

# Traditional healing and *usada* manuscript in Lombok, West Nusa Tenggara, Indonesia

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**Abstract:** This article explores ethnomedicine or traditional medication written in palm-leaf manuscripts in Lombok, West Nusa Tenggara. Most of the manuscripts in Lombok are written on palm leaf or lontar. One genre of palm-leaf manuscripts is USADA or traditional medication. These USADA manuscripts, serving as guides for traditional healers (dukun and balian), contain valuable information on diseases, treatments, herbal remedies, and incantations. The study reveals that ethnomedicine remains a relevant and respected practice in Lombok, often considered on par with modern medicine. Many residents rely on traditional healers for healthcare, particularly for minor illnesses. The research also highlights the living nature of the manuscript tradition, with continued recitation, copying, and teaching of these texts to younger generations. However, challenges persist in preserving these manuscripts and promoting wider appreciation for this unique cultural heritage.

**Keywords:** ethnomedicine; lontar manuscripts; shaman; Lombok

## 1. Introduction

The need to maintain health is carried out by more than just people today. It is confirmed by some knowledge about medical systems that is widespread in people's lives as a legacy passed down from generation to generation, which is passed down orally, called oral tradition. There is also a legacy of traditional medical knowledge stored in ancient records in manuscripts, handwritten notes, or printed books called literature. An edited book entitled "Healing power and modernity traditional medicine, shamanism, and science in Asian societies" (Connor and Samuel, 2001) presents studies on traditional, local, and indigenous medicine in some countries in Asia. It informs us that traditional healing can be found in diverse settings, practiced over the times, and positioned differently by society and government. Traditional healing is also developed by sets of beliefs, knowledge, and perceptions in line with the resources available in society's environment.

The studies on ethnomedicine involve many aspects, such as sources of knowledge, medicinal materials, treatment procedures, types of diseases, treatment practitioners, patients who utilize ethnomedicine, methodologies for the study of medicine, and the position of ethnomedicine in the medical world. Söukand and Raal (2005) classified the healing and medicinal plants in Estonian medicine based on 30,000 texts from the 19th century. Estonians utilized 100 medicinal plants for healing. Kipkore et al. (2014) found that the practice of herbal medicine is still prevalent in Marakwet, Kenya. It identified plants that had medicinal or related usages. Different

herbal preparations including healing fruits and vegetables were employed in the treatment of various medical conditions. The use of animals and pesticides was also documented. In Indonesia, the legacy of traditional healing knowledge in manuscripts and oral traditions can be found in various regions, ethnic groups, and cultural communities.

This article raises the topic of ethnomedicine from manuscript sources in West Nusa Tenggara, one of the provinces in the central part of the Nusa Tenggara Islands, between Bali province to the west and East Nusa Tenggara province to the east. The West Nusa Tenggara Province region consists of two islands, namely Lombok Island and Sumbawa Island, which are administratively divided into eight districts and two cities, with an area of 20,153.15 km<sup>2</sup>. Initially, the West Nusa Tenggara region was inhabited by only three tribes: Sasak, Samawa, and Bima. The Sasak tribe inhabits Lombok Island, the Samawa tribe (Tau Samawa) inhabits the western part of Sumbawa Island, and the Bima tribe inhabits the eastern part of Sumbawa Island. The Bima tribe consists of two tribes, namely the Donggo tribe or Donggo people, who are considered the first people to have inhabited the Bima area, and the Mbojo tribe, who are considered immigrants.

Currently, the population in the West Nusa Tenggara Province consists of various tribes originating from the Malay Peninsula, Aceh, Minang, Banten, Banjar, Java, and Sulawesi. The arrival of people from different tribes on this island brought their respective traditions and cultures, including their literacy culture and local knowledge. Therefore, Sumbawa Island and West Nusa Tenggara generally have various oral and written traditions covering multiple fields of expertise, including knowledge about medicinal systems. This article intends to highlight and explore learning about traditional healing systems in West Nusa Tenggara, which are stored in written and oral traditions. Manuscripts scattered throughout West Nusa Tenggara are written in various scripts. In this province, there are at least seven types of script, namely Latin, Sasak (Jejawan), Javanese (Harjendro), Balinese (Wiyagyana), Samawa (Jontal), Mbojo (Engahimantoi), and Malay Arabic. The diversity of scripts from these manuscripts is assumed to result from inheritance from different tribes with different cultural backgrounds. It shows how rich the cultural heritage is in West Nusa Tenggara Province, including medicinal cultures originating from various ethnic groups.

The cultural heritage of traditional knowledge about ethnomedicine is a wealth of culture and ancestral knowledge that deserves to be respected because it is proof of the intelligence and local wisdom of the people who own it in managing their lives and maintaining their existence as inhabitants of nature, who must be able to utilize the natural potential for their survival. The results of research on traditional medicine in Java conducted by Suyami (1992), Suyami et al. (1994, 1995, 1996, 2019, 2020, 2021), Titi Mumfangati et al. (2014), Sumarno et al. (2022) show that the materials used as medicinal ingredients recorded in Javanese manuscripts and literature all come from nature, whether from plant elements (flora), animal elements (fauna), natural mineral elements, or from the human body alone. This research investigates ethnomedicine from manuscript and oral traditions of West Nusa Tenggara. It examines how communities use natural resources for health and healing, drawing on knowledge preserved in manuscripts.

## **2. Materials and methods**

This paper is a result of a three weeks field research conducted in West Nusa Tenggara, 30 June–20 July 2023. The team consisted of researchers from the traditional gastronomy, medicine, and technology research group, the center for Manuscript, literature, and oral traditions, National Research and Innovation Agency, Indonesia. Prior to field research, we mapped potential locations and informants to be visited to gather intended data. We planned to visit Lombok in the western part of West Nusa Tenggara and Bima in the eastern part of the province. However, considering the time allocation, the area's breadth, and the corpus to be studied, we only went to Bima for three days to visit two significant manuscript collections. This refocusing of the research location was also intended to get data more precisely by exploring Lombok areas. This change was made because we found that the spread of USADA manuscripts in Bima was very few. Historically, Bima was highly influenced by Islamic sultanates and Sulawesi's culture, which has different exposures compared to Lombok which was largely influence by Hindu, Bali, and Javanese cultures. This information was also confirmed by our visit in Bima, where we found very little findings on palm-leaf manuscripts in this region.

During the field research, we visited some collections such as public museums, private and personal collections, and village museums in Lombok and Bima, which keep palm leaf manuscripts, particularly on the ethnomedicine theme. Methodologically, this research took a consideration an adequate representation of the USADA manuscript spread in Lombok. A preliminary mapping through the available information and previous literature reviews. During in the field, we search for further informants and USADA manuscripts based on the information provided by interviewed informants. To find the spread of ethnomedicine manuscripts and traditional healers in Lombok, we visited our informants in East Lombok, North Lombok, West Lombok, and Central Lombok. From these visitations, we found that there are manuscripts containing ethnomedicine in almost every region in Lombok. Traditional healing practitioners called dukun and balian are also easy to find. Based on our field experiences, dukun or balian have ethnomedicine manuscripts, mostly written on palm leaf (lontar), called Lontar USADA. We observed the manuscripts to identify the material aspects, such as their condition, size, script, and illustration. To document the manuscripts, we photographed them for further study. In addition, we also preserved parts of the manuscripts kept in personal collections with special treatment and showed the collectors how to preserve them.

To collect information, we conducted interviews with traditional healers who use palm-leaf manuscripts as a part of their medication processes and sources. In each research location, we met and conducted depth interviews with our informants. In selecting informants, we asked them to recommend other traditional healers to be visited, as they know each other's and indicating their capacity, popularity, and integrity among them. In general, our informants were open to provide information needed for this study. We explored the issues of the practice of ethnomedicine by discussing relevant aspects, including the materials, diseases, treatments, patients, mantra or praying, and procedures. We also held a focus group discussion by inviting our informants and related persons to discuss our findings and explore more aspects

of the West Nusa Tenggara manuscripts and ethnomedicine. Prior to the interviews and discussion, our informants were informed about the study, including asking their permission to use the provided discussion to be published. The field research was directed to focus on traditional healing, considering the significant number of ethnomedicine aspects in the field.

### **3. Results and discussion**

#### **3.1. Manuscripts and cultural history of Lombok**

The following data analysis in this paper is based on the findings collected during the field research and available literature. The data was obtained from interviews, focus group discussion, feedback from peer reviewers, and discussion of the research team members. Our observations and visitations into selected locations were recorded to add our understanding of the ecosystem of USADA manuscript and traditional healing in Lombok. However, as this research was conducted from the humanities discipline, there are still unexplored questions need to be studied further. This could be on the information of herbs, diseases, and treatment from the medical and pharmacy perspectives.

West Nusa Tenggara is one of the provinces in Indonesia endowed with a rich heritage of ancient manuscripts, most of which were relics of the three kingdoms that once existed in this province: Lombok, Sumbawa, and Bima. Geographically, the West Nusa Tenggara region consists of two islands: Lombok Island and Sumbawa Island. The primary inhabitants of Lombok Island are the Sasak tribe. Meanwhile, Sumbawa Island is occupied by the Sumbawa people, who occupy the western part of Sumbawa Island, and Dou Mbojo (Mbojo people), who occupy Sumbawa Island in the east. Furthermore, in addition to these three tribes, there are immigrant tribes in West Nusa Tenggara, such as Balinese, Javanese, Bugis, Bajo, Malay, Madurese, and various other immigrant tribes. The diversity of ethnic groups that occupy the West Nusa Tenggara region is one of the assets that enriches the literature in the region.

The earliest Sasak literature on Lombok Island was transmitted from one generation to the next through writing on palm leaves. The writing on lontar leaves typically used Javanese script, known as Jejawen script. Although the Sasak language is spoken daily in various accents, Javanese is usually practiced in literature (see also Marrison, 1999). While some Lombok texts are indeed written in Sasak, such as *Tutur Monyeh* and *Cilinaya*, in addition to some *babads*, such as *Babad Sakra*, *Babad Praya*, *Babad Lombok*, others are also written in Lombok-style Javanese. Even though Javanese is the literary language of Lombok, it can be inferred that the content of the manuscripts is part of Sasak culture because there are so many manuscripts on the island, far more than in many places in Indonesia. It explains that the content of the manuscripts is significant among the Sasak community because it is often used in ceremonies performed for individuals and the wider community.

Manuscripts in Lombok are also performed in Sasak puppetry, particularly the story of *Menak Amir Hamzah*. This performance provides a means of conveying the content of the text to the audience more easily than by reading it. Typically, Lombok manuscripts, both Sasak and Javanese, are in the form of *tembang* (song) *Macapat*. *Tembang Macapat* is a literary form from Java. *Tembang Macapat* in Java consists of

nine rhythms, while Lombok only uses six rhythms: *sinom*, *asmarandana*, *pangkur*, *maskumambang*, *dangdanggula*, and *durma*. It is rare to find other song rhythms, so it can be assumed that these six rhythms are the core songs used in Sasak literature. The uniqueness of Sasak literature is that although Javanese is often used, the local element can be identified from the many names assigned to rhythms that are only used in Lombok. However, there are also names in Lombok manuscripts found in East Javanese manuscripts (van der Meij, 2011, pp. 4–6). In the Sasak community on Lombok Island, it is estimated that there are more manuscripts among the community than those preserved in government institutions. The manuscripts are scattered in several sub-districts: Mataram, Gangga, Bayan, Labuapi, Pujut, Sakra, etc. Most of the manuscripts are owned by individuals. Among the owners of the manuscripts, quite a number consider the ancient manuscripts of their ancestors to be kept secret, so they should not be disclosed carelessly.

In addition to the Sasak tribe in Lombok, Sumbawa is also rich in literary treasures. The population of Sumbawa Regency has heterogeneous characteristics. Based on population and civil registration data from Sumbawa Regency, the population consists of eight major ethnic groups, which are Sumbawa (66%), Sasak (13%), Dompu (0.13%), Bima (3%), Java (3%), Bali (3%), Sunda (0.2%), Bugis/Makassar (3.24%), and other ethnicities of approximately 5%. The heterogeneity that characterizes Samawa has greatly influenced the cultural treasures, including literature, that grew and developed in the 6,643.98 km<sup>2</sup> area. In terms of literature, the early literary period of Samawa, the original name of Sumbawa, began with oral tradition. This early Samawa literature depicted the love of nature and man. It emphasized the behavioral norms of loyalty to the king, righteousness of children, respect for teachers or elders, sincere friendship, and chastity of women. The oral literature cited as the pillar of Samawa literature was *Lawas* (sung content). From its development, *Lawas* was influenced by “*Elom Ugi*” or Bugis poetry. This type of literature has lived and evolved in the community for centuries.

Meanwhile, the written literature of the Samawa traditional community began with the writing of literary works on dried palm leaves, called *bumung*. Literary works were written by scratching the tip of a *pangat* (a small sharp knife) over the surface of the *bumung*. These works were then displayed by hanging them on the walls or poles of houses (Raba, 2003, pp. 99–100). This type of written literature is increasingly challenging to find in Sumbawa. The few that remain are usually manuscripts containing diaries and teaching texts. In addition to the Sasak and Sumbawa tribes, Dou Mbojo in eastern Sumbawa Island is also rich in manuscripts (for a more detailed description of the manuscripts in Bima, see Chambert-Loir, 2004 and Chambert-Loir and Salahuddin (eds., 2012). The manuscripts owned by Dou Mbojo were mostly written in Arabic Malay, Bugis, and Bima scripts. In the past, Bima was a kingdom that prospered due to its trade. It was located in the middle of the maritime route that crossed the Indonesian archipelago. This made Bima a vital transit point in the trade network from Malacca to Maluku. Traders have visited its harbor since the 10th century. Since then, Bima has established relations with Ambon, Banjar, Makassar, Banten, Palembang, and China. When the Portuguese began to explore the archipelago, it became an important trading center. Therefore, many people visited and settled on the island.

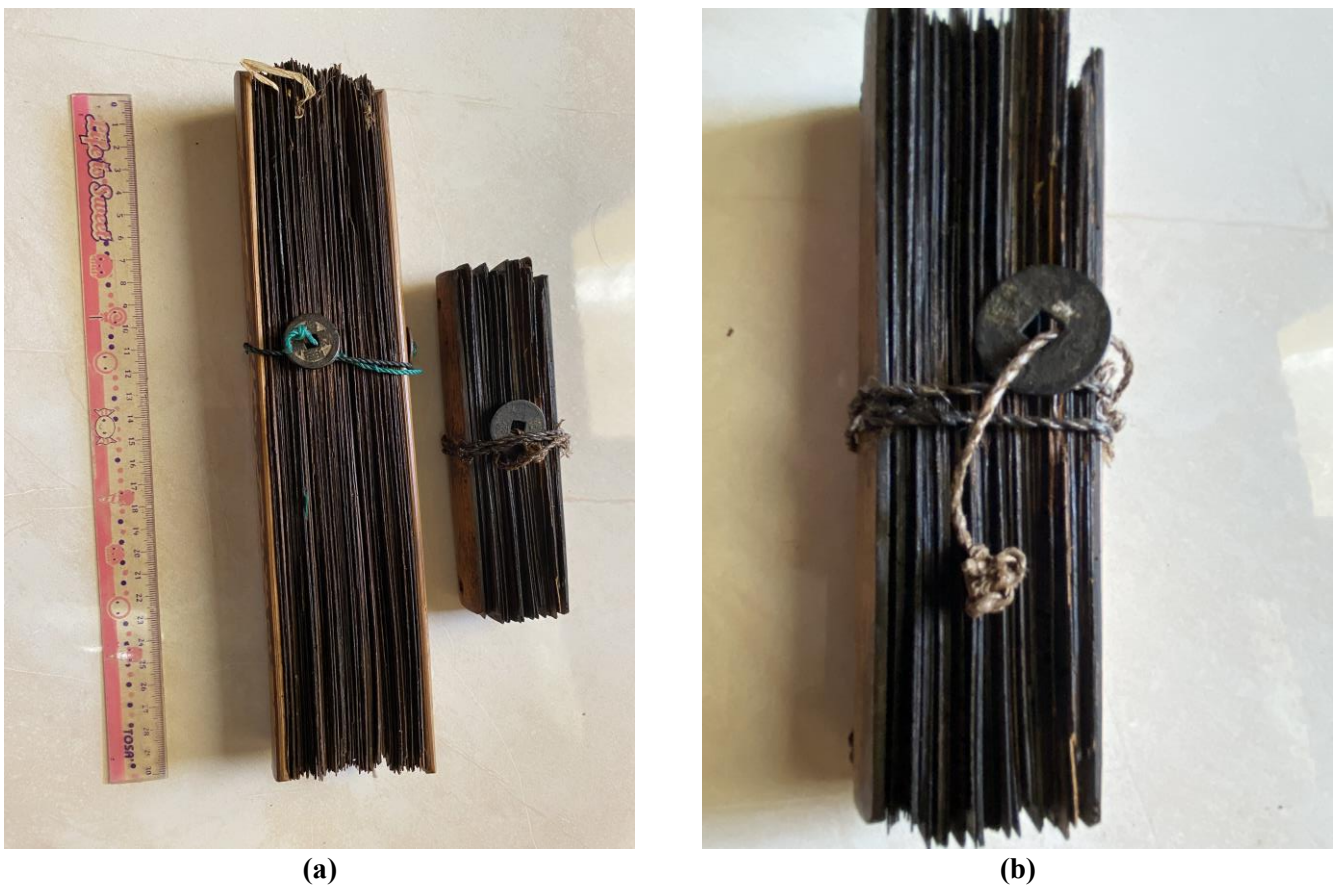
### **3.2. The distribution of ethnomedicine manuscripts**

Ethnomedicine manuscripts in NTB spread throughout the province. While researching the island of Lombok, the five regions we visited all had collections of Lontar manuscripts on medicine. These lontar manuscripts are owned or kept by individuals, especially shamans (dukun) and quacks (balian). Community leaders, such as village or hamlet chiefs, religious scholars, and traditional leaders also stored lontar manuscripts. Maintaining or keeping lontar manuscripts is a tool to legitimize leadership in the community.

Observing the distribution of lontar manuscripts and ancient manuscripts in paper or leather demonstrates the history of West Nusa Tenggara. The western part (Lombok and Sumbawa) was influenced by Balinese and Javanese cultures, which have a tradition of lontar manuscripts. These influences have included the Old Javanese language, classical literature, politics, Hinduism, and Buddhism, which developed in these areas. The eastern part of Sumbawa was influenced by cultures from Sulawesi, which brought the social system, Malay culture, and Islam. Yamin, Burhanudin, Jamaluddin, and Nasrudin (2018) provide an identification of the types of USADA manuscripts in Lombok, including the diseases, medicinal treatment and sources, and treatment methods.

The manuscript heritage in West Nusa Tenggara Province varies in size, type, and distribution. These manuscripts were lontar (handwritten using tal leaves [ron tal]), later metathesized into lontar. The manuscripts vary considerably in size. The sizes found are also quite widely distributed. Typical small lontar manuscripts are 3.1 cm wide and 11 cm long (Genggelang Village Museum, North Lombok, Agus Faturachman West Lombok, State Museum of West Nusa Tenggara). The large number of lontar manuscripts written in small sizes was assumed to be manuscripts that were well-known or familiar to be recited frequently. It was also speculated that the small size of the lontar manuscripts was meant to be easy to carry, similar to a pocketbook.

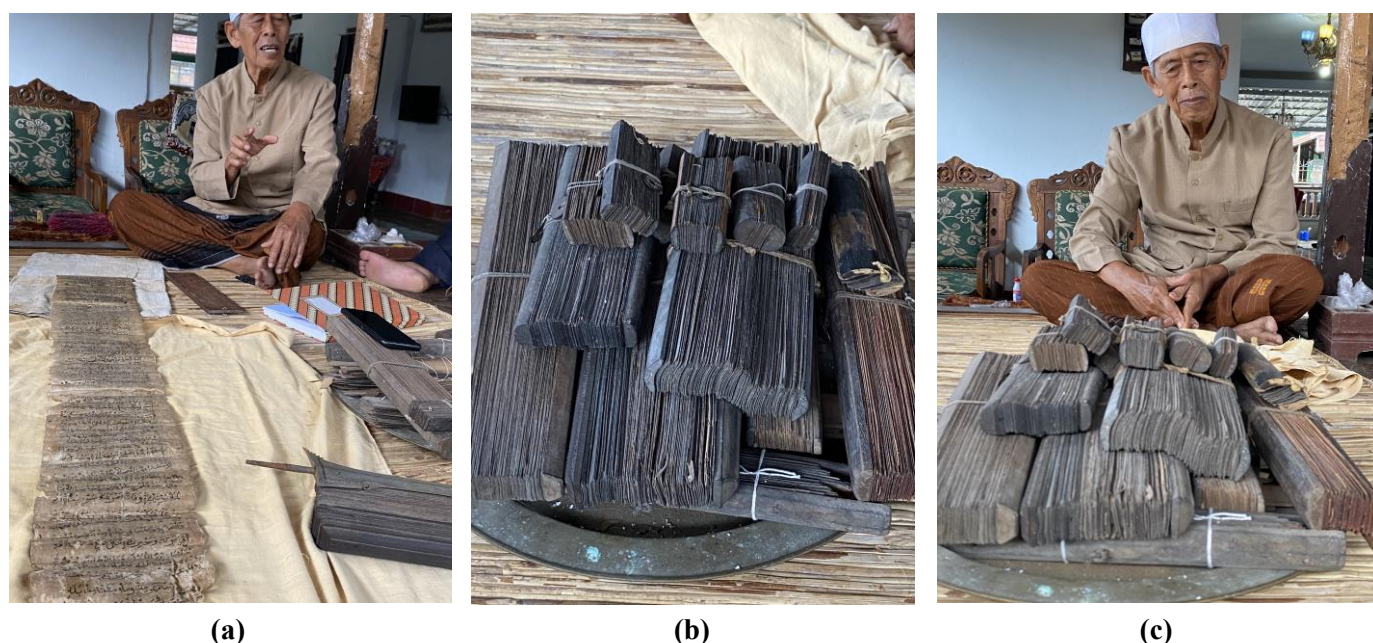
Other sizes that are sufficiently varied and numerous are manuscripts measuring between 4.2 cm wide and 24.8 cm long (15.2 cm thick, 100 plates), 3.45 cm wide and 34 cm long, 3.7 cm wide and 24 cm long, 1.8 cm thick, 30 plates (on the variety of lontar manuscripts, see Wiland et al. 2022). These are located in various places, both in private and institutional collections, including the Provincial State Museum, Genggelang Village Museum North Lombok, Fatah Yasin, Batu Jai, Central Lombok; Mundri Batukambang, West Lombok, Agus Faturachman West Lombok, Lalu Djap East Lombok. West Nusa Tenggara lontar manuscripts are also quite varied regarding the thickness of the manuscripts. The thinnest manuscripts only consist of 3 plates, while the thickest ones consist of 100 plates (see **Figure 1a,b**).



**Figure 1. (a)** Lontar USADA in diverse sizes; **(b)** photos are researchers' documentation.

A lontar manuscript usually contains a single unit of content bound with frog thread (*benang katak*) by punching a hole in the lontar. This hole is not exactly in the center of the lontar but to the right of the lontar. This is intended to indicate where they should start reading the text. The frog thread is knotted at the end with a punched *kepeng* or piece of metal to tie the *takepan*. Generally, lontar manuscripts are stored in a box (*keropak*), a wooden box partly decorated with lontar on the outside. Others are stored on trays (*dulang*). This storage is also equipped by wrapping the manuscripts in *mori* cloth.

Haji Mundri, who lives in Batu Kumbung Village, Lingsar District, West Lombok Regency, has kept around 20 manuscripts, consisting of lontar manuscripts, one sermon manuscript, and dozens of historical objects such as *keris*, *songket*, spears, swords, *samurai*, and traditional tools. The manuscripts are in Sasak and Arabic script and language. Meanwhile, the Quran manuscripts are stored elsewhere (see **Figure 2a–c**). The sermon manuscript measures 143 cm in length, 17.5 cm in width at one end, and 14 cm at the end of the opening sentence. The manuscript, which was written on camel skin, was kept in the form of a scroll inside bamboo. The sermon's content was written on the front and back of the camel skin. The condition of the manuscript remains generally acceptable, with holes in several places and faded ink at the edges and folds that make some of the contents illegible.



**Figure 2.** H. Mundri’s Manuscripts collections consisting of lontar USADA and sermon written on camel skin. Photos are researchers’ documentation. **(a)** A sermon manuscript written on camel skin; **(b)** parts of H. Mundri’s usada manuscripts collection; **(c)** H. Mundri and his lontar manuscripts collection.

Our field research identified that many manuscripts were kept by institutions and the community as individuals. The following table shows our findings on the number and condition of medicinal manuscripts. More ethnomedicine manuscripts are kept in various collections within society.

**Table 1** informing the spread of USADA manuscripts in Lombok and Sumba, West Nusa Tenggara Province. Prepared by authors.

**Table 1.** The spread of usada manuscripts found during the field research.

No.	Collection	Lontar manuscripts	USADA manuscripts	Explanation
1.	West Nusa Tenggara Provincial Museum	1107, according to the museum 1361, according to data recorded on library pillars	16	Well-stored
2.	Kusumaningsun (Lalu Djap) Sakra, East Lombok	4 manuscripts/lontar	2	Still-used
3.	Genggelang Village Museum (North Lombok)	4 manuscripts/lontar	1	Usable
4.	Agus Fathurrachman (West Lombok)	3 manuscripts/lontar	1	Not used because they do not work as a medic/shaman (dukun)/quack (balian)
5.	Fatah Yasin (Central Lombok)	30 manuscripts were mostly borrowed, and only four manuscripts remained	1	The manuscripts Used for various illnesses include treating a child with a speech impediment, a woman who has difficulty conceiving to have progeny (3 months x 3), and an animal that has difficulty having offspring.
6.	H. Mundri Batukumbung, West Lombok	10 manuscripts/lontar	1	Frequently recited when his father was still alive, but not anymore because H. Mundri was not a medic and could not interpret the text.



**Table 1.** (Continued).

No.	Collection	Lontar manuscripts	USADA manuscripts	Explanation
7.	Kuripan Hamlet (dusun), East Lombok		1	Acquired from the legacy and testament of Lalu Intaran.
8.	Mbojo Museum (Bima)	None		Only copies of manuscript sheets containing the history of Bima were available.
9.	Samparaja Museum	300 s of manuscripts		Not yet accessible because the manager was not on site.

The copying of lontar manuscripts still proceeds today, albeit in small numbers. Fatah Yasin, an ethnomedicine practitioner in Batujai, still teaches his students to practice writing and reciting lontar manuscripts. Meanwhile, Agus Fathurrahman, a retired and former head of the Provincial State Museum, still copies lontar manuscripts and transliterates and translates important manuscripts. Fathurrahman also writes new stories and copies manuscripts already widely known by the community (see **Figure 3**). The life of lontar manuscripts can also be witnessed from the reciting in occasional ceremonies. The reciting of manuscripts is performed periodically during celebrations hosted by the people of a village. This tradition of manuscript reading is called *pepaosan* (for a more detailed *pepaosan* of *takepan* in Sasak see Ihsani, Untari, Mandala, Muhdar 2021 and Atisah 2018). Islamic religious texts, such as Sufism, are recited regularly, generally once a week. Aswandi, a lecturer at Universitas Mataram, has a Sufism study group that learns its teachings by reciting lontar manuscripts. These manuscripts are recited with a certain rhythm. Then, explanations are given to the listeners. This tradition is different from the reading of books or manuscripts made from paper, where commentary (*syarh*) can be written in the text. In contrast, the space available in *lontar* does not accommodate *syarh* on the main text.

**Figure 3.** Fathurrahman and his works. Photo is researchers' documentation.

The copying and writing of Lombok lontar manuscripts demonstrate that traditions reviving local languages still exist in Indonesia. Beyond Lombok, the same tradition can still be found in Bali and parts of Java, including Madura, using the same medium (Morrison 1997, 2010). The copying of these medical texts, according to our interviewees, is intended to pass on the knowledge of USADA to their successors. However, if there is no one to inherit, then the writings are intended for anyone who wishes to learn them in the future. The ability to become a shaman (dukun) and quack (balian) by passing on the USADA texts is first passed on to children or close relatives, who have the opportunity to learn, experience, and assist in the daily practice of medicine. However, the responsibilities of inheriting and continuing ethnomedicine work can be socially undertaken by anyone who wishes to learn it.

#### **4. Discussion**

Previous researchers have conducted studies on ethnomedicine, particularly on manuscripts in Java, Sunda, Sumatra, and Kalimantan. Some researchers who have assessed ethnomedicine in Javanese manuscripts are Mulyani et al. (2017), Mumfangati and Susilantini (2017); Wulandari and Suhandano (2018); Suyami (2019); Suyami and Titi Mumfangati (2021); and Sumarno and Suyami (2022). Wulandari and Suhandano's research (2018) have proven that the Javanese disease lexicon offers information on disease identification, classification, and ethnomedicine, including the Javanese perspective on disease. The Javanese language had at least 463 disease lexicons tested according to the theory and could be determined as disease terms. The analysis results concluded that the Javanese perspective on disease, both from the identification, classification, and treatment of disease, is derived from their thoughts and characters that hold Javanese local wisdom values.

Generally, these researches reveal the types of diseases, types of medicinal herbs, the use of natural ingredients, treatment methods, and treatment duration. Ethnomedicine in Sundanese society has been explored by Gunawan (2012); Sumarlina and Husen (2017); Suganda et al. (2018); Sumarlina et al. (2022); Sumarlina et al. (2022); Suganda et al. (2018) identified the naming of human diseases in Sundanese culture, which is iconic and the connection between linguistic forms. Other findings revealed by Sumarlina (2017, 2022a, 2022b) and Gunawan (2012) uncovered the tradition of medicine in Sundanese society through manuscripts.

In investigating ethnomedicine in Sumatran manuscripts, Susena et al. (2013); Almos and Pramono (2015); Firdaus and Chairullah (2020); Masfalinda et al. (2021) showed that traditional Minangkabau medicine was also frequently detected in manuscripts in the Minangkabau language. For example, Susena had discovered 27 manuscripts of Minangkabau ethnomedicine that could be grouped into four types of treatment, which were treatment using medicinal herbs only, treatment with mantras and or prayers only, treatment with a combination of medicinal herbs and mantras, and treatment using amulets. Junaidi (2016) highlighted a manuscript written by Raja Haji Ahmad ibn Raja Haji Hasan (Raja Haji Ahmad Tabib) that covered treatment and its practice in the Malay community on Penyengat Island, with various herbs combined with beliefs considered to have the power to cure diseases. Hamid et al., (2012) discovered a strong Islamic influence in the Malay medical tradition in the Pontianak

manuscript of Haji Mustafa Bin Haji Ismail. Sahrozat and Limbong (2021) similarly look at the ethnomedicine practice in the Malay world, as reflected in a manuscript kept in National Library of Indonesia.

Nawaningrum et al. (2004) investigated diseases and traditional concoctions from the manuscript collection of the Faculty of Humanities, University of Indonesia. The results identified 282 diseases from Javanese manuscripts, 112 from Balinese manuscripts, 118 from Malay manuscripts, and a disease in Sundanese manuscripts. Furthermore, 500 names of medicinal plants from Javanese manuscripts, 219 names of medicinal plants from Balinese manuscripts, 265 names of medicinal plants from Malay manuscripts, and two names of *obata* plants from Sundanese manuscripts were also indexed. There were 746 names of medicinal plants successfully identified.

Ethnomedicine in Central Kalimantan is rooted in the teachings of Islam (Asmawati et al., 2018; Sukiada (2018). Meanwhile, Kaharingan Hinduism is also a source of ethnomedicine in Sukiada (2018), particularly in the Dayak community. The Muslim Dayak community's badewah treatment practice is one example of cultural heritage in Muara Teweh, Central Kalimantan. Badewah is a procession of ritual ceremonies performed to medicate the sick. In badewah, irrational and incurable disease management is more dominant. The Muslim community of Muara Teweh performs badewah as one of the alternative treatment solutions and is interpreted as a multi-functional card. Most patients originate from residents and migrants who resided in Muara Teweh. The badewah treatment ritual has been interpreted differently by patients. This meaning is reflected in their objectives and expectations in performing badewah. This research conducted by Asmawati (2016) reinforced that medical practices were influenced by new religions that arrived in Kalimantan, as concluded by Sofyan (1997).

In the treasury of manuscripts in Indonesia, the source of ethnomedicine can be traced to manuscripts scattered in the community. Ethnomedicine manuscripts contain mystical treatments in the form of prayers and talismans, types and methods of treatment such as mantras, herbs, and the efficacy of reading wafak, rajah, and isim, or prayers to ward off disease (Hidayatullah, 2016, 2017, 2019). In the context of COVID-19, for example, Hidayatullah has provided information on ethnomedicine related to several minor illnesses used by the people of South Kalimantan (Hidayatullah, 2020; Hidayatullah and Yulianto, 2021; Hidayatullah et al., 2021).

Ethnomedicine can also be traceable through ethnographic research, as Humaedi (2016) demonstrated. He investigated the medicine of the Tau Taa Vana community in Tojo Una-Una District and Morowali District, Central Sulawesi Province. In the conception of customary societies, such as Tau Taa Vana, medicine is not just a physical thing associated with discovering, compounding, and engineering medicinal materials from the surrounding area. The forest (*pengale*) is the most important part of their lives, not only as a source of consumptive needs, but the forest as the soul of the expression and existence of maintaining life. This research demonstrates that practicing medicine in customary societies is integral to local wisdom. Moreover, the knowledge, identification methods, and concoctions of various types of plants and other materials recognized by the Tau Taa Vana customary community can also contribute to the world of modern medicine. While in West Nusa Tenggara, which is the location and focus of the research in this article is based, the handling of

manuscripts about ethnomedicine is transliteration and translation of the USADA Lontar Manuscript (Tetumpun) has been conducted by the State Museum of West Nusa Tenggara Province (Museum Negeri Nusa Tenggara Barat, 2020).

#### **4.1. Manuscripts, communities, and ethnomedicine**

Ethnomedicine in Lombok has been well documented in manuscripts. Those preserved in the West Nusa Tenggara Provincial State Museum collection are categorized into USADA or tetumpun manuscripts, indicating a distinct classification. Community-held collections also show a considerable number and distribution. Most USADA manuscripts are written on lontar, in the Sasak script and language. These texts record a range of ethnomedicinal practices, including information on diseases, ingredients, and treatments.

The knowledge in these manuscripts reveals the types of illnesses experienced by people around Lombok and their causes. According to Aswandikari, the illnesses that can be cured through ethnomedicine are mostly minor illnesses such as cough, fever, sore eyes, earache, and diarrhea. However, ethnomedicine provides an alternative to curing severe illnesses that cannot be cured through medical treatment, specifically when the illness is believed to be caused by non-medical reasons. Traditional and modern medicine's methods, ingredients, and supporting facilities differ. Shamans generally practice ethnomedicine in their homes, using traditional equipment. The scattered USADA manuscripts have indicated that ethnomedicine is a treatment effort that originates from the community in terms of the healers, the herbs and ingredients, and the treatment method.

Ethnomedicine plays a role in maintaining the community's health and well-being. Medicinal ingredients and treatment processes are sourced from the natural resources found around Lombok. Most ingredients are herbal plants that grow in yards, gardens, forests, and waters. Some traditional treatment methods are called tumpu, which is treatment without drugs. Tumpu can mean a method that leads to a treatment method that is not taken or inserted into the patient's body (see **Figure 4**). This method also includes the use of mantras to treat patients. Thus, some of the treatment methods that are commonly used are vaporization, kneading, rubbing, or washing.



**Figure 4.** A traditional healer and informant showing lontar USADA recitation and its explanation in Sakra. Photo is researchers' documentation.

Manuscript owners who also can medicate have the ability to memorize the names and benefits of medicinal ingredients. This ability can be possessed because of the intensity of using these ingredients in their treatment. This knowledge of medicinal ingredients is obtained from the medicinal manuscripts that they inherited from their ancestors. Lalu Suprayadi, for example, is one of the heirs who was mandated to continue the practice of ethnomedicine by his elder brother, who passed away about two months ago. In addition to the mandate, he was also inherited to maintain lontar manuscripts containing medicine and other traditional knowledge such as time calculations. These manuscripts are a form of legitimization for someone to become a traditional healer (Hunter, 2001, p. 166).

Ethnomedicine in Lombok for some communities can be categorized as treatment equivalent to medical treatment provided by the government or private sector, through health facilities such as hospitals, clinics, or other health practices. Hunter (2001) further explained that people's choice to take traditional medication is based on their belief that certain illnesses can only be cured by traditional healers. Ethnomedicine is an option for patients or their families to treat various types of illnesses. This choice is usually based on the cause of the illness, which is believed to be curable through ethnomedicine. Some minor medical ailments can be cured with traditional herbs. When diseases require more severe treatment and support handling, the community will bring the patient to the hospital.

During our fieldwork, we encountered an informant undergoing treatment for an illness. At first, he went to the doctor, got a diagnosis, and the first treatment. However, the doctor also advised him to seek treatment from a traditional healer, as the illness was related to causes believed to be related to non-medical elements. The opposite is common, with the shaman advising the patient to consult a doctor if the illness requires medical diagnosis and treatment. According to Hosseinzadeh et al. (2015, p. 636), the choice to seek traditional or modern treatment is influenced by some reasons: cost, location, trust, or suggestion. While hospital fees are determined under regulations, shamans' (dukun) and quacks' (balian) treatment fees are never specified, depending on the patient's willingness. Modern health facilities still need to be improved, and this is filled by dukun and balian, located in the villages and can be accessed by patients at any time. Meanwhile, the belief or suggestion of the medicine man is related to the story that develops, the social relationship between the medicine man and the community, and the acceptable way of treatment.

The community in Genggelang Village, Gangga Sub-District, North Lombok Regency still has high trust in ethnomedicine. Medical and non-medical illnesses can be treated by dukun and balian. Even the informant we met in the field demonstrated the treatment he took to treat the illness he suffered at the hands of a dukun. The doctor he met previously also suggested that he seek treatment from a dukun, because medical treatment had not been able to cure him. Ethnomedicine practices are no longer an alternative treatment but the main treatment or equivalent to seeking medical treatment (see **Figure 5**).



**Figure 5.** A village museum depositing local heritage including lontar USADA manuscripts. Photo is researchers' documentation.

#### **4.2. Traditional healer and living manuscripts**

In Lombok, there are two terms for people who practice ethnomedicine. The first is the dukun, which can treat general diseases, both medically known and non-medical diseases. This non-medical service also includes advising on when to perform activities or for political purposes. For example, his service uses astronomical knowledge or warage, a calendar tool that combines time (days in AD and the Javanese calendar). The second is the balian, who treats diseases that are known medically. Balian also has specific skills to treat certain illnesses or medications, such as the balian of childbearing and the balian of broken bones.

Dukun and balian have an important social position in Lombok. They generally serve as community elites. Two informants we encountered in the field were former hamlet chiefs and village staff, who are still consulted in determining issues the community faces. The traditional healers are respected people within the society (Viney et al., 2014). Dukuns are predominantly male, while balians can be both male and female. The difference between the two professions is due to the different characteristics of treatment and services, which require different treatment times and patients. In addition to the patients coming to the dukun's and balian's house, they also come to the patients, especially if they suffer from diseases that cannot be brought to the shaman's and balian's house. Remote treatment can also be done for certain types of diseases (see **Figure 6a,b**).



(a)



(b)

**Figure 6.** A traditional healer in Sakra, demonstrating an example of treatment method. Photos are researchers' documentation (a) Traditional materials and herbs used for medication; (b) traditional tools used for mixing traditional materials and herbs for medication.

Some plants, such as betel leaves, have properties to cure various diseases. However, some medicinal materials are specialized to cure certain diseases only.

Likewise, the same ingredients can cure different diseases using different concoction methods. The types and names of the plants that make up the medicinal ingredients have names in the Sasak language. A popular plant used for medication is banten (*lannea coromandelica*), which is used to cure fever, cough, and cold. There is a potential development for further investigation and usage of medical plants in Indonesia. Some recent studies (Fadhilah et al., 2023; Gondokesumo et al., 2023; Lestariningsih et al., 2023; Prajoko et al., 2023; Tahoangkao et al., 2023; Wahyuningrum et al., 2022). These studies provide the sources and methods of ethnomedicine taken from local knowledge and manuscripts throughout Indonesia.

Apart from the USADA manuscripts, other lontar manuscripts are also used as treatment sources. For example, the treatment for children to be able to speak uses the Takepan Indarjaya. This manuscript does not explicitly contain medicine, but there are parts in this manuscript that explain healing children to be able to speak. Therefore, the sources of knowledge in lontar manuscripts are scattered in various manuscript contents. The transmission of traditional medical knowledge through lontar USADA manuscripts is necessary to confirm all treatment-related matters. The observations show that the dukun and balian must fully utilize the USADA lontar manuscripts for daily treatment practices. When we requested our informants to recite the USADA lontar manuscript, they tried to recite and understand its contents. Most of the information contained in the lontar USADA manuscripts was recognized in their treatment practices, but some needed to be recognized or had not been performed. This includes ingredients, concoctions, and treatment procedures.

One of the challenges in reading lontar manuscripts is that despite using the same script and language, the character of each lontar manuscript is different for each writer. Therefore, it requires time to understand the whole character of the manuscript or copy so that it can be adequately deciphered. This unique character depends only on the variation and style of the writer or copyist in using the script carved on the lontar. In general, there are no titles affixed to lontar manuscripts. Titles can be identified and utilized after the content of the lontar manuscript has been read. Titles that became widely recognized by the community were used because of their conventions, such as Rengganis and Indar Jaya. The author or copyist is anonymous, and a colophon rarely gives information on when and where the lontar manuscript was written.

Furthermore, according to Fatah Yasin, the inheritance and learning of Sasak ethnomedicine is the result of three knowledge acquisition methods. The first is inherited from previous generations of Sasak people. The second is the result of learning both within the Sasak Tribe and in other places, for example, in Kalimantan and Sulawesi. The third is the result of knowledge gained from migrants living in Lombok. Therefore, the mutual influence of ethnomedicine materials and methods in Lombok occurs, in addition to the uniqueness of local ethnomedicine. The use of mantras, for example, has been influenced by Islamic teachings. The mantras, for example, begin with bismillah and are followed by Salawat upon the Prophet, even though it is in the Sasak language.

Ethnomedicine still has a negative reputation in some aspects, including the hygienic and sterilization aspects of the materials and methods of treatment. Anticipating these potential adverse effects has also received attention from dukun and balian, for example, the treatment is conducted by chewing ingredients or medicinal



herbs and then applying them to the patient's body. There have been attempts to minimize the negative effects that may occur. The Community Health Center (Puskesmas) has a unique program related to this ethnomedicine. The development of traditional birth attendants by introducing safe methods and equipment has been massively implemented. Establishing and guiding family medicinal plant (family herbal plantation abbreviated with toga) groups to introduce herbal-based medicinal materials can be a clinically recognized health supporter.

The relationship between dukun, balian, and medical institutions such as hospitals and health centers in Lombok is well established in some areas. Fatah Yasin is an employee at the Batujai Health Center who also performs ethnomedicine. He tries to apply medical principles in ethnomedicine. Efforts have even been initiated to organize dukun and balian to become familiar with and apply basic medical principles, especially to students and members of the study group he founded. Fatah Yasin has a study group provides a space for those who want to read, write, and understand the contents of lontar manuscripts. Five of over 150 people who participate in the activities are studying to become traditional healers. People who have chosen to become dukun and balian have the same oaths and responsibilities. They also have a code of ethics, such as maintaining confidentiality of patient information or advice to patients (Sutana, 2023). This code of ethics and responsibility is also maintained so that patients do not have doubts about their treatment.

Several programs to preserve manuscripts has been conducted by the State Museum of West Nusa Tenggara Province. It also promotes the important values of USADA manuscript by holding workshops for local collectors. The local government has issued regulations in protecting and acknowledging traditional health care as part of medical services. For example, in the Regency of Central Lombok's regulation No. 65 Year 2016 on the structure and function of the public health office, it is stated that traditional health care is included in the structure, comparable with primary health care. In the national regulation, regulation No. 17 Year 2023 provides more space for acknowledging traditional medication as part of national health services. In the article 161 (2), it is stated that "traditional health service can be conducted in independent place, community health center, traditional health center facility, hospital, and other health center facility." This emphasizes that traditional health care has been acknowledged as part of health care system in Indonesia.

Traditional healing with its richness in terms of the herbal sources and methods is potential to be included in the medical education system, for example as supplementary teaching and research material, health care service, and medical treatment inherited from our ancestors which store various local knowledge. The wide spread of traditional healing and USADA manuscript in Lombok can be used as the object and source for field study as it provides direct experience for students in the fields of humanities and medical teaching materials.

## **5. Conclusion**

In this article, we have explored manuscripts and their correlation with ethnomedicine in Lombok, West Nusa Tenggara. The ethnomedicine manuscripts primarily written on lontar or lontar USADA are spread widely in the province. These

manuscripts contain information and knowledge on traditional healing, including materials, procedures, ingredients, mantra, and other related medication practices. The society also respects traditional healers. The existence of dukun or balian, who have the expertise and ability to treat, has an important position in the community. They serve as a reference and source for maintaining traditional knowledge related to medicinal materials, concoctions, and treatment procedures. In the view of the people of Lombok, ethnomedicine is equal to modern medicine. In some cases, these shamans and balians are also referrals for non-medical matters but also social issues.

The USADA manuscripts are kept and read by people, mainly traditional healers. The manuscript's recitations are held occasionally. Some people still copy and teach the manuscripts to the younger generation. Therefore, the lontar manuscript tradition in Lombok, especially the USADA manuscripts, is a living manuscript in terms of its writing, copying, and utilization practices. It is worth noting that USADA manuscripts are important in documenting ethnomedicine inherited from the ancestors and passing on the knowledge to the people of Lombok. The fact that people still keep, recite, copy, teach, and write new stories on palm-leaf manuscripts indicates that this tradition could survive. However, the challenges to keep this condition still take place, such as the trading of manuscripts, preservation efforts, and promotion of manuscripts and their knowledge to the public to gain more attention. It could be explored further to uncover other aspects than ethnomedicine, such as traditional technology, environmental issues, social interaction, and historical study.

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