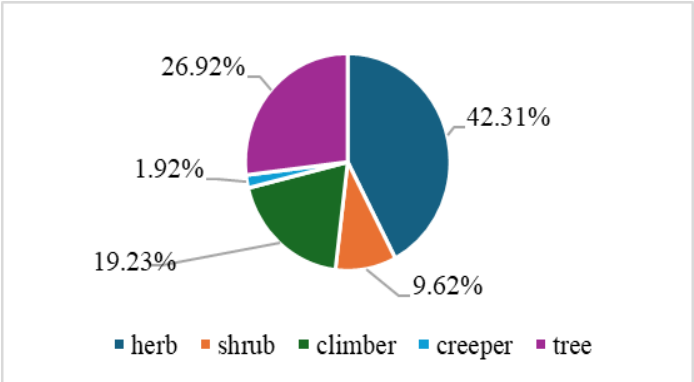

Figure 2: Percentage of habit of plants. Habit wise usage of selected medicinal plants

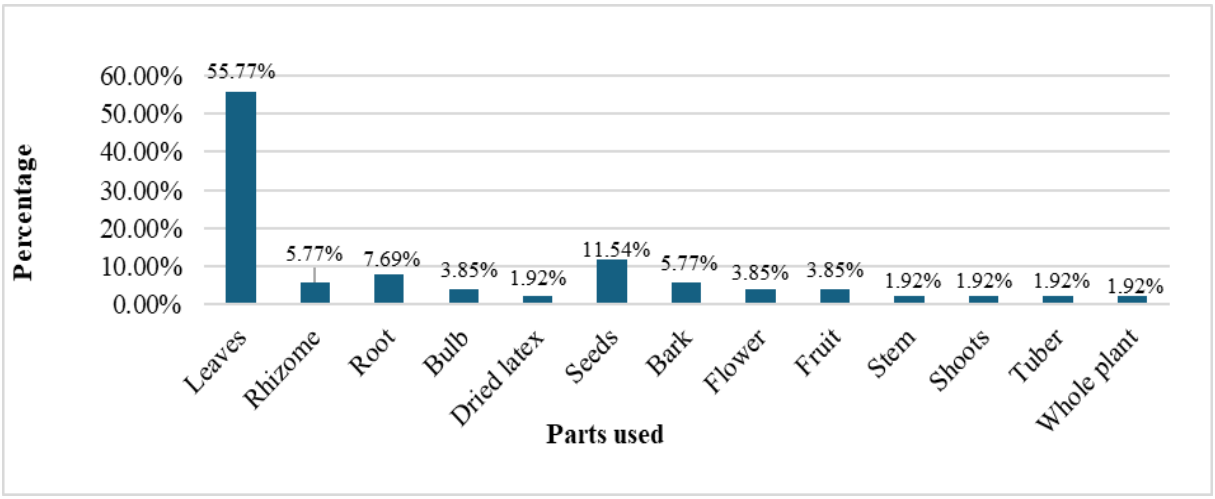

Figure 3: Commonly used parts of Medicinal plants

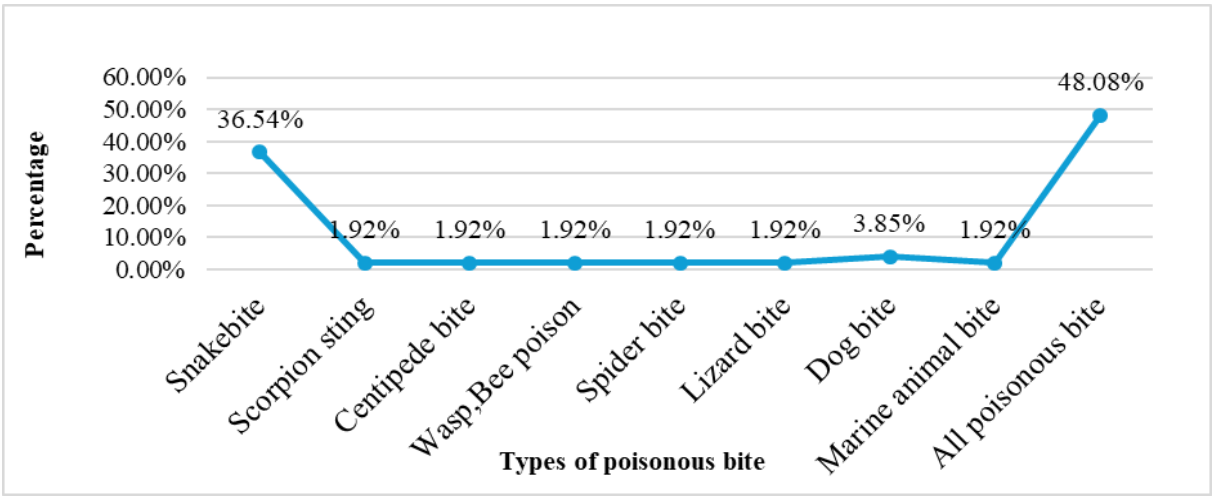

Figure 4: Frequency of the medicinal plants used for various poisonous bites. A significant portion of the treatments indicates the largest single category, "All poisonous bites"

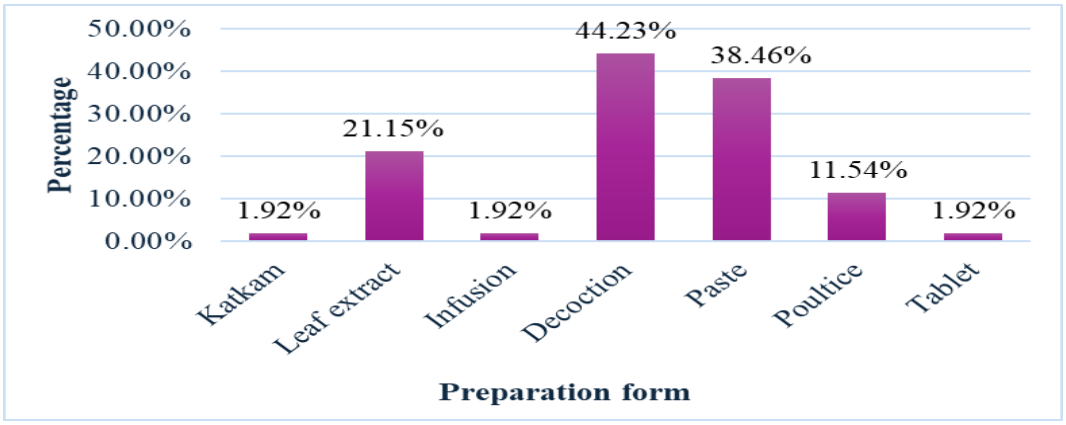

Figure 5: Mode of preparation of medicinal plants. The preparation form of medicines used by Traditional practitioners for treating poisonous bites are categorized into various forms including: *katkam*, leaf extract used as *kalikkam* or *nasyam*, infusion, decoction, paste, poultice and tablet

Figure 6: Visha kal (Stone)

DISCUSSION

In Sri Lanka, traditional medicine is essential in the treatment of poisonous bites, especially in rural and remote places where access to modern healthcare is limited. These traditional treatments practice have an emphasis on immediate first aid, detoxification and venom neutralization using medicinal plants that are readily available locally. Traditional healers of Sri Lanka's Eastern Province play an important role in the treatment of Poisonous bites, notably those caused by snakes, scorpions and venomous insects, using indigenous knowledge passed down through generations. These practitioners, use a combination of herbal treatments, spiritual rituals and traditional methods and techniques to identify the type of poisonous bite and neutralize venom and treat symptoms.

According to a research study revealed, 70% of rural communities rely on these healers as first responders due to delayed access to antivenom and modern healthcare. Eastern part of the island, mainly Batticaloa and Ampara Districts have enriched indigenous knowledge and several cultural heritage entities, most of which were written in palm-leave manuscripts found in Batticaloa present a considerable account on Traditional medicine [8].

The results reveal a diverse but selective use of plant families in the ethnomedicinal treatment of poisonous bites. The predominance of the family Fabaceae (11.54%) suggests its known therapeutic potential and extensive traditional use, possibly related to its diverse phytochemical profile. The moderate composition of families such as Acanthaceae and Piperaceae further indicates their pharmacological importance. The total identification of 32 plant families points to a significant biodiversity and the holistic nature of traditional healing systems in the Eastern Province. The distribution of plant habits shows a clear preference for herbs, followed by trees and climbers. This suggests that the selection of plants is determined by accessibility, growth forms and ease of preparation. Herbs may also predominate because they are readily available in emergencies such as envenomation. Similarly, the major reliance on leaves as the primary plant part is due to their ease of collection, lesser processing, and higher concentrations of bioactive compounds, whereas other plant parts are used more selectively for specific therapeutic indications.

The pattern of conditions treated for snakebite management as a key area of concern for traditional practitioners, consistent with the recognized public health burden of snakebite in rural Sri Lanka. The high proportion of treatments classified as 'all poisonous bites' is particularly suggesting a preference for broad-spectrum remedies. The ways of preparing them highlight usefulness and effectiveness even more, with decoctions and pastes being the most common forms. These methods probably make it easier to get and deliver active compounds while still being easy to use in places with few resources. The observed patterns indicate a necessity for additional pharmacological validation and standardisation to facilitate the secure and efficient incorporation of these practices into comprehensive healthcare systems.

All the practitioners mainly give paste, decoction type medicine as internally for poisonous bite especially for snake bites. And also, the main part in them is roots, bark and leaves. Some plants used for snake venom neutralization traditionally have been tested pharmacologically for their snake venom efficacy [9]. Based on the data provided in Table 5, the variety in formulations suggests a tailored approach to treatment, where the method of preparation is chosen based on the type of bite, symptoms and severity of envenomation. This diversity not only indicates the understanding of plant pharmacology but also highlights the cultural and therapeutic significance of different dosage forms in traditional poison management systems.

The data analysis reveals main obstacles which challenge the implementation and continuation of traditional herbal therapies against venomous animal bites. The major obstacle stands as medicinal plant unavailability according to 71.88% of respondents who described habitat destruction and excessive collection and seasonal plant shortages that damage the traditional healing methods. Patient-related issues emerged including lack of support in 15.63% of cases and concerns about side effects in 6.25% of cases which point to insufficient knowledge regarding herbal treatment safety and effectiveness. The data highlights the importance of preserving medicinal plants and making their use affordable while implementing educational programs to enhance traditional medicine within healthcare systems.

The number of fang impressions shows how severe the envenomation is. One tooth mark means a quarter bite, two marks mean a half bite, three marks mean a three-fold bite, and four marks mean a full bite. The depth of venom penetration is thought to be related to these results, which show that it can reach the skin (one fang), flesh (two fangs), bone (three fangs), and brain (four fangs). The number of fang penetrations will affect the prognosis. Herbal treatment is thought to be able to handle single fang bites. Two fang bites need a mix of mani, mantra and aushadha treatments. Three fang bites need stronger herbal and ritual treatments, but four fang bites are considered very serious and often deadly, and they don't respond well to treatment.

The traditional reports of snakebite identify various incurable indicators linked to fatal consequences. The presence of a hidden auxiliary fang is believed to cause rapid systemic envenomation and death. If bleeding doesn't stop, if the bite site moves or twists, or if the area becomes raised, hard and swollen like a turtle shell, then even one fang bite could be deadly.

Special account on snake bite treatment was recorded, such as identifying the snake that bit the patient, biology and behavioural patterns of different snake species, and herbs antidotes. Indigenous medical doctors could identify species of snakes-based variations in tastes exhibited in snake-bitten patient by giving particular herbal mixtures to victim. Behavioural pattern and biology of snakes also help identify the snake bite even without clearly knowing the creature. On contrary, in western medicine snake species should be physically identified to select anti-venom, which could take time and be impossible in certain cases. In such case, techniques to identify snake species in indigenous medicine could be incorporated into western medicine for efficient treatment [8].

Simple remedies for poisonous bites practiced by the traditional healers including, primarily, the Traditional practitioners are starting their treatment with first aid. For all *Visha kadi* gingelly oil is given for emesis Take five betel leaves with gingelly oil, crush them and give them along with oil. For any poison, take a handful of *Paakal* leaves, crush them and give them the juice, the poison will be reduced. For any type of snake bite, the physician applies the *kattu* and give stem juice of plantain or curd internally then wash the bite site with kerosene or apply lemon and wash with soap water as first aid.

For rat poison, take a handful of *veliparuthi* leaves, mix with pepper, *sukku* and garlic and give with second filtered coconut milk and apply the residue (*sakkai*) on it. For *Aranai* or lizard bites, grind bamboo shoots, with pepper, *sukku* and garlic and give with second filtered coconut milk. For crocodile bite clean the bite site and take 1 handful of Tamarind leaves, salt, turmeric crushed and bandage, then give pepper, garlic boiled water for 3 times per day. For cat bites, take a handful of *kuppaimeni*, mix pepper, *sukku* and garlic and give with second filtered coconut milk and apply it to the bite site for three days. For dog bites, take a handful of *serupadai* leaves, mix pepper, *sukku* and garlic and give with second filtered coconut milk or cow's milk twice daily for 3 days and apply it to the bite site. For dog bites, you can give *Thavasi murungai* in the same way. For bear or fox bite take one handful of *kaatu kurunthai* leaves, salt and turmeric crushed and bandaged. For *kaana kadi* venom, take each 1 handful of *mudi thumbai, veliparuthi, kuppaimeni* and *nilavembu* and grind with pepper, *sukku* and garlic and give with second filtered coconut milk.

Some of the Traditional practitioners use *Visha kal* (stone) for treating the venomous bite (Figure 6). When the victim comes with the poisonous bite, the physician places the *Visha kal* over the bite site. Also, they stated, if it is a *visha kadi*, the *Visha kal* will immediately bind at the bite site, absorb the poison there and not allow to spread the venom further in the body. After the venom reduces, the stone will automatically fell down.

Some of the Traditional practitioners are using *Kudori* method for treating the poisonous bite. If the patient became unconscious state, the physician will make a small incision on the vertex of patient as in cross shape and then *Mudithumbai* leaf juice will apply on the vertex, few minutes later, the patient will recover his consciousness back. Likewise, some of the traditional healers are using '*Thavanai podal'* method to treat the venomous bite, before administrating any internal medicines. Here the traditional practitioners apply the '*Thiruneeru'* on the patients from their vertex to feet with bunch of neem leaves and say some '*Mantras'*. They believe that the spread of venom is reducing from head to toe by doing this method, especially for the snakebites.

Dietary & Daily Regimen: Traditional medical systems propose specific dietary and daily regimens for patients recovering from life-threatening poisonous bites, with an emphasis on detoxification, anti-inflammatory support, and immunological regulation. To alleviate metabolic stress, dietary regimes frequently recommend avoiding heavy, greasy, or spicy foods in favour of light, readily digestible meals such as barley soup, steaming vegetables, and herbal decoctions (for example, neem, turmeric, or liquorice root). Fasting may be advised initially by the traditional practitioners to prioritize toxin elimination. Hydration with warm water or herbal decoction (e.g., ginger, coriander) is encouraged to enhance circulation and detoxification. Daily regimens emphasize physical relaxation to avoid venom spread, along with topical treatments of herbal poultices. Avoid cool water intake and head bath until the swelling subsides. Avoid *Theetu*.

The dietary and daily regimens prescribed in traditional medical systems for snakebite recovery are grounded in centuries-old practices that focus on detoxification, inflammation reduction, and immune support. These practices are supported by classical texts and ethnobotanical research, highlighting their continued relevance in contemporary healthcare. Also, the daily regimens emphasize physical relaxation to prevent the spread of venom, along with topical treatments using herbal poultices. Patients are also advised to avoid cool water intake and head baths until swelling subsides. These practices are rooted in traditional knowledge systems that have been passed down through generations and are supported by ethnobotanical studies documenting the use of specific plants and dietary practices in the management of snakebites [10].

CONCLUSION

The ethnomedical survey conducted in the Eastern province of Sri Lanka has successfully identified 52 medicinal plants among 32 families, utilized by Traditional practitioners for the treatment of Poisonous bites. Fabaceae family plants were identified as having the highest representation with 11.54%. The study emphasizes the importance of geographically specific medicinal plants and treatment practices, in which the local environment and cultural customs have a significant impact on the selection and administration of herbs and plant-based medicines internally as well as externally. Accordingly, it is concluded that the diagnostic techniques such *Thoothan kuri* as well as the study of medicinal plants and herbal remedies used by Traditional practitioners, are highly efficient in the diagnosis and treatment of poisonous bites.

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Author Contributions

TV & SJ conceptualised and designed the study. TV conducted the field surveys, data collection, and ethnobotanical documentation. Also contributed to data acquisition, literature review, and statistical analysis. Both TV and SJ participated in the interpretation of results and preparation of the manuscript. TV will act as the guarantor of the manuscript.

Data Availability Statement

The data that support the findings of this study are available and will be made available upon request.

Use of AI in Drafting of Manuscript

The authors declare that they have not used any generative AI/AI-assisted technologies in the writing of this manuscript.

Conflict of Interest

The authors declared no conflict of interest.

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