



Utilization of Plants in the *Turun Mandi* Tradition as an Ethnobotanical Heritage of the Nagari Sijunjung Community, West Sumatra

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Abstract

The turun mandi tradition in Nagari Sijunjung, West Sumatra, is a postnatal ritual that expresses gratitude for the birth of a child while serving as a medium for intergenerational transmission of ethnobotanical knowledge. This study aimed to identify the diversity of plant species used, their modes of utilization, and their symbolic meanings within the ritual. A descriptive exploratory research design was employed, with data collected from December 2025 to January 2026 through semi structured interviews with ten informants, including dukun bayi and bundo kanduang aged over fifty five years and mothers aged thirty to fifty five years who had performed the ritual for their newborns. The results documented nineteen plant species used across ritual stages, with leaves, flowers, and fruits being the most frequently utilized plant parts due to their regenerable properties. Plants were applied through immersion, burning, and incorporation into ritual materials, and each species carried symbolic meanings related to protection, purification, moral values, and gratitude linked to biological characteristics. Ritual stages such as baiyo iyo and mangatoan urang, mandi ka sumua, and nail and hair cutting reflected an integrated ethnobotanical knowledge system in which plant functions are embedded within social, moral, and spiritual community values. The continuity of this knowledge depends on dukun bayi and bundo kanduang, with mothers maintaining transmission at the household level. However, modernization, lifestyle changes, and limited documentation pose risks of knowledge erosion. Documentation is essential for cultural preservation and biodiversity conservation efforts locally.

Keywords: ethnobotany, turun mandi, Minangkabau, plant diversity, West Sumatra

1. Introduction

Human–plant interactions extend beyond mere utilization of natural resources; they represent a form of knowledge preservation that embeds the inherent biological functions of plants within the social and cultural structures of community life. The use of biodiversity to fulfill basic needs (Amboupe et al., 2019), traditional medicine (Tunny et al., 2025), and ritual elements (Suwardi et al., 2025) reflects a strong and enduring relationship between humans and plants. For centuries, ancestral communities relied on biodiversity as a source of education and empirical observation (Fauziyah et al., 2025). Such accumulated knowledge and experience concerning plants have shaped social and cultural structures that influence how communities perceive life, behave, and maintain their beliefs (Julung et al., 2018).

This ancestral knowledge has been transmitted intergenerationally through traditions, which permeate nearly every aspect of Indonesian society, from birth to death (Barella et al., 2024). *Turun mandi* is one of the postnatal traditions practiced in several regions of West Sumatra, including Nagari Sijunjung. This tradition is performed as an expression of gratitude for the birth of a baby born to parents of Minangkabau descent (Gusman, 2022). It also serves as the infant's first introduction to nature (Masyitoh & Widyaputi, 2022). The *turun mandi* tradition involves various plant species as essential elements, each carrying specific symbolic meanings as well as biological benefits. Previous studies have reported that certain plants used in this tradition symbolize protection, life lessons, and expressions of gratitude (Masyitoh & Widyaputi, 2022).

Nagari Sijunjung is a village located in Sijunjung District, Sijunjung Regency, West Sumatra. The local community has, for generations, utilized a wide range of indigenous plant species in diverse traditional practices and customary rituals, including *turun mandi* (Gusman, 2022). Despite its strong cultural significance, the ethnobotanical knowledge underpinning this cultural heritage and the associated biodiversity is currently facing serious threats. One of the main issues identified is the absence of systematic documentation regarding the botanical identity of plants involved as functional elements in the implementation of the tradition. Such documentation should include local names, scientific names, plant parts used, and methods of utilization.

Without systematic documentation, this knowledge is highly vulnerable to erosion by the forces of modernization, which may ultimately disrupt the intergenerational transmission of traditional knowledge (Santosa et al., 2025). Therefore, documenting local knowledge associated with the *turun mandi* tradition in Nagari Sijunjung is an urgent necessity as a preventive measure against the loss of ethnobotanical heritage. Beyond cultural preservation, such documentation contributes valuable data to national biodiversity databases and holds potential as a foundation for future research in biological conservation and sustainable plant utilization. Based on this background, the present study aims to identify the diversity of plant species, modes of utilization, and symbolic meanings embedded within the *turun mandi* tradition in Nagari Sijunjung, West Sumatra.

2. Materials and Methods

This study employed a descriptive exploratory research design and was conducted in Nagari Sijunjung, Sijunjung Regency, West Sumatra. Data collection was carried out from December 2025 to January 2026. Primary data were obtained through direct interviews guided by a structured questionnaire. The interviews were conducted in a semi-structured manner to comprehensively capture information on the plant species utilized, plant parts used, modes of application, and sources of plant acquisition within the *turun mandi* tradition. The location of the study area is illustrated in Figure 1.

Informants were selected using purposive sampling to ensure the inclusion of individuals with relevant and in-depth knowledge of the tradition. Key informants consisted of dukun bayi and bundo kanduang aged over 55 years, who possess extensive experience in guiding and conducting the *turun mandi* ritual. General informants comprised women aged approximately 30–55 years who had performed the *turun mandi* tradition for their newborn children. This combination of key and general informants allowed for the integration of expert traditional knowledge with contemporary community practices, thereby strengthening the reliability and contextual depth of the ethnobotanical data collected.

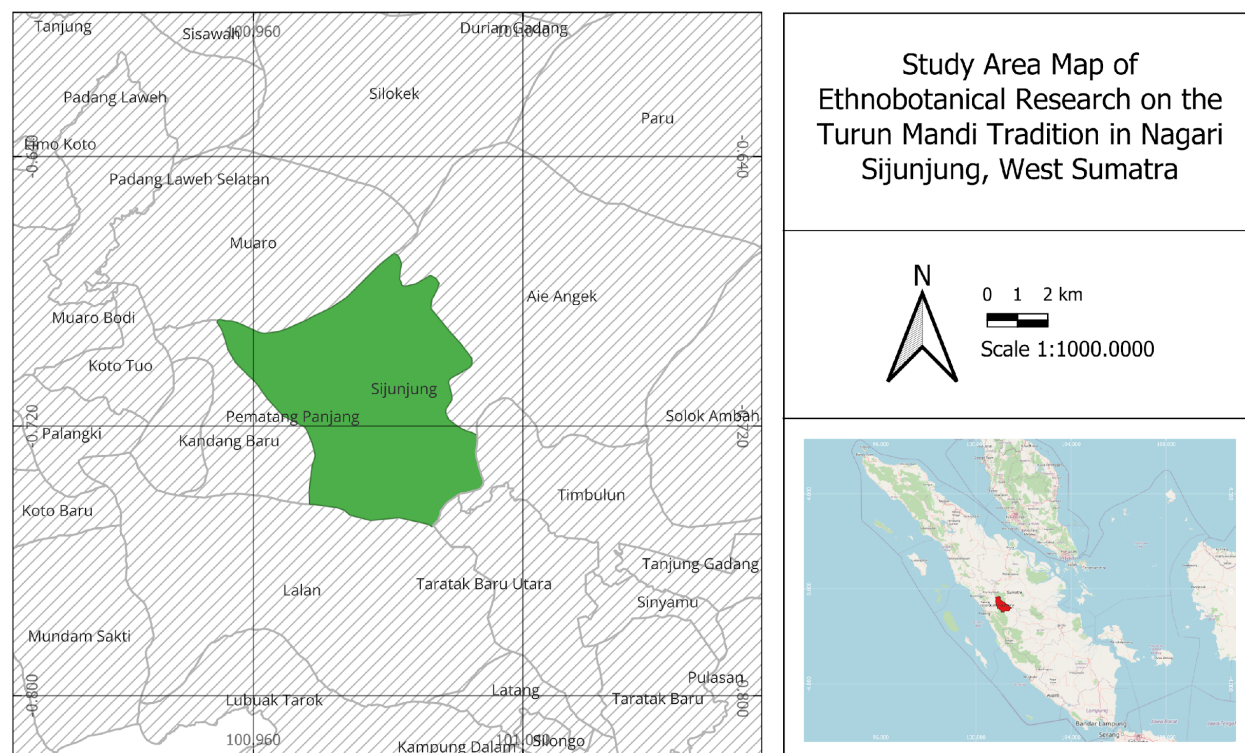


Figure 1. Study Area Map of Ethnobotany Research on the Turun Mandi Tradition in Nagari Sijunjung, West Sumatra

3. Results

Based on interviews conducted with 10 informants, a total of 19 plant species were documented as being utilized by the community of Nagari Sijunjung, West Sumatra, in the *turun mandi* tradition. These species represent a diverse assemblage of locally available plants that are deliberately selected based on inherited knowledge regarding their symbolic meanings and perceived biological functions within the ritual context (Table 1).

Table 1. Plant Species Used by the Nagari Sijunjung Community in the *Turun mandi* Tradition.

Local Name/ Common Name	Species & Family	Part Used	Mode of Utilization	Symbolic Meaning
Siriah/ Betel Leaf	<i>Piper betle</i> L. (Piperaceae)	Leaf	Masticated during Mangatoan urang	Essential prerequisite for ritual validity
Pinang/ Betel Nut	<i>Areca catechu</i> L. (Arecaceae)	Fruit	Masticated during Mangatoan urang	
Tambakau/ Tobacco	<i>Nicotiana</i> sp. L. (Solanaceae)	Leaf	Masticated during Mangatoan urang	
Bawang Putih/ Garlic	<i>Allium sativum</i> L. (Amaryllidaceae)	Bulb	Formulated into a ritual amulet	Apotropaic (warding off malevolent forces/misfortune)
Sipadeh/ Ginger	<i>Zingiber officinale</i> Roscoe (Zingiberaceae)	Rhizome	Formulated into a ritual amulet	
Kunik/ Turmeric	<i>Curcuma longa</i> L. (Zingiberaceae)	Rhizome	Formulated into a ritual amulet	
Kunik Putih/ White Turmeric	<i>Curcuma zedoaria</i> (Christm.) Roscoe (Zingiberaceae)	Rhizome	Formulated into a amulet and planted near the ritual well	
Jariangau/ Sweet Flag	<i>Acorus calamus</i> L. (Acoraceae)	Rhizome	Formulated into a amulet and planted near the ritual well	
Galundi/ Three-leaved Chaste Tree	<i>Vitex trifolia</i> L. (Lamiaceae)	Leaf	Burned during Mandi ka Sumu	Thermoregulation and spiritual warmth
Sicerek/ Curry Leaf Tree	<i>Clausena excavata</i> Burm.f. (Rutaceae)	Leaf	Burned during Mandi ka Sumu	
Tabu/ Sugarcane	<i>Saccharum</i> sp. L. (Poaceae)	Stem	Distributed to children observing the procession	Symbolizes altruism and a benevolent character
Mawar/ Rose	<i>Rosa</i> sp. L. (Rosaceae)	Flower	Scattered upon return to the residence	Welcoming ritual and spiritual purification
Malati/ Jasmine	<i>Jasminum</i> sp. L. (Oleaceae)	Flower	Scattered upon return to the residence	
Kanango/ Ylang-ylang	<i>Cananga odorata</i> (Lam.) Hook.f. & Thomson (Annonaceae)	Flower	Scattered upon return to the residence	
Lado/ Chili	<i>Capsicum annum</i> L. (Solanaceae)	Fruit	Applied for gustatory initiation with other flavors	Symbolizes resilience and firmness in life's challenges
Bungo Rayo/ Hibiscus	<i>Hibiscus × rosa-sinensis</i> L. (Malvaceae)	Flower	Immersed in a vessel of water for ritual cleansing	Neutralization of negative psychological influences
Bungo Marak/ Peacock Flower	<i>Caesalpinia pulcherrima</i> Sw. (Fabaceae)	Flower	Immersed in a vessel of water for ritual cleansing	
Bareh/ Rice	<i>Oryza sativa</i> L. (Poaceae)	Seed	Provided as ritual compensation	Expression of gratitude and social reciprocity
Pisang/ Banana	<i>Musa</i> sp. L. (Zingiberaceae)	Fruit	Provided as ritual compensation	

4. Discussion

The turun mandi tradition represents a postnatal ritual in Minangkabau society, which not only functions as an expression of gratitude for the birth of a child but also serves as a medium for the intergenerational transmission of ethnobotanical knowledge. The results of this study indicate that the use of plants within the turun mandi tradition reflects a structured local knowledge system. Such local knowledge integrates the biological functions of plants with symbolic, social, and spiritual values within the community.

Based on interviews with ten informants, a total of 19 plant species were recorded as being utilized during the implementation of the turun mandi tradition in Nagari Sijunjung. This number demonstrates a relatively high level of diversity for a single ritual or tradition, reflecting the richness of local knowledge regarding surrounding plant resources (Suwardi et al., 2025). Such diversity aligns with previous ethnobotanical research on rituals across various regions in Indonesia, which indicates that the more complex a tradition is, the more diverse the plant species employed (Suwardi et al., 2025).

The plant parts most frequently utilized in the turun mandi tradition are leaves, flowers, and fruits. This pattern of use reflects the principle of sustainability indirectly applied by the community. The use of regenerable plant parts allows the plants to remain alive and available for future use (Krisnawan et al., 2023). From an ethnobotanical perspective, these practices exemplify community adaptation to the environment, shaped through long-term interactions between humans and plants (Monica et al., 2024). These findings support the view that traditional practices often contain embedded conservation values, internalized within cultural practices (Sabina et al., 2025).

Plant utilization during the turun mandi ritual includes immersion, burning, and placement as integral components of the ritual sequence. These modes of application were consistently reported by both key informants and general informants, indicating that knowledge regarding ritual performance is well-established and culturally standardized within the local community (Iskandar & Iskandar, 2017). Plants employed in the ritual also hold specific symbolic meanings, such as protection, purification, life lessons, and expressions of gratitude. These symbolic meanings are inseparable from the biological characteristics of the plants, including aroma, color, texture, and perceived efficacy based on empirical experience. The close linkage between symbolism and biological traits indicates that the local knowledge system developed through prolonged observation and adaptation (Benner et al., 2021). Accordingly, plants function not only as ritual materials but also as symbolic media representing cultural values and the philosophy of life within the Nagari Sijunjung community.

The sustainability of ethnobotanical knowledge within the turun mandi tradition relies heavily on the role of specific cultural actors. The dukun bayi and bundo kanduang occupy central positions as custodians, managers, and transmitters of ethnobotanical knowledge related to ritual performance. Their knowledge is acquired through direct experience, oral learning, and repeated engagement in ritual practices from a young age. General informants, particularly mothers who have performed the ritual for their children, play a critical role in maintaining continuity at the family level. This experience-based and practice-centered knowledge transmission demonstrates that the continuity of the tradition is highly dependent on the presence and regeneration of these cultural actors. Therefore, without adequate knowledge regeneration, the ethnobotanical knowledge system is vulnerable to weakening or discontinuity (Haq et al., 2023).

The turun mandi tradition in Nagari Sijunjung is conducted through several sequential ritual stages, each incorporating plants as primary elements. The initial stage, known as baiyo-iyu and mangatoan urang, involves a family deliberation to determine the timing of the ritual. At this stage, sirih (*Piper betle* L.), pinang (*Areca catechu* L.), and tembakau (*Nicotiana* sp. L.) are chewed by Niniak Mamak as symbolic communicative media representing permission requests, respect, and reinforcement of social bonds among family members and elders. The use of these plants reflects their role not only as physical materials but also as instruments for establishing social and spiritual legitimacy prior to the main ritual.

The subsequent primary ritual, turun mandi or mandi ka sumua, aims to introduce the infant to the natural environment as part of social and ecological life. During this ritual, bawang putih (*Allium sativum* L.), jahe (*Zingiber officinale* Roscoe), kunyit (*Curcuma longa* L.), kunyit putih (*Curcuma zedoaria* (Christm.) Roscoe), and jeringau (*Acorus calamus* L.) are cut and fashioned into bracelets as symbols to repel negative energies and misfortune. These plants were selected for their biological traits, including strong aroma, distinctive taste, and warming properties, which are symbolically interpreted as protection, health, and vitality. At the conclusion of this stage, kunyit putih and jeringau are planted around the well where the ritual is performed as symbols of hope for the child's growth and development. Additionally, tebu (*Saccharum* sp. L.) and other prepared foods are distributed to children observing the ritual as symbols of generosity from an early age.

The ritual continues, the introduction of various tastes to the infant using a cone made from sirih leaves. During this stage, cabe (*Capsicum annum* L.), sugar, and other taste elements are introduced as

symbolic reminders that life is not always sweet but also includes bitterness and spiciness. The ritual sequence concludes with nail and hair cutting, symbolizing cleanliness and early cultivation of neatness, incorporating kembang merak (*Caesalpinia pulcherrima* Sw.) and kembang sepatu (*Hibiscus × rosa-sinensis* L.). The inclusion of plants in each stage demonstrates that the turun mandi tradition constitutes an integrated ethnobotanical knowledge system, wherein the biological functions of plants are closely linked with symbolic values, moral education, and the socio-cultural structure of the Nagari Sijunjung community (Benner et al., 2021).

Although the turun mandi tradition continues to be practiced, the underlying ethnobotanical knowledge faces significant threats. Modernization, lifestyle changes, and the declining interest of younger generations in traditional customs contribute to the weakening of knowledge transmission. Furthermore, the absence of systematic documentation regarding plant identity, plant parts used, and modes of application further increases the risk of knowledge loss. This condition aligns with findings from various ethnobotanical studies in Indonesia, indicating that traditional knowledge that is not well documented tends to erode and become discontinuous in intergenerational transmission (Łuczaj, 2023).

Therefore, documenting plant utilization in the turun mandi tradition has crucial implications for both cultural preservation and biodiversity conservation. Data generated from this research not only function as an archive of local knowledge but also enrich national biodiversity databases and provide a foundation for further studies in conservation biology, ethnopharmacology, and sustainable plant utilization. By integrating cultural and biological aspects, this study emphasizes the strategic role of ethnobotany in bridging local knowledge with modern scientific approaches while reinforcing efforts to preserve cultural heritage and natural resources sustainably.

5. Conclusions

The turun mandi tradition in Nagari Sijunjung utilizes a diverse array of plants as an integral part of the local community's ethnobotanical knowledge system. This study identified 19 plant species employed across various ritual stages, with consistent usage patterns that involve regenerable plant parts and are embedded with symbolic meanings such as protection, purification, life lessons, and gratitude. The selection of plant species, modes of application, and ritual stages indicate that ethnobotanical knowledge in the turun mandi tradition is structured, culturally standardized, and transmitted intergenerationally through collective practice and experience, with the dukun bayi and bundo kanduang playing central roles as custodians of local knowledge.

Conflicts of Interest: The authors declare no conflicts of interest.

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