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A Comprehensive Approach to Exploration, Documentation and Conservation of Indigenous Traditional Knowledge of Tamil Nadu, focusing on External Medicines Used in *Varma Maruthuvam* w.r.t *Enbu Murivu* (Musculoskeletal Disorders)

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ABSTRACT: *Varma Maruthuvam*, a branch of Siddha Medicine, employs external medicine to manage various *Enbu Murivu* (Musculoskeletal conditions). Despite its popularity, there is a lack of comprehensive documentation on the external medicines opted in *Varma Maruthuvam* for fracture management. This literature review aims to compile and document the external medicines used in *Varma Maruthuvam* for *Enbu Murivu*, exploring their ingredients, preparation methods, and applications. A thorough search of traditional *Varma* literature was conducted to identify relevant information. The review reveals a range of External Medicines, including *Ottiradam*, *Poochu*, *Nasiyam*, *Oothal*, *Thaarai*, and *Potanam*, etc., used to promote fracture healing, reduce pain and inflammation, and enhance functional recovery. The documented medicines and their applications provide a foundation for further research and standardization of *Varma Maruthuvam* practices. This review contributes to preserving traditional knowledge and promotes the integration of *Varma Maruthuvam* into modern healthcare practices, offering a complementary approach to fracture management.

1. INTRODUCTION

The Siddha Medicine, a traditional medicine originating from ancient Tamil Nadu, India, has been a cornerstone of healthcare for centuries. Siddhars established it. With its roots in the Dravidian culture and philosophy, Siddha medicine is a holistic approach that integrates physical, mental, and spiritual well-being. To treat the 4448 ailments listed in the Siddha literature, this medical system is primarily divided into two classes: 32 varieties of *Aga marunthugal* (Internal Medicine) and 32 types of *Pura marunthugal* (External Medicine), depending on the source of drug intake. This encompasses many of Siddha's classic internal and external medications and specialties, such

as *Varmam*, *Siddhar Yoga*, *Kaayakalpam*, and *Vaadham* (Janani & R, 2017). *Varmam* medicine stands out as a cornerstone of Siddha Medicine, a gift from Siddhars for the betterment of humanity. Siddha medicine offers a treasure trove of tried-and-true remedies, both internal and external, with *Varmam* standing out for its exceptional efficacy in treating a range of health issues, particularly those affecting the musculoskeletal and nervous systems (Janani & R, 2017).

Varmam is a unique therapeutic approach in Siddha medicine that focuses on manipulating vital energy points, called *varmam* points, on promoting health and wellness. By applying precise pressure to these anatomically specific points, practitioners aim to stimulate healing and balance. This external therapy,

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introduced by Siddhars, involves the targeted stimulation of muscles, tendons, bones, and soft tissues to restore energy flow and prevent illness-like life-threatening symptoms, which may even result in death on vigorous stimuli. Each *Varma* has its specific time for resolution. It may be restored by an advanced therapeutic procedure called *Adangal* within a stipulated time (Janani & R, 2017).

In the context of Siddha medicine, *Varmam* treatment is considered a drugless therapy, relying solely on manual stimulation to prevent and manage certain diseases. This approach is time-consuming and cost-effective, making it a preferred method for many ailments. *Varmam* points are where the *vaasi* energy is stored and activated, crucial to the body's physiological functions.

1.1. History of *Varmakalai*

It is believed that Lord Shiva, the first Siddhar, taught the art of *Varmam* to his son, Lord Murugan. This lineage continues through Siddhar Agathiar, Nanthidevar, and their followers. The majority of the *Varmam* texts written in Tamil are attributed to Siddhar Agathiyar, Thirumoolar, Bogar, Therayar, Romarishi, and Ramadevar, and it is practised well in the Southern region of Tamil Nadu, especially Kanyakumari. The tradition of passing down the *Varmam* art through the master and disciple has kept it alive and thriving for centuries (Mohanaraj, 2008).

1.2. Classification of *Varmam*

There are two main classifications of *Varmam*. The first is based on geographical distribution (*Kandam* - 5) and the second on *Aadharam*- 6. In both classifications, there are a total of 108 *Varmam* points. These points are divided into upper limb (15), lower limb (14), area below the navel (9), area above the navel (45), and area above the neck (25). *Varmam* points are specific locations in the body that activate, regulate, and supply energy and functions according to the body's needs. The *Varmam* text "*Varma Vilvisai*" lists 8000 *Varmam* points, while *Kumbamuninarambarai* describes 251 points. Most *Varmam* texts mention 108 *Varmam* points, 12 being *paduvarmams* and 96 being *thoduvarmams*.

The text "*Varma Chinthamani*" explains that there are 828 *Varmam* points distributed across three body regions (*kandam*) - *Vatha* region (navel to foot, containing 190 *varmams*), *pittha* region (area between navel and base of the neck, containing 366 *varmams*), and *kabam* region (area above the head, containing 182 *varmams*) (Figure 1). *Paduvarmams* are directly linked to brain energy and are major energy storage points. According to the text "*Pingala nigandu*17", the term '*padu*' signifies the brain. *Thoduvarmams*, on the other hand, are connected to *paduvarmams*. The term '*thodu*' means touch, indicating that one *varmam* point is connected to another through touch. Each *paduvarmam* is linked to eight *thoduvarmams*, totalling 96 *thoduvarmams*. These serve as minor energy storage points. The total number of *Varmam* points, which amounts to 108, includes two terminologies - *Varmam* and *Kaalam*. *Varmam* refers to static energy, while *Kaalam* refers to kinetic

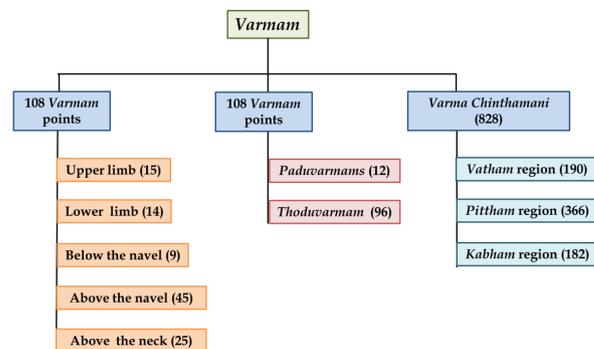


Figure 1. Various classifications of *Varmam*.

energy (Mohanaraj, 2008).

Other types of *Varmam* mentioned in the texts include *vathavarmam* (64), *pithavarmam* (26), and *silathumavarmam* (6). *Varmam* literature also describes *patchivarmam* (related to astrology-*panjapatchi*), *odukki varmam*, *thattuvarmam*, etc. (Mohanaraj, 2008).

1.3. Historical Proofs of *Varmam*

Varmam leaves its mark in the manuscripts of Tholkappiam, an ancient document that serves as the foundation for Tamil language and literature from the period ranging from 5000 BC to Tholkappiam. It is during this era that the term '*Vali Aatral*' is coined. There exist approximately 120 textbooks under the banner of *Varmam*. These textbooks contain around 30,000 verses dedicated to *varmam* and its components, many of which are preserved on palm-leaf manuscripts. The content of these texts is deeply rooted in the traditions of siddhars, including *Agasthiars*, *Bogar*, *Ramadevar*, *Thirumoolar*, and *Theraiyar* (Mohanaraj, 2008).

1.4. *Varmam* as a Treatment for Illnesses

Varmam is believed to be energy storage points that flow through specific energy channels or streams. The correct stimulation of these points (*mathirai alavu* (pressure) – 1/4, 1/2, 3/4, 1) is thought to aid in treating various illnesses. Individuals with a profound understanding of applying *Varmam* in a standard method, through the analysis of *Vatham*, *Pitham*, and *Kabam*, are believed to be able to treat diseases effectively. *Varmam* Internal medications are given in various forms as *kanji*, *kudineer*, *chooranam*, *thylam*, *illagam* etc., *Varmam* External applications are given in the form of procedures like *Ottradam*, *Poochu*, *Nasiyam*, *Oothal*, *Naasigabaranam*, *Kombukattal*, *Murichal*, *Thaarai*, *thadaval*, and *Potanam* etc.,

Musculoskeletal injuries are a pervasive and debilitating issue, affecting a significant portion of the global population and resulting in substantial economic and social burdens. According to the World Health Organization, musculoskeletal

disorders account for 21.3% of years lived with disability globally. These injuries can result from various factors, including sports participation (Hägglund et al., 2013), occupational activities (Buckle & Devereaux, 2002), and everyday life. The economic burden of musculoskeletal injuries is substantial, with estimated annual costs exceeding \$200 billion in the United States alone. Furthermore, musculoskeletal injuries can have long-term consequences, including chronic pain, reduced mobility, and decreased quality of life (Vos et al., 2010). therefore, it is essential to investigate the causes, prevention strategies, and treatment options for musculoskeletal injuries to mitigate their impact on individuals and society.

Varmam procedure plays a major role in managing Traumatological conditions like *Enbu murivu*. Various external procedures have been practiced widely for *Enbu murivu* (Musculoskeletal disorders). Nowadays, more *Enbu murivu* cases (Musculoskeletal disorders) have been reported.

The collection of *Varmam* literature regarding *Enbu murivu* may be useful for further research study, clinical activities, and exploration of *Varmam* management. So, reviewing the literature regarding *Varma* external therapy literatures for *Enbu murivu* paves the way for future research and Clinical practice safely and cost-effectively.

2. MATERIALS AND METHODS

A comprehensive review of 25 *Varma* literatures was conducted, and relevant data was extracted and organized into tables.

2.1. Source of Books

The review of *Varma* Literatures (Source of books) gave valuable insights into External applications used in *Enbu Murivu* management. The List of External Applications collected from the *Varma* Literature (Source of books) is in Table 1 (T. Kannanrajaram, 2007,?, 2008; .T. Kannanrajaram & Mohanaraj, 2011; Mohanaraj, 2008, 2009, 2010a, 2010b, 2015, 2018; Thiagarajan, 1995a, 1995b).

2.2. Types of External Preparations

The Types of External Preparation like *Poochu*, *Ottradam*, *Ennai*, *Thaarai*, *Thuvaalai*, *Pasai*, *Thalam*, *Pottanam*, and *Nasiyam* were collected after a review of *Varmam* literature (Figure 2). A list of the number of formulations was given in Table 2 (T. Kannanrajaram, 2007,?, 2008; Mohanaraj, 2008, 2009, 2010b, 2015, 2018; Nagarajan et al., 2018; Thiagarajan, 1995a,?).

3. EXTERNAL APPLICATIONS AND THEIR INDICATIONS

The names of External Application, Indications and Reference books for each type of preparations were given below (T. Kannanrajaram, 2007,?, 2008; Mohanaraj, 2008, 2009, 2010b, 2015, 2018; Thiagarajan, 1995a).

Table 1
Source of *Varma* Literature.

S. No	<i>Varma</i> Literature Book Name	List of Types of Preparation
1.	<i>Varma Odivu Murivu Sarasootheram- 1200</i>	<i>Poochu</i> – 5, <i>Ennai</i> – 3, <i>Thuvaalai</i> – 1, <i>Ottradam</i> – 1, <i>Thaarai</i> – 4
2.	<i>Varma Gurunool</i>	<i>Poochu</i> – 2, <i>Ennai</i> – 1
3.	<i>Sigichai Murivu Saari</i>	<i>Poochu</i> – 1, <i>Ottradam</i> – 4
4.	<i>Varma Aani</i>	<i>Poochu</i> – 1 <i>Ottradam</i> – 1
5.	<i>Varma Kannadi</i>	<i>Poochu</i> – 4 <i>Ennai</i> – 1 <i>Ottradam</i> – 1
6.	<i>Varma Naalu Mathirai</i>	<i>Poochu</i> – 1 <i>Ottradam</i> – 1 <i>Thaarai</i> – 2
7.	<i>Varma Gnana Odivu Murivu Sarasootheram</i>	<i>Ennai</i> – 3
8.	<i>Varma Saari</i>	<i>Ennai</i> – 1 <i>Ottradam</i> – 1
9.	<i>Varma Sootheram</i>	<i>Ennai</i> – 3 <i>Ottradam</i> – 1
10.	<i>Varma Beerangi Vaitthiya Sootheram</i>	<i>Ennai</i> – 1
11.	<i>Vallisai Kaivalliyam</i>	<i>Ottradam</i> – 2
12.	<i>Sathuramani Sootheram</i>	<i>Ottradam</i> – 1
13.	<i>Varma Thiravukool</i>	<i>Ottradam</i> – 3
14.	<i>Thattu Varma Thirattu</i>	<i>Ottradam</i> – 1
15.	<i>Varma Nithanam</i>	<i>Ottradam</i> – 1
16.	<i>Varma Villum Visaiyum</i>	<i>Thaarai</i> – 1
17.	<i>Varmanool Thoguthi- 1</i>	<i>Thalam</i> – 1
18.	<i>Varmanool thoguthi- 2</i>	<i>Ottradam</i> – 1
19.	<i>Varmanool Thoguthi- 3</i>	<i>Ottradam</i> – 1
20.	<i>Siddha Maruthuvam Sirappu</i>	<i>Paasai</i> – 1
21.	<i>Varma Vidhi</i>	<i>Nasiyam</i> – 1
22.	<i>Varma Kalai Kannadi Sootheram</i>	<i>Paasai</i> – 1
23.	<i>Varma Kaaviyam</i>	<i>Thaarai</i> – 1
24.	<i>Varma Sara sookchamam</i>	<i>Pottanam</i> – 1
25.	<i>Varma Odivu Murivu Sarasootheram - 1500</i>	<i>Pottanam</i> – 1 <i>Ottradam</i> – 2

Table 2
Types of External Applications for *Enbu Murivu*.

S. No	Types of External Applications for <i>Enbu Murivu</i>	Number of Formulations
1.	<i>Poochu</i>	14
2.	<i>Ottradam</i>	19
3.	<i>Ennai</i>	10
4.	<i>Thaarai</i>	7
5.	<i>Thuvaalai</i>	1
6.	<i>Pasai</i>	6
7.	<i>Thalam</i>	1
8.	<i>Pottanam</i>	1
9.	<i>Nasiyam</i>	1
	Total	60



Figure 2. Types of External Applications for *Enbu Murivu*

3.1. *Poochu* (Anointing)

Poochu, also known as liquid poultice or anointing. It is the topical application of medicated oil or herbal juices and decoctions after gently warming the affected area. It can also be prepared by dissolving herbal powders or tablets in juices or oils and then using them. Typically, it is applied slowly to the affected areas and then gently smeared for a few minutes or until the heat subsides. This procedure includes purification, lubrication, local healing, analgesia, and anti-inflammatory properties. It also removes toxins from the skin while dilating all body channels to cleanse and improve peripheral circulation.

Poochu is classified into two types based on its physical properties: water-based and Oil-based. Duration: 15 to 20 minutes. The list of names of external applications, indications, ingredients, and reference books for *Poochu* is given in [Table 3](#).

3.2. *Ennai* (Medicated Oil)

Ennai (Medicated Oil) is made by boiling base oil with raw drugs or herbal juices and heating until the drugs are

dehydrated, transferring the therapeutic active chemicals to the oil. It can be administered in both an internal and external manner. The list of Names of External Applications, Indications, Ingredients and Reference Books of *Ennai* is given in [Table 4](#).

3.3. *Ottradam* (Fomentation)

Ottradam is called a Fomentation, which is prepared and administered as follows. The required plant parts, grains, and others are put together in a vessel/container, fried, boiled, or heated and then tied in a sterile cloth as a bag (kizhi). The bag is applied over the affected area in the trained manner (compressing and releasing) gently for a few minutes or till the heat subsides. This fomentation procedure involves purification, local healing, analgesic and anti-inflammatory action. It also removes toxins through the skin and dilates all body channels for cleansing and improving peripheral circulation.

Types: According to the physical nature of *ottradam*, it is classified into three

Table 3*Poochu*- External Applications, Indications, Ingredients and Reference Books.

S.No	Name of <i>Poochu</i> External Application	Reference Textbook	Ingredients	Indication
1.	<i>Uchi murivuku poochu</i>	Varma Odivu Murivu Sarasoothiram- 1200	Santhanam (<i>Santalum albam</i>), Kukkil (<i>Shorea rosbestra</i>), Nimba pazham (<i>Citrus limon</i>), Aathali (<i>Momordica cymbalaria</i>), Vazhaikizhangu (<i>Musa paradisiaca</i>), Nanjaruppan (<i>Tylophora indica</i>), Veliparuthi saaru (<i>Pergularia daemia</i>)	Vertex Fracture
2.	<i>Thodai vali poochu</i>	Varma Gurunool	Kanupaalai (<i>Alostomia schoarasis</i>), Kalipaakku (<i>Areca catechu</i>), Thumbai saaru (<i>Leucas aspera</i>), Veliparuthi saaru (<i>Pergularia daemia</i>)	Thigh Pain and Neuralgia
3.	<i>Kazhuthu narambu thettralukku poochu</i>	Sigichai Murivu Saari	Thumbai saaru (<i>leucas aspera</i>), Vilvam saaru (<i>Aegle marmelos</i>), Nerunji saaru (<i>Tribulus terrestris</i>), Muttai venkaaru (egg white), Illaneer (tender coconut), Kaadi (Vinegar), Kurunthotti (<i>Sida cordifolia</i>), Ven kunthirigam (<i>Vateria indica</i>)	Cervical Spasm
4.	<i>Narambu pidippu poochu</i>	Varma Kannadi	Chukku (<i>Zingiber officinale</i>), Kombarakku (<i>Cateria lacca</i>), Velipaaruthi (<i>Pergularia daemia</i>)	Muscular spasm
5.	<i>Udhiyanpattai poochu</i>	Varma Gurunool	Thengai poo (<i>Cocos nucifera</i>), Uthiyam pattai (<i>Lannea coromandelica</i>)	Bony Fracture and traumatic pain
6.	<i>Ulunthu maavu poochu</i>	Varma Aani	Anda vellai karu (egg white), Ulunthu maavu (<i>Vigna mungo</i>), Elumichai pazha saaru (lemon juice)	Traumatic Pain and Fracture Reunion
7.	<i>Odivu murivu, sithaivuku poochu</i>	Varma Odivu Murivu Sarasoothiram- 1200	Kuvilam veer (<i>Aegle marmelos</i>), Kuppaimeni (<i>Acalypha indica</i>), Uzbinjai veer (<i>Albizia odoratissima</i>), Kothamalli (<i>Coriandrum sativum</i>), Sambvani (<i>Styrax benzoin</i>), Thakkolam (<i>Thakkol</i>), (<i>Illicium verum</i>), Kadugu (<i>Brassica nigra</i>), Ellu illai (<i>Sesamum indicum</i>), Velliparuthi saaru (<i>Pergularia daemia</i>)	Fracture Reunion and Laceration.
8.	<i>Kaara poochu</i>	Varma Kannadi	Thurusu (copper sulphate), Pannri nei (pig fat), Thirugukalli paal (<i>Euphorbia ligularia</i>)	Extrudes Bony Pieces from Fracture Site
9.	<i>Neerkoortha sathaimurivuku</i>	Varma Odivu Murivu Sarasoothiram- 1200	Kukkil (<i>Shorea robusta</i>), Sathakuppai (<i>Anethum graveolens</i>), Aathali (<i>Momordica cymbalaria</i>), Sanni nayagam (<i>Aloe littoralis</i>), Kasthuri manjal (<i>Curcuma aromatic</i>), Uluva aarusi (<i>Trifonella foenum</i>), Milagu (<i>Piper nigrum</i>) - Each one kazhanju (5.1g)	To Reduce Swelling in muscle traumatized region.
10.	<i>Murivu thalluku poochu</i>	Varma Kannadi	Aadhali (<i>Momordica cymbalaria</i>), Pazhukkai Patthhiri (<i>Artemisia nilagirica</i>), Kasakasa (<i>Papaver somniferum</i>), Sathikai (<i>Myristica fragrans</i>), Punnarusi (<i>Calophyllum inophyllum</i>) - Each equal quantity. Panneer (rose water)	Traumatic Injury
11.	<i>Moodillathali poochu</i>	Varma Naalu mathirai	Kudangal Nilapannai (<i>Curculigo orchiodes</i>), Muthakaasu (<i>Cyperus rotandus</i>), Mathuram (<i>Glycyrrhiza indica</i>), Ayamothagam Kaccholam (<i>Kaempferia galangal</i>), Kaiyan chaaru (<i>Eclipta prostrata</i>)	Neck Injury
12.	<i>Pura poochu</i>	Varma Kannadi	Pacha arusi (<i>Oryza sativa</i>), Ilupai (<i>Madhuca longifolia</i>), Nathai soori (<i>Cordia dichotoma</i>), Puzhu kooli (<i>Senna alata</i>) Puthan oodu	Heals Lacerated wound
13.	<i>Sathai murivuku poochu</i>	Varma Odivu Murivu Sarasoothiram- 1200	Moodilla thaali (<i>Cassytha filiformis</i>), Athikozhunthu (<i>Ficus racemosa</i>), Paal (milk)	Bruise and Laceration
14.	<i>Sathaimurivu raththakattuku poochu</i>	Varma Odivu Murivu Sarasoothiram- 1200	Mavilangu attai (<i>Crataeva magna</i>), Murungai pattai (<i>Moringa oleifera</i>), Naaruvizhi pattai (<i>Cordia dichotoma</i>), Nathai soori ver (<i>Spermacoce hispida</i>)	Fracture Reunion and Laceration.

1. Liquid-based like kashayam, oils

2. Semisolid based karkam

3. Solid-based stones or vessels.

Duration: 20 – 30 minutes

The list of names of external applications, indications, ingredients, and reference books for *Otttradam* is given in Table 5.

3.4. Thuvalai

Thuvalai is described as *poochu* in ancient Siddha texts. It is a simple procedure adapted for balancing disarranged humours, as explained by Therayar in his book Therayar Thaaru. The list of names of external applications, indications, ingredients, and reference books for Ennai is given in Table 6.

3.5. Thaarai

Thaarai therapy, medicated oil is steadily poured on the affected body part of the patient at a prescribed rate. There

Table 4
Ennai- External Applications, Indications, Ingredients and Reference Books.

S.No	Name of Ennai External Application	Reference Textbook	Ingredients	Indication
1.	Aalam Paal Ennai	Varma Gnana Odivu Murivu Sarasoothiram	Milagu (<i>Piper nigrum</i>) Omam (<i>Carum coptium</i>) Aalam paal (<i>Ficus bengalensis</i>) Shenbaga paal (<i>Magnolia chempaca</i>) Veppam oil (Neem oil) Illupai oil (<i>Madhuga longifolia</i>) Chukku (<i>Zingiber officinale</i>) Sevali (<i>Rubia cordifolia</i>) Pirandai saaru (<i>Cissus quadrangularis</i>) Katrazhai saaru (<i>Aloe vera</i>) Illupai (<i>Madhuca longifolia</i>)	Muscular spasm
2.	Sulukku Ennai	Varma Gnana Odivu Murivu Sarasoothiram	Murungai illai (<i>Moringa oleifera</i>) Sivappu kodiveli (<i>Plumbago rosea</i>) Nalla ennai (Gingelly oil)	Muscular spasm
3.	Vasavu Ennai	Varma Saari	Katrazhai (<i>Aloe vera</i>) Venknthirigam (<i>Vateria indica</i>) Nalla ennai (Gingelly oil)	Spasm, Ligament Strain And Pain.
4.	Murivu Ennai	Varma Gurunool	Amukkara (<i>Withania somnifera</i>) Kombarraku (<i>Cateria lacca</i>) Ammanakku ennai (Castor oil) Nalla ennai (Gingelly oil)	Reunion of fracture.
5.	Vasavu Ennai -2	Varma Beerangi Vaithiya Soothiram	Chukka (<i>Zingiber officinale</i>) Kasakasa (<i>Papaver somniferum</i>) Naathai ssori vethai (<i>Borreria hispida</i>) Kaacholam (<i>Kaempferia galangala</i>) Nanaari (<i>Hemidesmus indicus</i>) Katrazhai saaru (<i>Aloe juice</i>) Ellumichai juice (<i>Lemon uice</i>) Ammanakku ennai (Castor oil) Thengai ennai (Coconut oil)	Canal Stenosis , inflammation and burns, Paraesthesia
6.	Puya Varma Ennai	Varma Odivu Murivu Sarasoothiram- 1200	Vaayu vidangam (<i>Embelice ribes</i>) Vetpaalai (<i>Wrightia tinctoria</i>) Sirupunnalarusi Venthayam (<i>Trigonella foenum</i>) Aasali arusi (<i>Lepidium sativum</i>) Kombarakku (<i>Cateria lacca</i>) Thippili (<i>Piper longum</i>) Maramanjai (<i>Coscinium fenestratum</i>) Mudakaruthan (<i>Cardiospermum halicacabum</i>) Aalam kozhundu (<i>Ficus religiosa</i>) Saangu (<i>Clerodendrum inerme</i>) Mudilla thaali (<i>Cassytha filiformis</i>) 3. Punugu (<i>Viverra civetta</i>) Korosana (<i>Cow's bile</i>) Seeni (sugar) thengai ennai (Coconut oil)	Supraspinatus Tendinitis Sub acromion Bursitis.
7.	Vilva Veer Ennai	Varma Kannadi	Santhanam (<i>Santum album</i>) Vilanmicchu ver (<i>Plectranthus vettriveroides</i>) Ellam (<i>Elettaria cardomomum</i>) Koshtam (<i>Costa speciosus</i>) Saathikaai (<i>Myristica fragrans</i>) Vilva ver (<i>Aegle marmelos</i>) Thazhuthazhai (<i>Clerodendrum phlomidis</i>) Vengai (<i>Pterocarpus marsupium</i>) Arugan ver (<i>Cynodon dactylon</i>) Nalla ennai (Gingelly oil) Veppam oil (Neem oil)	Arthritis & Neuropathy.
8.	Kumari Ennai	Varma Soothiram	Katrazhai saaru (<i>Aloe juice</i>) – 1 nazhi Paasu nei – 1 paadi Seeragam (<i>Cuminum cyminum</i>) Ellam (<i>Elettaria cardomomum</i>) Chukka (<i>Zingiber officinale</i>) Thippi (<i>Piper longum</i>) Athimathuram (<i>Glycyrrhiza glabra</i>)	Spasm, Ligament Strain
9.	Kundri Illai Thylam	Varma Soothiram	Vellai kundrimani saaru (<i>Abrus precatorius</i>) Kuppai menni (<i>Acalypha indica</i>) Sirtamutti kasbayam (<i>Sida cordifolia</i>) Each one litre. Nalla ennai (Gingelly oil) – 3 litre. Karpooram (Camphor) – 5grams.	Spasm, Ligament Strain
10.	Nandu Kozhuppu Ennai	Varma Soothiram	Nandu kozhuppu (crab extract) Vilakku ennai (Castor oil)	Muscular spasm

are different types of *Thaarai*, each of which cures a different health issue. The herbal oil mixture used in each is also different. The method of treatment is chosen based on the nature of the illness. *Thaarai* is generally administered throughout 30 to 90 minutes. The list of names of external applications, indications, ingredients, and reference books for *Thaarai* is given in Table 7.

3.6. Nasiyam (Nasal Drops)

Nasiyam is called a liquid nasal application. It is a method of instilling liquid into both nostrils. Fresh plant parts are crushed, filtered, boiled, filtered, or prepared fatty oil is instilled into

nostrils. Watery drops are faster than oily drops in their function during *Nasiyam* therapy. It is advisable to use watery drops like plant juice, salt-dissolved water in acute conditions and oily drops in chronic conditions.

Generally, *Nasiyam* is performed in the morning for Vaadha diseases, in noon for Pitha diseases and in the evening for Iya diseases. The dose should be appropriate: less than four drops and not more than eight drops. *Nasiyam* is done gently by slowly instilling the drops one by one. The physical nature of drops is neither hot or cooler; it should be a little warmer. The list of names of external applications, indications, ingredients, and

Table 5

Ottradam- External Applications, Indications, Ingredients and Reference Books.

S.No	Name of <i>Ottradam</i> External Application	Reference Text book	Ingredients	Indication
1.	Kadugu <i>ottradam</i>	<i>Vallisai Kaivalliyam</i>	<i>Kadugu (Brassica nigra)</i> , <i>Nallennai</i> (gingelly oil)	For Thoracic fracture and sprain.
2.	Kaazhuthuku meel ulla murivuku	<i>Vallisai Kaivalliyam</i>	<i>ellam (Elettaria cardamomum)</i> , <i>Seeragam (Cuminum cyminum)</i> , <i>Koduppai (Alternanthera sessilis)</i>	For Muscle spasm and injuries
3.	Nathaisoori <i>ottradam</i>	<i>Sathuramani Sootthiram</i>	<i>Nathai soori illai (Spermacoce hispida)</i> , <i>Nallaennai</i> (Gingelly oil)	Muscular strain and injury, swelling and pain.
4.	Padigaara <i>ottradam</i>	<i>Sigichai Murivu Saari</i>	<i>Neermulli (Hygrophila auriculata)</i> , <i>Irulli (Allium sativa)</i> , <i>Amirthavalli (Tinospora cardifolia)</i> , <i>Pirandai (Cissus quadrangularis)</i> , <i>Nallaennai</i> (Gingelly oil)	Wrist joint dislocation.
5.	Neermulli <i>ottradam</i>	<i>Varma Kannadi</i>	<i>Padigaram (Alumen)</i> , <i>Seelanthipattai (Asystasia Gangetica)</i> , <i>Siru mullai veer (Jasminum auriculatum)</i>	Traumatic injury, swelling and pain in head.
6.	Muzhangai muda <i>ottradam</i>	<i>Sigichai Murivu Saari</i>	<i>Illupai pinnaku (Madhuca longifolia)</i> , <i>Manjal pattai (Coccinimum fenestratum)</i> , <i>Illuvai pattai (Madhuca longifolia)</i> , <i>Eenthi pattai (Cycas circinalis)</i> , <i>Kuduvai pattai (Vitex Negundo)</i> , <i>Kukkil Saarayam</i> (alcohol), <i>Vasavennai</i>	Reduces joint swelling. Elbow dislocation Strengthens elbow joint.
7.	Murivuku <i>ottradam</i>	<i>Varma Aani</i>	<i>Murungai illai (Moringa oleifera)</i> , <i>Murivu poruthi Milagu (Piper nigrum)</i> , <i>Thumbai (Leucas aspera)</i> , <i>Ulli (Allium sativa)</i> , <i>Nallaennai</i> (gingelly oil)	For Muscle spasm and injuries
8.	Murivuku <i>ottradam</i> - 2	<i>Varma Saari</i>	<i>Murungai illai (Moringa oleifera)</i> , <i>Vettrillai (Piper betle)</i> , <i>Uppu (Sodium chloride)</i> , <i>Milagu (Piper nigrum)</i> , <i>Mukkuthi pachilai (Biophytum sensitivum)</i> , <i>Nalla ennai</i> (gingelly oil)	Relieves Stiffness of joint due to injury.
9.	Velluli <i>ottradam</i>	<i>Sigichai Murivu Saari</i>	<i>Vellulli (Allium sativum)</i> , <i>Kodithuvai (Fragia involucriata)</i> , <i>Murungai veer thol (Moringa oleifera)</i> , <i>Kanjiram pattai (Strychnus nux vomica)</i>	Traumatic injury and fractures.
10.	Vellai paarai kal <i>ottradam</i>	<i>Varma Naalu Mathirai</i>	<i>Vellai paarai kal Nochi kozhunthu (Vilex negundo)</i> , <i>Thengai poo (Cocos nucifera)</i>	Cures Suzhiyadi and peenkuzhi Varmam injury. Delirium. Styptic action for injured region. Reduces swelling and pain in the fractured region
11.	Oorillai thamarai kizhi	<i>Sigichai Murivu Saari</i>	<i>Oorillai thamarai veer (Nervilia arangoana)</i> , <i>Sirusundai veer (Solanum torvum)</i> , <i>Kadaladi kai (Achyranthus aspera)</i> , <i>Vellulli (Allium sativum)</i> , <i>Kadugu (Brassica nigra)</i> , <i>Kaccholam (Kaempferia galangala)</i> , <i>Veppa ennai (neem oil)</i> .	Wrist joint dislocation Swelling in wrist joint due to fracture.
12.	Sangan kuppi kizhi	<i>Varma Thiravukool</i>	<i>Sangan kuppi (Clerodendrum inerme)</i> , <i>Muddakaruthan (Cardiospermum halicachum)</i> , <i>Ninrasinungi Vizhi illai (Cadaba indica)</i> , <i>Kaariuppu</i>	For Muscle spasm and injuries
13.	Thirugu kalli kizhi	<i>Varma Aani</i>	<i>Thirugukalli kozhunthu (Euphorbia tirucalli)</i> – 2 fist, <i>Arasu thool (Ficus religiosa)</i> -2 fist, <i>Vellulli (Allium sativa)</i> – a little, <i>Kitta thool</i> (iron powder) - a little	Internal injuries.
14.	Methai kizhi	<i>Varma Thiravukool</i>	<i>Medhai Abini (Papaver somnifera)</i> , <i>Vellai kunthigam (Vateria indica)</i> , <i>Sanninayagam (Aloe littoralis)</i> , <i>Uppu (salt)</i> , <i>Murungai illai (Moringa oleifera)</i> , <i>Nalla ennai</i> (gingelly oil).	Delirium, giddiness and injuries.
15.	Narambu pidippu <i>ottradam</i>	<i>Varma Odivu Murivu Sarasootthiram- 1200</i>	<i>Milagu (Piper nigrum)</i> , <i>Chukka (Zingiber officinale)</i> , <i>Katti sanninayagam (Aloe littoralis)</i> , <i>Sathakuppai (Anthem graveolens)</i> , <i>Vellai paarai podi Nalla ennai</i> (Gingelly oil)	Edema and pain
16.	Manjal kizhi	<i>Thattu Varma Thirattu</i>	<i>Manjal (Curcuma longa)</i> , <i>Sundai ver (Solanum torvum)</i> , <i>Vettrillai (Piper betle)</i> , <i>Veppa ennai</i> (Neem oil)	Cervical spasm Frozen shoulder.
17.	Muthugu Varma kizhi	<i>Varma Thiravukool</i>	<i>Murungai illai (Moringa oleifera)</i> , <i>Uppu (salt)</i> , <i>Nalla ennai</i> (gingelly oil)	Muscle spasm Lumbar Spondylosis Sciatica Spasm and sprains
18.	Ella kizhi	<i>Varma Sootthiram</i>	<i>Thengai ennai (coconut oil)</i> , <i>Ellam (Elettaria cardamomum)</i> , <i>Noichi ver (Vitex negundo)</i> , <i>Kakattan ver (Clitoria ternatea)</i> , <i>Chukka (Zingiber officinale)</i> , <i>Milagu (Piper nigrum)</i> , <i>Thippili (Piper longum)</i>	Relieves Muscle pain and sprain.
19.	Veppam pattai <i>ottradam</i>	<i>Varma Nithanam</i>	<i>Veppam pattai (Azhadirachta indica)</i> , <i>Maavilangu pattai (Crataeva magna)</i> , <i>Vathamadaki ver (Clerodendrum phlomoidis)</i> , <i>Ulli (Allium sativum)</i> , <i>Thevadaaram (Cedrus deodara)</i> , <i>Sithramoolam (Plumbago indica)</i> , <i>Kazharchi (Caesalpinia bonduc)</i> , <i>Pootha karappan pattai</i>	Cervical spasm Neuropathy.

Table 6

Thuvaalai - External Applications, Indications, Ingredients and Reference Books.

S.No	Name of Thuvaalai External Application	Reference Textbook	Ingredients	Indication
1.	<i>Yelathi Thuvaalai</i>	<i>Varma Odivu Murivu Sarasoothiram- 1200</i>	<i>Ellam (Elettaria cardomomum), Sathikaai (Myristica fragrans), Maasikaai (Quercus infectoria), Koorosanai (cow's bile), Santhanam (Santum album), Punugu (Pungama pinnata), Kunkumapoo (Crocus sativus), Vellarivittu (cucumis sativus) - Each one kazhanju (5.1g). Kathali pazham (Muca paradisiaca), Ettipazham (Strychnus nux vomica), Pulathi pazham - Each 2 kazhanju. Vennai (butter) -14 kazhanju, Seeragam (Cuminum cyminum), Mathuram (Glycyrrhiza glabra), Singi Naanganam Sirunaaga poo (Mesua nagassarium), Mathulampazham (Punica granalum), Katthri (Solanum melongena), Amirtha valli (Tinospora cordifolia), Thamaraivalayam (Nelumbo nucifera), Aambal (Lilium candidum), Kottikizhangu (Aponogeton natanas), Neithal (Nymphaea pubescens) Elaneer (tender coconut water).</i>	Insomnia, body heat, weakness, bony lesions and loss of taste.

Table 7*Thaarai* - External Applications, Indications, Ingredients and Reference Books

S.No	Name of <i>Thaarai</i> External Application	Reference Textbook	Ingredients	Indication
1.	<i>Kaadi thaarai</i>	<i>Varma Odivu Murivu Sarasoothiram- 1200</i>	<i>Kurunthotti illai (Sida cordifolia), Siruneerunjil illai (Tribulus terrestris), Ponnavarai illai (Senna occidentalis), Sirupunnalarusi Kombaraku (Carteria lacca), Kaadi (Vinegar)</i>	Pain, fracture, sprain, laceration and traumatic injuries
2.	<i>Saaru thaarai</i>	<i>Varma Villiyum Visaiyum</i>	<i>Aasali (Lepidium sativum), Seeragam (Cuminum cyminum), Uzhijai (Cardiospermum halicacabum), Koduppai (Albizia odoratissima), Kurunthoti saaru (Sida cordifolia)</i>	Head traumas and fractures. Lower abdomen Varma point diseases.
3.	<i>Thaneer thaarai</i>	<i>Varma Odivu Murivu Sarasoothiram- 1200</i>	<i>Seeragam (Cumimum cyminum), Aaliya (Adansonia digitata), Sathakuppai (Anetham graveolens), Panjathaarai Thaneer</i>	Relieves traumatic pain, sprain and Fractures.
4.	<i>Thayir thaarai</i>	<i>Varma Odivu Murivu Sarasoothiram- 1200</i>	<i>Arugan pul (Cynodon dactylon), Santhanam (Santam album), Nannari ver (Hemidesmus indicus), Parpadagam (Oldenlandia corymbosa), Thayir (curd)</i>	Fractures and sprain.
5.	<i>Thaila thaarai</i>	<i>Varma Naalu Mathirai</i>	<i>Sathakuppai (Anetham graveolens), Kariyapolam (Aloe barbadensis), Veppam pisin (Azadirachta indica), Kukil (Shorea robusta), Senjanthanam (Pterocarpus santalinus), Nalla ennai</i>	Sprain and fractures. For Wrist joint sprain, swelling and fractures.
6.	<i>Paal thaarai</i>	<i>Varma Naalu Mathirai</i>	<i>Koottam (Saussurea lappa), Thaalisaaru (Pandanus fascicularis), Vennai (Butter), Seeni (Sugar), Aavin paal (Cow's milk)</i>	Thumb finger sprain and fractures.
7.	<i>Moor thaarai</i>	<i>Varma Odivu Murivu Sarasoothiram- 1200</i>	<i>Sirupeelai (Aerva lanata), Kodupai (Alternanthera sessilis), Katraazhai (Aloe barbadensis), Kurunthootti (Sida cordifolia), Moor (Butter milk)</i>	Relieves traumatic pain, sprain, lacerations and fractures.

Table 8*Nasiyam* - External Applications, Indications, Ingredients and Reference Books.

S.No	Name of <i>Nasiyam</i> External Application	Reference Textbook	Ingredients	Indication
1.	<i>Thumbai Nasiyam</i>	<i>Varma Odivu Murivu gnanam</i>	<i>Thumbai (Leucas aspera), Thulasi (Ocimum tenuiflorum), Chukku (Zingiber officinale), Milagu (Piper nigrum), Illavanam (Bombax malabaricum), Theesi chaaru (Lemon juice)</i>	Temporo mandibular joint dislocation. Delirium Giddiness.

reference books for *Nasiyam* is given in Table 8.

3.7. Pasai (Cream/Ointment)

Pasai is called an embrocation application, cream, or ointment. Pasai medicines are semi-solid fatty oils or gums or resins-based applications. It is a mixture of medicated powder with specified oil and melted honey bee wax. Pasai is generally prepared by adding honey wax with a few medicinal powders. Its physical properties are almost similar to wax or gum. The list of names of external applications, indications, ingredients, and reference books for Pasai is given in Table 9.

3.8. Pottanam (Medicated Pouch)

Perspiration is inducted using heated packs of herbal powder. The list of names of external applications, indications, ingredients, and reference books for Pottanam is given in Table 10.

3.9. Thalam

Thalam, herbal paste or medicated oil will be covered over the affected area. Generally, it is an effective therapeutic remedy for problems relating to the nervous system and mental disorders. The list of names of external applications, indications, ingredients, and reference books for Thalam is given in Table 11.

4. DISCUSSION

Varmam medicine, a branch of Siddha Medicine, offers a unique approach to managing musculoskeletal disorders, making its documentation essential for advancing healthcare. Musculoskeletal conditions, such as osteoarthritis, rheumatoid arthritis, and bone fractures, are prevalent and debilitating, affecting millions worldwide. Varmam medicine, focusing on manipulating pressure points and using external medicines, provides a cost-effective treatment that enhances patients.

The literature documentation of Varmam medicine is vital for several reasons. Firstly, it allows for the systematic study and evaluation of its efficacy in managing musculoskeletal disorders. By documenting Varmam practices, researchers can design studies to assess its impact on pain, inflammation, and functional ability. Secondly, documentation facilitates the standardization of Varmam techniques and formulations, ensuring consistency and quality in its application.

Furthermore, documenting Varmam medicine can lead to discovering new therapeutic targets and treatment strategies for musculoskeletal disorders. By exploring the traditional knowledge and practices of Varmam, researchers may uncover novel mechanisms of action, such as the role of pressure points in modulating pain and inflammation. This can lead to the development of innovative treatments that combine the best of traditional and modern medicine. In conclusion, the literature documentation of Varmam medicine is crucial for unlocking its full potential in managing musculoskeletal disorders and improving patient care. The review yielded 60 external applications for *Enbu Murivu*, categorized into nine types: *Poochu*, *Ottradam*, *Ennai*, *Thaarai*, *Thuvaalai*, *Pasai*,

Thalam, *Pottanam*, and *Nasiyam*. Each application has specific indications, and reference textbooks are provided. In this Literature review, 25 Varmam texts were reviewed. Among 25 Varmam books, Varma Odivu Murivu Sarasoothiram, Sigichai Murivu Saari, Varma Naalu Mathirai, Varma Saari, Varma Kannadi And Varma Aani had more number of formulations.

Many of the drugs (herbs) used in the external preparations have anti-inflammatory, analgesic, and Anti-spasmodic properties that aid in the better healing musculoskeletal disorders. Drugs like *Chukku* (*Zingiber officinale*) (Ezzat et al., 2018; Mashhadi, 2013), *Veliparuthi* (*Pergularia daemia*) (Sridevi et al., 2015), *Kurunthotti* (*Sida cordifolia*) (Franzotti et al., 2000), *Elumichai pazha saaru* (*Citrus limon*) (Galati et al., 2005), *Kasthuri manjal* (*Curcuma aromatic*) (Sudharshan et al., 2010), *Milagu* (*Piper nigrum*) (Tasleem et al., 2014) and *Katrzhai* (*Aloe barbandensis*) (Devaraj & Karpagam, 2011) possess Anti – Inflammatory Activity. Drugs like *Chukku* (*Zingiber officinale*) (Pagano et al., 2021), *Kalipaakku* (*Areca catechu*) (Khan et al., 2011), *Kasakasa* (*Papaver somniferum*) (Abarna et al., 2023), and *Amukkara* (*Withania somnifera*) (Uthirapathy, 2021) has analgesic properties. Drugs like *Chukku* (*Zingiber officinale*) (Ghayur, 2008; Yassin et al., 2012), *Sathakuppai* (Naseri & Heidari, 2007) and *Vasambu* (*Acorus calamus*) (Gilani et al., 2006) has antispasmodic activity. As they possess Anti-Inflammatory, Analgesic, and Anti-Spasmodic properties, they would have better-reduced swelling and inflammation and better healing of trauma.

5. CONCLUSION

In conclusion, this study has compiled a comprehensive collection of Varma external applications for *Enbu Murivu* from various Siddha Varma literature, highlighting the significance of traditional knowledge in Orthopaedic care. This research's findings demonstrate Varma therapy's potential in promoting fracture healing, reducing pain and inflammation, and improving overall patient outcomes.

The documentation of these external applications contributes to preserving traditional Varma practices and provides a foundation for further research. Future studies can build upon this work to investigate the efficacy and safety of Varma therapy in clinical settings, explore its mechanisms of action, and develop standardized treatment protocols.

Integrating traditional Varma knowledge with modern medical practices may reveal new possibilities for preventing and treating bone fractures, ultimately improving the quality of life for individuals affected by these injuries. This research is a stepping stone for further exploration and collaboration between traditional practitioners and modern healthcare professionals.

CONFLICTS OF INTEREST

None.

Table 9

Pasai - External Applications, Indications, Ingredients and Reference Books

S. No	Name of Pasai External Application	Reference Textbook	Ingredients	Indication
1.	<i>Odivu kattum pasai</i>	<i>Sathuramani Sarasoothiram</i>	<i>Puliyam kottai (Tamaraindus indica), Ulunthu (Vigna mungo), Kaarkool arusi (Psoralea corylifolia)</i> - Each equal quantity. <i>Nalla ennai Kozhi muttai</i> (egg)	Bony fractures.
2.	<i>Murivu kattum pasai</i>	<i>Sigichai Murivu Saari</i>	<i>Ulutham parruppu (Vigna munga), Mudilla thaali</i>	Joints fractures.
3.	<i>Murivu kattum pasai-2</i>	<i>Sigichai Murivu Saari</i>	<i>Karrukkuvellam (Jaggery), Muttai ven kaaru</i> (egg white), <i>Nalla ennai</i>	Use it as bandage for fractures.
4.	<i>Mozhiporunthu kattum pasai</i>	<i>Varma Naalu Mathirai</i>	<i>Venkunthirikka poodi (Vatria indica), Saarayam (Spirit), Nallamilagu (Piper nigrum), Katti saninayagam, Muttai ven kaaru</i> (Egg White).	Femur fracture.
5.	<i>Mozhiporunthu kattum pasai</i>	<i>Varma Naalu Mathirai</i>	<i>Vendhayam (Trigonella foenum graecum), Vilaam pisin (Limonia acidissima), Omam (Trachyspermum ammi), Ven kungiliyum (Vatria indica), Kariyapolam (Aloe baradensis)</i>	Metacarpal dislocation Metacarpophalangeal dislocation.

Table 10

Pottanam - External Applications, Indications, Ingredients and Reference Books

S. No	Name of Pottanam External Application	Reference Textbook	Ingredients	Indication
1.	<i>Sneha Pottanam</i>	<i>Varma Odivu Murivu gnanam</i>	<i>Arathai (Alpinia galanga), Punnal arusi (Oryza sativa), Vangaala patchai (Vernonia Kollu (Macrotyloma uniflorum), Kirambu (Syzygium aromaticum), Kumkuma poo (Crocus sativus), Samuthira pazham (Barringtonia acutanguala), Koottam (Costus speciosus), Venhayam (Trigonella foenum graecum), Sadamanjil (Nardostachys jatamansi), Thirikadugu Vengayam (Allium cepa), Karuvapattai (Cinnamomum verum), Sangu vaai mudi (Conch shell), Kadugu (Brassica nigrum), Elam (Elatteria cardamomum), Athimathuram (Glycyrrhiza glabra), Thagarai (Cassia tora), Shenbaga poo (Magnolia champaca), Agil (Aqualaria agallocha), Aali virbai (Lepidium sativum), Magizham poo (Mimusops elangi), Vasambu (Acorus calamus), Elumichai pasha saaru (Lemon juice), Veppam ennai (Neem oil)</i>	Generalised body pain.

Table 11

Thalam - External Applications, Indications, Ingredients and Reference Books

S. No	Name of Thalam External Application	Reference Textbook	Ingredients	Indication
1.	<i>Moodillathali Thalam</i>	<i>Varma naalumathirai</i>	<i>Moodilaa thaali (cassytha filiformis), Saaranai kizhangu (Boerhavia diffusa), Pachai nelaarasi (Oryza sativa), Kaadineer</i> (Fermented rice water/vinegar)	Face fractures and spasm

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