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Traditional medicinal knowledge and use of *Ubar Kampung* among local healers in Tatar Sunda, West Java, Indonesia

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Abstract. *Febriyanti RM, Susilawati Y, Tjitraresmi A, Muhaimin. 2025. Traditional medicinal knowledge and use of* Ubar Kampung *among local healers in Tatar Sunda, West Java, Indonesia. Asian J Ethnobiol 8: 202-221.* In Sundanese communities (West Java, Indonesia), traditional medicine (*Ubar Kampung*) remains central to primary health care. This study aims to document medicinal plant use by local healers and quantify cultural salience-that is the significance of a plant in the cultural practices and beliefs of the Sundanese people. Studies were conducted between 2017 and 2019 using semi-structured interviews with 52 purposively selected key informants (healers, elders, traditional birth attendants) across five Sundanese villages. We recorded 111 species from 54 families. Leaves were the most frequently used part, and decoction was the predominant preparation. *Curcuma longa* and *Kaempferia galanga* had the highest RFC (1.00) and high UV (4.07 and 4.15). Digestive disorders showed the strongest agreement (ICF = 0.88), with *Psidium guajava* cited unanimously for diarrhea (FL = 100%). Musculoskeletal conditions also showed high consensus (ICF = 0.87), particularly for *K. galanga*. *Ubar Kampung* represents a resilient medical system, with culturally salient species that align with reported pharmacological activities. Prioritized taxa (such as *K. galanga, C. longa,* and *P. guajava*) warrant targeted pharmacological and conservation action. Documenting this knowledge supports sustainable use and culturally appropriate integration with regional health services and paves the way for future research and discoveries on plant knowledge and use among healers in the Tatar Sunda Region, West Java, Indonesia.

Keywords: Ethnobotany, informant consensus factor, relative frequency of citation, Sundanese traditional medicine, use value

Abbreviation: FC: Frequency of Citation, FL: Fidelity Level (percentage agreement on a species' principal use), ICF: Informant Consensus Factor, NUR: Number of Use Reports (the total number of citations for an ailment category), PROSEA: Plant Resources of Southeast Asia database, RFC: Relative Frequency of Citation, UV: Use Value

INTRODUCTION

Over the past decades, ethnobotany and ethnomedicine have gained prominence as interdisciplinary approaches to drug discovery, underpinning the development of numerous therapeutic agents (Hu et al. 2020; Manzoor et al. 2023). Approximately 75% of herb-based remedies and therapeutics used globally have their origins in traditional medicine, with numerous synthetic analogs developed from plant-derived compounds. Notable examples include colchicine (*Colchicum autumnale* L.), paclitaxel (*Taxus brevifolia* Nutt.), artemisinin (*Artemisia annua* L.), silymarin (*Silybum marianum* (L.) Gaertn.), and vincristine and vinblastine (*Catharanthus roseus* (L.) G.Don) (Choudhury et al. 2020; Ralte et al. 2024).

Studies have highlighted the role of traditional medical knowledge in ethnopharmacological research, particularly in understanding plant efficacy within cultural contexts, preserving community health knowledge, and ensuring the sustainability of these practices (Baharvand-Ahmadi et al. 2016; Mahapatra et al. 2019; Gyeltshen et al. 2024). In many societies, medicinal knowledge is maintained by village elders or traditional healers who pass it down through oral tradition or ritual practice (Tamalene et al. 2016; Fathir et al. 2021). Despite its importance, local ethnobotanical traditions, including the use of specific plant species, are increasingly at risk of extinction in numerous regions worldwide. The erosion of cultural transmission to younger generations is causing an irreversible loss of ethnobotanical wisdom, creating an urgent need for documentation and scientific validation before this knowledge disappears (Hu et al. 2020; Febriyanti 2021; Manzoor et al. 2023).

Indonesia, with its rich cultural diversity and biodiversity, is home to approximately 30,000 plant species, of which only 940 are recognized for their medicinal properties, and just 300 are used in herbal industries (Putri et al. 2016; Rahayu et al. 2024a). Variations in environmental conditions, cultural beliefs, and customary practices across Indonesia contribute to diverse traditional medicinal knowledge among its many ethnic groups. For instance, an ethnomedicine study in Lombok, West Nusa Tenggara, emphasizes how palm-leaf manuscripts (*lontar*), particularly of those on the Usada, guide traditional healers by providing detailed information about diseases, treatments, herbal remedies, and incantations. Currently, around 40 million Indonesians utilize approximately 6,000 plant species for healthcare, underscoring the importance of traditional medicinal practices nationwide (Elfahmi et al. 2014).

Nationwide studies on traditional medicinal plant knowledge, called RISTOJA (research on medicinal plants and jamu) in

2015 and 2017, have demonstrated the richness and diversity of traditional practices among Indonesia's indigenous communities (Ministry of Health of the Republic of Indonesia 2017). However, their findings also underscore a critical limitation: the need for targeted, region-specific studies to capture the nuanced practices of individual communities. As highlighted in the nationwide findings, there is an urgent need for region-specific studies to complement national-level surveys, ensuring that localized practices are properly documented and preserved.

The Sunda Region of West Java in Indonesia demonstrates the potential for ethnobotanical research. This area is well known for its cultural heritage and diverse plant life, making it an important source of traditional medicinal knowledge. It provides a strong case for a detailed ethnobotanical study for three main reasons: firstly, its mountainous terrain supports a unique and varied collection of plants, increasing the chances of discovering species with special pharmacological properties, secondly, the Sundanese community has inhabited the area for generations, fostering a deep and resilient body of local ecological knowledge, thirdly, their traditional healing practice, known as *Ubar Kampung*, remains an integral part of community healthcare, particularly in rural areas. Yet, it has not been subjected to large-scale documentation or scientific validation (Heinrich 2000; Balick and Cox 2020).

Sundanese traditional medical practice is called *Ubar Kampung*, a practice that remains widely used, especially in rural areas. Research has shown that many medicinal plants used in *Ubar Kampung* align with modern scientific literature, highlighting the potential to incorporate traditional knowledge into current healthcare systems (Rahayu et al. 2020; Dewi et al. 2023; Febriyanti et al. 2024). Our previous study has examined qualitative and quantitatively the knowledge dimension of *Ubar Kampung*, including transmission pathways and sociocultural drivers (Febriyanti 2021). Building on that foundation, the present study focuses on the documentation and quantitative appraisal of medicinal plants, specifically providing a species list and computing standard ethnobotanical indices including Relative Frequency of Citation (RFC), Use Value (UV), Fidelity Level (FL), and Informant Consensus Factor (ICF) to prioritize taxa for future ethnopharmacological validation and conservation.

MATERIALS AND METHODS

Study area

Java, the central island of Indonesia, holds a pivotal position not only geographically and administratively but also in terms of population density. With approximately 141 million residents, Java accounts for 56.7% of Indonesia's total population (Goro et al. 2024). Geographically and ethnographically, Java is traditionally divided into three regions: the western part, encompassing the national capital Jakarta, West Java Province, and Banten Province; Central Java, including the Special Region of Yogyakarta; and eastern Java, which also incorporates Madura Island (Ananta et al. 2015).

This study focused on the Tatar Sunda Region, home primarily to Sundanese communities. To date, there are only limited indigenous Sundanese communities in West Java. According to the data from the Department of Culture and Tourism, there are eight indigenous communities (*kampung*/village) in the Sunda Region, namely Kampung Cireundeu, Kampung Pulo, Kampung Naga, Kampung Dukuh, Kampung Gede Kasepuhan Cipta Mulya, Kampung Mahmud, Kampung Kuta, and Kampung Cikondang (Harashani 2018; Hernawati et al. 2022).

Fieldwork was carried out in five culturally significant Sundanese villages to document the indigenous knowledge and cultural practices of the local community. These villages included Kampung Naga, Kasepuhan Cipta Mulya, Kampung Dukuh, Kampung Cireundeu, and Kampung Pulo. These sites were selected for their cultural significance and their role in preserving Sundanese traditions (Figure 1). Detailed information on each location is presented in Table 1.

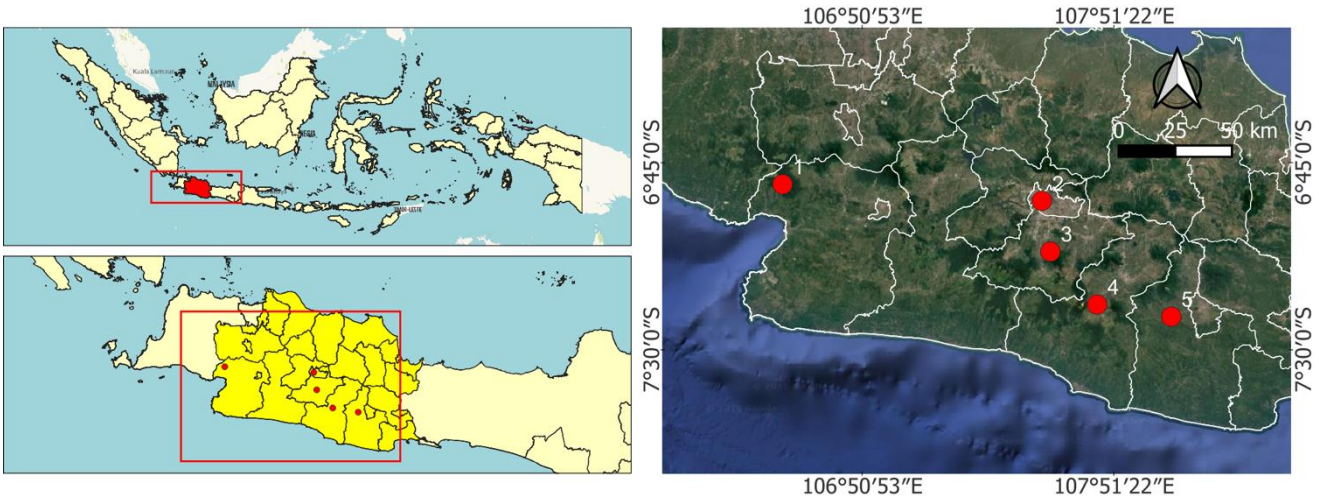

Figure 1. Study area: 1. Kasepuhan Cipta Mulya, 2. Kampung Cireundeu, 3. Kampung Dukuh, 4. Kampung Pulo, 5. Kampung Naga, in Tatar Sunda Region, West Java, Indonesia

Table 1. Key demographic and geographic details of fieldwork sites

Village	GPS coordinates	Altitude (masl)	Ecology
Kasepuhan Cipta Mulya	6°50'12"S, 06°31'45"E	~700	Hilly terrain; secondary forests; subsistence fields
Kampung Cireundeu	6°54'10"S, 07°34'02"E	~670	Agroforestry environment near urban fringe, hills with home gardens
Kampung Dukuh	7°06'21"S, 07°36'05"E	~800	Low montane area; dense bamboo groves; small-scale horticulture
Kampung Pulo	7°19'03"S, 07°47'19"E	~650	Near riverbanks with terraced rice fields, pockets of remnant natural forest
Kampung Naga	7°21'59"S, 08°05'08"E	~480	Valley ecosystem is surrounded by forests, paddy fields, strongly protected environment

Data collection

This study employs an ethnobotanical methodology to investigate indigenous medical knowledge, particularly focusing on the practice of *Ubar Kampung* as performed by local healers in the Sundanese community. The methodological framework integrates three principal perspectives: the historical perspective, the emic and etic perspectives, and the field ethnological study, ensuring a comprehensive understanding of the practice (Silva et al. 2014; Febriyanti 2021). An emic perspective emphasizes insider understanding of vernacular illness categories, explanatory models, and rationales for plant use, ensuring that descriptions remain true to local knowledge systems and practices. In contrast, an etic perspective uses analyst-driven concepts and standardized classifications to allow for cross-case comparisons, quantitative analysis, and hypothesis testing.

Historical perspective

The historical perspective examines the development of medical practices, beliefs, and health systems within the Sundanese community over time. This component of the study investigates how cultural, social, and historical factors have influenced the practice of *Ubar Kampung*.

Emic perspective

The emic perspective seeks to understand health and illness through the lens of local healers and community members (Pham et al. 2020). Data collection was conducted qualitatively between 2017 and 2019, employing in-depth interviews with 52 informants who were purposively selected from five traditional villages. Informants included elders, traditional healers, and community leaders, and *paraji* (traditional birth attendants), and aged between 55 and 71 years. It is important to acknowledge that the informant sample size was limited and not representative of the entire Sundanese population.

Therefore, quantitative generalizations cannot be reliably made. The key informants were specifically chosen for their extensive indigenous knowledge of medicinal plants, aligning with the study's aim of elucidating ethnobotanical practices. Prior to recruitment, permission and referrals were obtained through community leaders, ensuring cultural and ethical considerations were respected.

Interviews were conducted in Sundanese, later transcribed into English by the first author, a native Sundanese speaker who is fluent in both languages. Semi-structured interviews guided by specific questions elicited detailed information on the following aspects: local knowledge about *Ubar Kampung*; sources of information about the practice; perceptions of disease symptoms; and the identification, use, preparation, and processing of medicinal plants. This approach focuses on species most relevant to participants, as these are typically part of their active memory and cultural practices (Silva et al. 2014).

Field ethnological study

Field studies incorporated participant observation, informal conversations, and immersive interactions within the community. Researchers documented the practice of *Ubar Kampung* by observing daily life and traditional health practices. Key informants also accompanied researchers to their gardens, identifying plants used in *Ubar Kampung*. Photographs and in situ documentation ensured the accurate recording of medicinal flora.

Plant identification

Plant identification was conducted by comparing their morphological characteristics with references in authoritative sources such as Plant Resources of Southeast Asia (PROSEA) (https://prosea.prota4u.org) and other reputable botanical literature. Scientific nomenclature was validated and updated using the World Flora Online Plant List (https://www.worldfloraonline.org). A subset of 20 frequently cited antidiabetic species from the same informants had voucher specimens collected and archived (Febriyanti 2021). For the remaining taxa reported in the present study, photographs serve as documentary evidence to support identifications, with the recognition that photographs do not replace herbarium vouchers.

Data analysis and reporting

To present the ethnobotanical data, a mixed descriptive-quantitative approach was employed. Since a single index can only offer a finite amount of information, we used a wide range of indices to enable a comprehensive analysis of the data, including the Relative Frequency of Citation (RFC), Use Value (UV), the Fidelity Level (FL), and the Informant Consensus Factor (ICF) (Hoffman and Gallaher 2007).

Relative Frequency of Citation (RFC)

To evaluate the cultural and medicinal significance of individual plant species, the Relative Frequency of Citation (RFC) was calculated. This measure reflects the proportion of informants who cited a particular plant species and is

derived by dividing the Frequency of Citation (FC) for a species by the total number of informants (N) surveyed. Higher values (closest to 1) indicate that a medicinal plant was cited consistently by informants for treating a specific illness. In contrast, lower values reflect less frequent citation or less common therapeutic usage (Ralte et al. 2024).

Use Value

The Use Value (UV) was employed to quantify the relative significance of medicinal plants known in the study region (Hernawati et al. 2022). The UV for each species was determined using the formula:

$$UV = \frac{\Sigma Ui}{N}$$

where *N* is the total number of informants and Ui is the total number of uses reported by each informant for a given species. A higher UV denotes broader usage and knowledge of the plant within the community.

The Fidelity Level (FL)

Fidelity Level (FL) was calculated to measure the degree of consensus among informants regarding the use of a specific plant species for treating a particular ailment. This parameter was calculated using the following formula:

$$FL = \frac{Ip}{Iu}\ x\ 100\%$$

Here, I_p represents the number of informants who reported using a species for the same primary therapeutic purpose, and I_u is the total number of informants who mentioned the species for any use. The FL value expresses the percentage agreement among informants about the specific use of a plant.

Informant Consensus Factor (ICF)

The Informant Consensus Factor (ICF) quantified agreement among informants for each ailment category and was calculated as:

$$ICF = \frac{(NUR - Nt)}{(NUR - 1)}$$

Here, NUR is the total number of Use-Reports (URs) recorded for a given ailment category (i.e., the sum of URs across all ailments subsumed under that category and across all informants), and Nt is the number of distinct plant taxa cited for that category. ICF ranges from 0 (no consensus) to 1 (complete consensus), with higher values indicating that many URs converge on relatively few taxa.

All analyses were conducted at the species level unless stated otherwise. Summary statistics are reported as median (IQR) for skewed variables and mean (SD) otherwise. Two-sided tests with $\alpha = 0.05$ were used. The relationship between Relative Frequency of Citation (RFC) and Use Value (UV) across species was examined. Because RFC and UV were non-normally distributed (Shapiro–Wilk, $p < 0.001$), Spearman's rank correlation (ρ) was used as the primary analysis, with Pearson's r reported as a descriptive sensitivity estimate. Influential observations were assessed using standardized residuals ($|z| > 3$) from an ordinary least-squares fit. Correlation coefficients, two-sided p-values, and 95% confidence intervals were reported (Pearson via Fisher's z transformation; Spearman via bootstrap). All analyses were conducted in Python (SciPy/StatsModels, matplotlib).

Comparisons by plant family and ailment

To evaluate whether Use Value (UV) varies across plant lineages, species were grouped by family. Families with ≥ 3 species were retained for inference. A Kruskal–Wallis test assessed overall differences in UV among families. When the global test was significant, pairwise Mann–Whitney U tests were performed and Benjamini–Hochberg False-Discovery Rate (BH-FDR) adjustment was applied across pairwise *p*-values. For descriptive inference, family-level means, medians, SD, and bootstrap 95% CIs (B = 5,000) of UV were reported. Species-level category-specific UV distributions were compared across ailment categories using Kruskal–Wallis, followed by pairwise Mann–Whitney U tests with BH-FDR correction. Category were tabulated.

Family–category structure was examined using a contingency table of summed Use-Reports (UR) per plant family × ailment category. A chi-square test of independence assessed global association. Standardized Pearson residuals were used to identify over- or under-represented family–category pairs. Outputs include the UR matrix, expected frequencies, residuals, and a heatmap.

In the present study, transmission processes were not reported, as qualitative analyses of knowledge, beliefs, and practices within the *Ubar Kampung* system have been reported previously (Febriyanti 2021). Accordingly, the study was intentionally limited to the inventory of medicinal plants and their cultural salience (RFC, UV, FL, ICF), thereby providing a comparable baseline for prioritizing species for subsequent ethnopharmacological follow-up. Any discussion of knowledge erosion is provided as contextual background, not as findings derived from the current dataset.

RESULTS AND DISCUSSION

The Sundanese people: Cultures and communities

The Tatar Sunda, or Parahyangan region, encompasses the cultural areas of West Java and Banten, where the majority of inhabitants identify as Sundanese (Roosita et al. 2008; Hernawati et al. 2022). Due to its predominantly mountainous terrain, this region is also referred to as Parahyangan, derived from the Sanskrit term Hyang, meaning "god." Historical evidence suggests that the Sunda Region has existed for centuries; one of the earliest inscriptions referencing "Sunda" is the Shanghyang Tapak inscription, dated 952 Saka (1030 CE), discovered in Cibadak near Sukabumi. The name "Sunda" applies to the people, their language, and the historical kingdom located in the western part of Java (Roosita et al. 2008; Febriyanti et al. 2022).

As an ethnic group, the Sundanese are not only the second-largest ethnic group on Java but also in all of Indonesia. Sundanese culture is dominant in West Java and has spread to other parts of Indonesia, including the

transmigration areas in Lampung Province on Sumatra. In the context of ancient beliefs, the Sundanese belief system holds that a balanced life can be achieved by a harmonious relationship with nature, gods/spirits, and human beings (Saefullah 2023). In their research, Gyasi et al. (2015) elucidated the belief paradigm, which emphasized the triadic of natural forces: mind, soul, and body (Gyasi et al. 2015). The capability of traditional medicine in the holistic healing process, taking into account the importance of mind, body, and soul, is an important component in the health-seeking process. Specifically, Sundanese cosmology is grounded in a triadic concept, namely *tritangtu*, encompassing the individual, the spiritual realm, and the universal context. This philosophical framework is reflected in various aspects of Sundanese life, including healthcare, landscape usage, housing configurations, and ecological arrangements (Saefullah 2023).

Patterns in plant usage and dominant families

Our study documented 111 medicinal plant species, with Zingiberaceae, Asteraceae, Fabaceae, and Lamiaceae being the most represented families (Figure 2). Leaves were the primary plant part used, and decoction (boiling) was the predominant preparation method (Figures 3.A and 3.B). The complete species list, together with each taxon's Relative Frequency of Citation (RFC) and Use Value (UV), is provided in Table S1.

Association between RFC and UV. Across 111 species, Spearman's $\rho = 0.817$ (bootstrap 95% CI 0.712-0.892), indicating that more culturally salient taxa tend to be reported for a greater number of uses. Pearson's correlation was comparable ($r = 0.884$, 95% CI 0.836-0.919). The scatterplot with fitted line is provided in Figure 4.

Frequently used species and ethnomedicinal importance

Our analysis is further enriched by considering quantitative ethnobotanical indices such as Used Report (NUR), Fidelity Level (FL), and the Informant Consensus Factor (ICF) for various diseases (Table 2).

Table 2. Informant Consensus Factor (ICF), Fidelity Level (FL), and the most cited medicinal plants by ailment category

Ailment category	Disease/ailment under each category	No. of plants used (Nt)	Used reports (NUR)	ICF	Most cited plant	FL (%)	Purpose of the most cited plants
Infectious and Parasitic Diseases	Viral infections (dengue, malaria, hepatitis), bacterial infections, fungal infections, parasitic infestations	68	546	0.88	*Momordica charantia* L.	65	Dysentery, dengue fever
Cardiovascular and Circulatory Disorders	Diabetes mellitus, hypercholesterolemia/hyperlipidemia, obesity, and other metabolic syndromes.	101	662	0.85	*Apium graveolens* L.	100	Hypertension
Metabolic and endocrine disorders	Hypertension (essential or secondary), heart disease, circulatory problems (e.g., varicose veins, edema if primarily cardiovascular in origin).	94	700	0.87	*Swietenia mahagoni* L. Jacq	100	Diabetes
Musculoskeletal and Connective Tissue Disorders	Rheumatism (e.g., rheumatoid arthritis), osteoarthritis, gout, low back pain, muscle pain, sprains/strains.	76	599	0.87	*Kaempferia galanga* L.	100	Rheumatism
Digestive and Gastrointestinal Disorders	Diarrhea, constipation, ulcers (peptic/gastric), gastritis, indigestion/dyspepsia, hemorrhoids, dysentery.	111	939	0.88	*Psidium guajava* L.	100	Diarrhea
Respiratory Disorders	Asthma, bronchitis, cough (when it reflects a respiratory condition), common cold, and other respiratory infections.	89	611	0.86	*Cymbopogon citratus* (DC.) Stapf	100	Cough and sore throat
Dermatological Disorders and Wound Care	Burns, dermatitis/eczema, psoriasis, acne, wound healing, skin ulcers, and sunburn.	93	572	0.84	*Ageratum conyzoides* L.	100	Wound healing
Genitourinary	Kidney disorders (stones, chronic kidney disease), urinary tract infections	60	354	0.83	*Sonchus arvensis* L.	100	Urinary tract infection
Oncological (Cancers)	Any reference to malignant neoplasms, cancer prevention, or anticancer claims.	8	12	0.36	*Acmella paniculata* (Wall. ex DC.) R.K.Jansen	19	Anticancer
Neurological & Mental Health	Headache/migraine, anxiety, stress-related complaints.	33	190	0.83	*Cymbopogon citratus* (DC.) Stapf	88	Insomnia
Nutritional Disorders	Anemia and other malnutrition.	42	200	0.79	*Curcuma xanthorrhiza* Roxb.	88	Apetite enhancer
Symptomatic condition	Fever, headache, nosebleed.	72	341	0.79	*Sandoricum koetjape* Merr.	46	Fever
Women	Menstrual disorders (dysmenorrhea,	50	297	0.83	*Sauropus*	100	Enhance

reproductive health	irregular cycles), postpartum issues, and lactation support.				*androgynus* (L.) Merr.		breastmilk production
Tooth and mouth disorders	Mouth ulcers, swelling gums, and toothache.	34	125	0.73	*Areca catechu* L.	50	Swollen gum, toothache

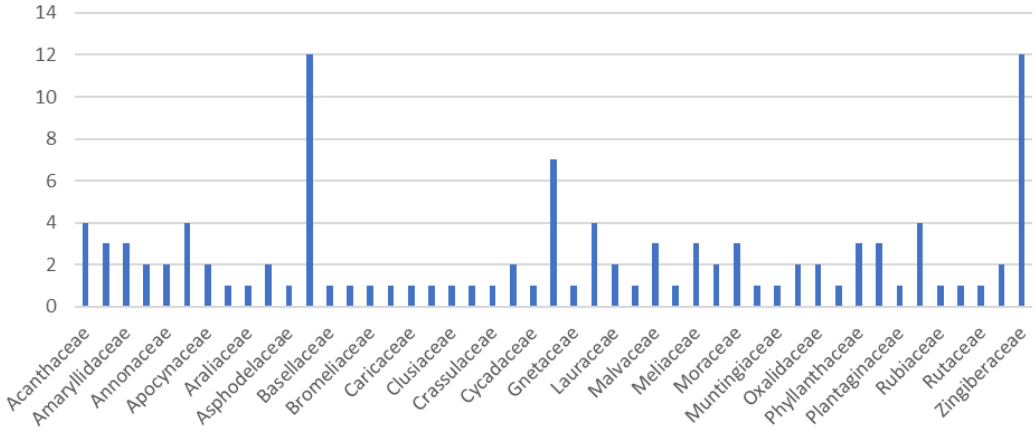

Figure 2. Frequency distribution of plant families used in *Ubar Kampung*

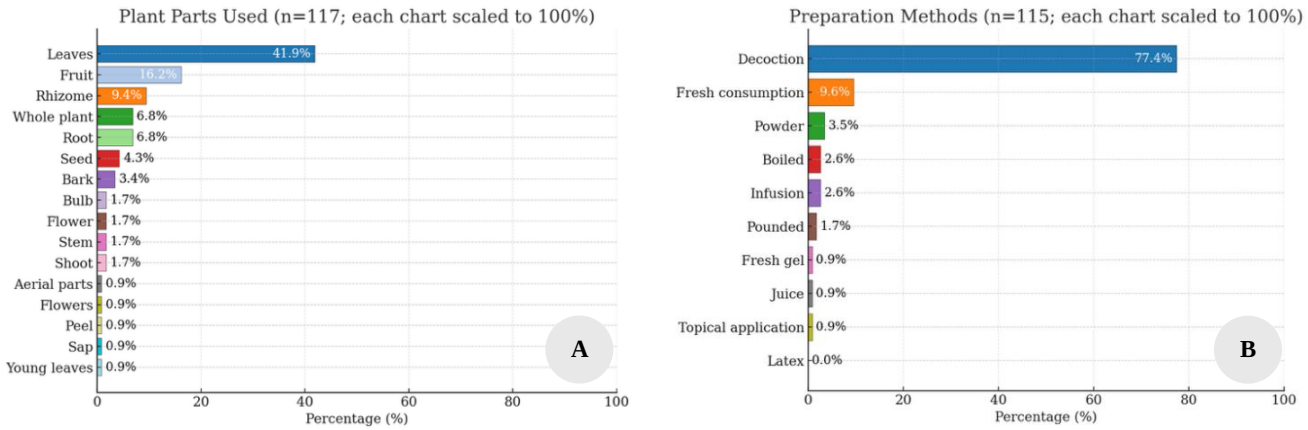

Figure 3. A. Part used of medicinal plants, B. Preparation methods of medicinal plants used

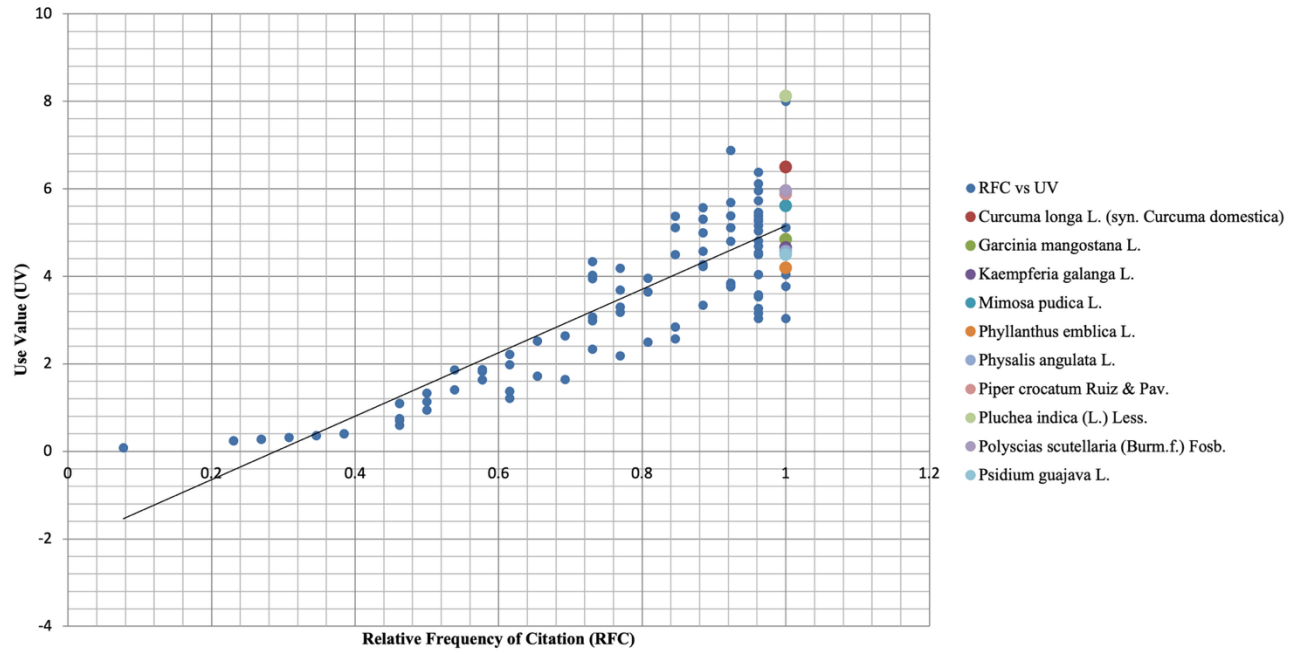

Figure 4. Scatter plot of Relative Frequency Citation and Use Value with top 10 highest Use Value

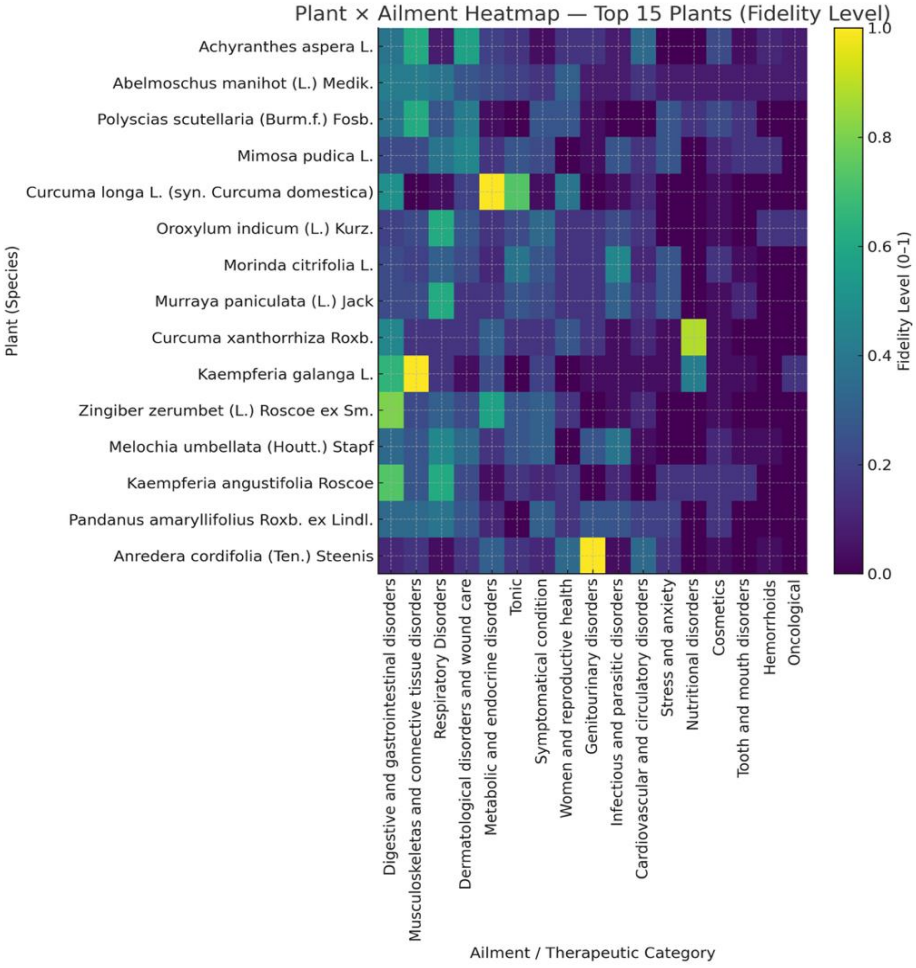

Figure 5. Heatmap of 15 plants with highest Fidelity Level in each therapeutic category

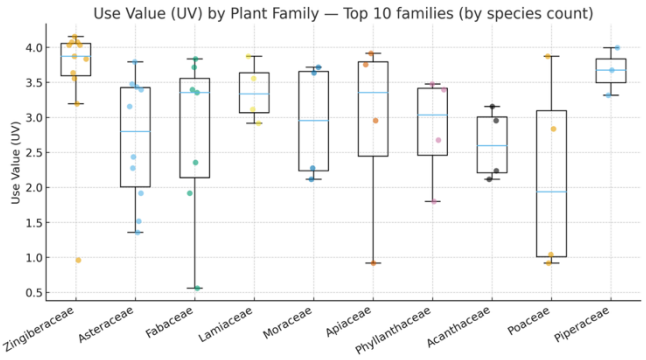

Figure 6. Use Value (UV) by plant family. Boxplots show species-level UV for the top 10 families (by species count); points are individual species. Families differ significantly (Kruskal–Wallis; pairwise BH-adjusted Mann–Whitney in the Supplementary File S2)

High informant consensus was observed for Infectious and Parasitic (ICF = 0.88; Nt = 68; NUR = 546), Digestive and Gastrointestinal (ICF = 0.88; Nt = 111; NUR = 939), Metabolic and Endocrine (ICF = 0.87; Nt = 94; NUR = 700), and Musculoskeletal disorders (ICF = 0.87; Nt = 76; NUR = 599). High ICF coupled with large NUR indicates strong agreement on what is used for common, high-burden complaints, and suggests robust household-level repertoires with multiple options (large Nt) for first-line care. Respiratory (ICF = 0.86; Nt = 89; NUR = 611) and Cardiovascular and Circulatory disorders (ICF = 0.85; Nt = 101; NUR = 662) similarly show high consensus, consistent with frequently managed conditions in primary/community settings. Top 15 plants with highest Fidelity Level are visualized in Figure 5.

Use Values (UV) were compared across plant families with ≥3 species. A significant overall difference was detected. Families with the highest central tendency were observed to include those with multiple culturally salient species. Pairwise contrasts (Mann–Whitney with BH-FDR) identified several family pairs with adjusted $p < 0.05$, indicating that cultural versatility is not uniformly

distributed across lineages. The distribution of species-level UV within the top families is shown in Figure 6.

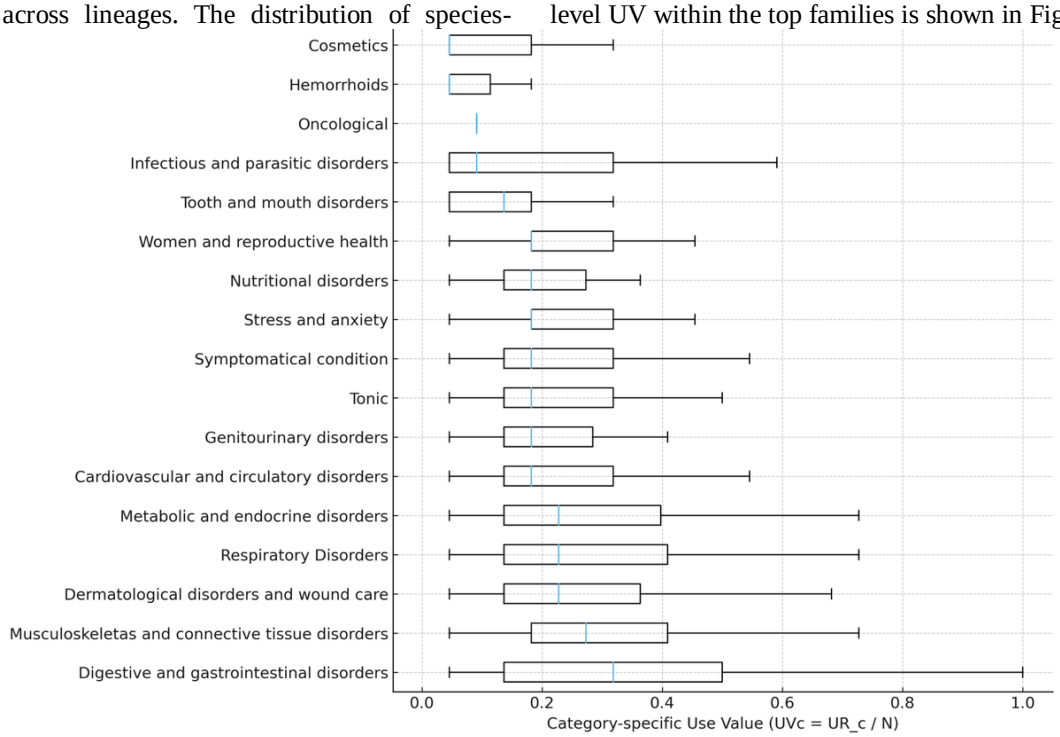

Figure 7. Category-specific Use Value (UVc = UR/N) across ailment domains. Horizontal boxplots ordered by median UVc. Domains with high median UVc correspond to those with high ICF, indicating strong agreement and concentrated use

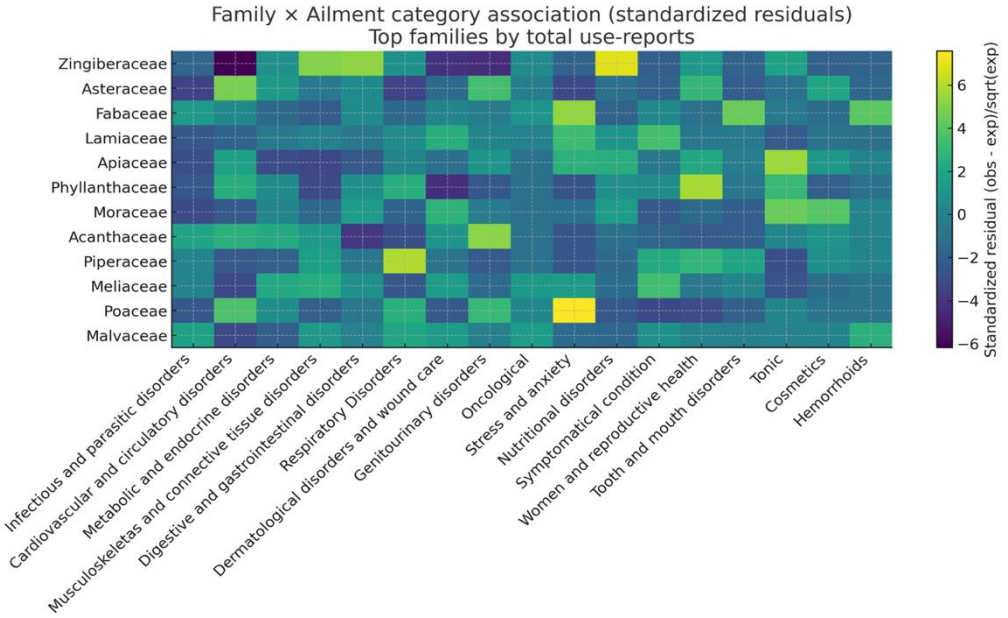

Figure 8. Heatmap of family and ailment category association

Category-specific Use Values (UVc) were contrasted across domains. A significant global difference was found, with the highest median UVc observed for domains that also showed high ICF, such as digestive and gastrointestinal disorders, metabolic and endocrine disorders, and musculoskeletal disorders. Pairwise tests (BH-adjusted) highlighted which category contrasts remain significant after multiple-testing correction (Figure 7).

A significant association between plant family and ailment category was detected (χ^2 = 3980.22). Over-representation was observed for Zingiberaceae in nutritional disorders (standardized residual +7.0) and digestive and gastrointestinal disorders (+5.3), with a secondary concentration in musculoskeletal conditions (+5.0). Asteraceae were strongly concentrated in dermatological and wound care (+9.4), Arecaceae in tooth and mouth disorders (+9.5/+8.5), Campanulaceae in women's reproductive health (+9.9), Clusiaceae in genitourinary (+13.0) and cardiovascular (+8.4), and Solanaceae in cardiovascular (+7.4). The

complete matrix and residuals are provided in Figure 8 and Supplementary File S2.

Discussion

This ethnobotanical study highlights the profound significance of *Ubar Kampung* within Sundanese communities in West Java, Indonesia. Comparable ethnomedicinal traditions have been documented among the Sundanese and other Indonesian ethnic groups, emphasizing widespread reliance on traditional medicinal practices to manage both common acute ailments and chronic diseases (Nahdi 2016; Supiandi et al. 2021; Dewi et al. 2023; Julung et al. 2023; Agustina et al. 2024; Mulyanto et al. 2024). Despite increasing access to modern healthcare, the persistence of these practices underscores their resilience and adaptability, shaped by empirical knowledge transmitted through generations (Majeed et al. 2023).

Our study documents 111 medicinal plant species, with the prominence of specific plant families belonging to Zingiberaceae, Asteraceae, and Fabaceae. This finding is in accordance with previous studies conducted in West Java, where Zingiberaceae also contributed a high proportion of medicinal plants. Across different provinces, the dominant families can shift depending on local flora. In Java, herbaceous families like Zingiberaceae and Asteraceae lead, reflecting the abundance of cultivated spices and backyard medicinal herbs (Rahayu et al. 2024b). In contrast, studies in forest-rich areas like parts of Sumatra or Kalimantan might report more tree or woody families among the top ranks (Lestariningsih et al. 2023). Nonetheless, our study finds that many of the same families commonly used in West Java also appear in the ethnobotanical profiles of Central Kalimantan and Aceh, demonstrating a core set of plant lineages that are repeatedly relied upon for healing (Novaryatiin and Indah 2019; Asiandu and Sari 2024).

Regarding plant parts used, there is a strong consensus across studies. Leaves are the primary part utilized in our study, a pattern similar to that in most regions of Indonesia and worldwide. Leaves are often readily available throughout the year and contain abundant bioactive compounds, making them convenient for concoctions. Other common parts include rhizomes (for Zingiberaceae spices), bark, fruits, and flowers, depending on the species. This consistency in using leaf decoctions underscores a shared practical knowledge where boiling not only extracts potent compounds but also sterilizes the remedy, a technique long optimized in indigenous medicine (Putri et al. 2016; Weking et al. 2023; Raihandhany and Purnomo 2025).

The distribution of UV across families indicates that cultural versatility clusters within specific lineages, consistent with domestication/availability (e.g., spice–medicinal families) and long-standing culinary–therapeutic roles. The UVc analysis further shows that domains with high ICF also tend to exhibit higher median UVc, suggesting that shared community heuristics concentrate use-reports on a subset of species perceived as effective. Across Indonesia, considerable overlap in ethnomedicinal repertoires has been documented, with regional specializations superimposed on a shared core of taxa. In the present dataset, several top-ranked species coincide with reports from other provinces, indicating convergent cultural valuation. *Curcuma longa* L. and *Curcuma xanthorrhiza* Roxb. were widely cited for gastrointestinal complaints, women's health (postpartum recovery), and anti-inflammatory purposes, consistent with their prominence elsewhere; similarly, a Central Kalimantan survey identified *Curcuma zedoaria* (Christm.) Roscoe as the most frequently used species (Novaryatiin and Indah 2019). The use of *Zingiber* spp. was also ubiquitous. Among Lio healers in Flores, *Zingiber officinale* Roscoe and *Zingiber purpureum* Roscoe attained the highest UV (0.714), reflecting central roles in managing colds, fatigue, and digestive symptoms (Prasetyo et al. 2024). In the present study, multiple *Zingiber* species were likewise listed for comparable indications. These patterns suggest that widely cultivated spice–medicinal taxa (e.g., *Z. officinale*, *C. longa*, *Piper betle* L.) form a pan-Indonesian pharmacopoeial backbone, while locale-specific plants or uses (e.g., *Dillenia suffruticosa* (Griffith ex Hook.f. & Thomson) Martelli for skin ailments) capture microhabitat availability and community-specific knowledge transmission.

Together with our earlier RFC–UV correlation and FL signals (e.g., *Psidium guajava* L. for diarrhea; *Apium graveolens* L. for hypertension; *Swietenia mahagoni* L. Jacq for diabetes), these comparisons strengthen a data-driven prioritization which taxa from high-UV families that also show high FL for indications within high-ICF domains represent the most compelling candidates for ethnopharmacological validation. Complete agreement (FL = 100%) was observed for *P. guajava* in diarrhea (digestive disorders), *A. graveolens* in hypertension (cardiovascular disorders), *S. mahagoni* in diabetes (metabolic or endocrine disorders), *Kaempferia galanga* L. in rheumatism (musculoskeletal disorders), *Cymbopogon citratus* (DC.) Stapf in cough and sore throat (respiratory disorders), and *Sauropus androgynus* (L.) Merr. in lactation support (women's health and reproductive). Such high FL indicates that community use-reports for these taxa are tightly concentrated on a single therapeutic target, strengthening their candidacy for ethnopharmacological follow-up. Where relevant, these cultural signals align with emerging pharmacological evidence e.g., *P. guajava* for antibacterial and antidiarrheal effects (Liu et al. 2024), *A. graveolens* for antihypertensive action in a crossover trial and mechanistic support through calcium-channel blockade, diuresis, endothelial NO, and flavone constituents (Bencheikh et al. 2021; Alobaidi and Saleh 2024; Sohrabi et al. 2024). *Swietenia mahagoni* is widely reported for hypoglycemic activity including α-glucosidase inhibition and improvements in glycemic and antioxidant parameters, with formulation work (SNEDDS) further enhancing β-cell preservation in vivo (Sukardiman and Ervina 2020; Shiming et al. 2021; Ahamd et al. 2023; Taiyeb et al. 2024). These convergences do not equate to clinical efficacy but do indicate strong, triangulated leads.

Cultural salience (RFC) and versatility (UV) were found to be strongly associated at the species level, indicating that plants cited by more informants also tend to be reported for a broader range of uses. Because RFC aggregates citation frequency and UV aggregates use-reports, this association should be interpreted descriptively rather than causally; nonetheless, it supports an index-guided triage in which

taxa with high ICF in their domain, high RFC/UV overall, and high FL for a specific indication are prioritized for pharmacological validation and conservation attention.

Taken together, these findings position *Ubar Kampung* as a robust, living knowledge system whose therapeutic core is broadly convergent with ethnobotanical profiles around Indonesia, yet retains locality-specific emphasis shaped by ecology and practice. The high informant consensus (ICF $\geq$ 0.85) in digestive and musculoskeletal categories indicates use patterns that are consistent with pharmacological plausibility (e.g., *P. guajava* for diarrhoea and *K. galanga* for rheumatism). These findings, through combining the emic-to-etic approach, both honor cultural logics and generate decision-grade evidence, enabling conservation-aware utilization and policy-relevant integration of *Ubar Kampung* within regional health systems.

Furthermore, the study has limitations which are attributed to the small quantity of sample size (n = 52), limiting its broader generalizability, highlighting the need for expanded surveys across diverse ecological and cultural contexts. Additionally, plant identification was performed solely through desk-based comparison of field photographs and vernacular descriptions with authoritative online and printed floras without collecting or preserving physical voucher specimens. As fieldwork documented an extensive list of medicinal plants, destructive sampling of plants is discouraged. Consequently, non-destructive photo-documentation and literature matching provided an ethically acceptable compromise. While this approach is widely used in rapid ethnobotanical inventories, it remains inferior to vouchers for long-term verification. For follow-on work, we therefore recommend that the highest-priority species be revisited, collected under appropriate permits, and documented by depositing duplicate voucher specimens in recognized herbaria to provide a permanent, citable reference. Additionally, a longitudinal study, which is crucial for understanding the long-term dynamics of plant use and knowledge transfer, that periodically samples diverse age groups and genders across additional Sundanese villages, is also necessary to clarify generational knowledge transfer, plant-use dynamics, and the resilience of *Ubar Kampung* under rapid socio-ecological change.

Within the ethical stewardship and cultural safeguards context, we recognize the risk that publishing traditional knowledge could facilitate commercialization that detaches practices from their cultural context. To mitigate this, our documentation is framed as community-respectful scholarship aimed at preservation and hypothesis generation, not exploitation. Any future use of these data for product development will proceed only with prior informed consent, mutually agreed terms, and access-and-benefit sharing with knowledge holders, in line with internationally recognized principles. We emphasize attribution of provenance, collaboration with community representatives, and mechanisms for fair benefit-sharing. These safeguards complement our ethically approved procedures and our focus on sustainable, culturally appropriate integration of local practices within regional health services.

In conclusion, the findings of this study emphasize the lasting importance *of Ubar Kampung* in maintaining health and cultural identity within Tatar Sunda, West Java. Several plant families emerge as therapeutically prominent, notably Zingiberaceae, Asteraceae, and Fabaceae. Moreover, these findings demonstrate significant consensus (ICF) and high Fidelity Levels (FL) for specific species used to address common ailments such as digestive disorders, infectious diseases, metabolic syndromes, and musculoskeletal conditions. Plants like *K. galanga, C. longa*, and *P. guajava* show strong cross-cultural validation, highlighting pharmacological concordance between folk usage and scientific evidence. The sustained use of *Ubar Kampung* holds implications beyond cultural preservation. However, the transmission of local knowledge to younger generations raises concerns for biodiversity and cultural continuity. Consequently, documenting and revitalizing traditional ethnobotanical expertise is thus essential, both to safeguard regional heritage and to facilitate responsible resource management.

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Table S1. Ethnobotanical uses, preparation methods, and quantitative indices (RFC and UV) of reported medicinal plants

Latin name	Family	Local name	Part(s) used	Preparation and application	Traditional medicinal uses	RFC	UV
Abelmoschus manihot (L.) Medik.	Malvaceae	*Daun nedi / Daun gedi*	Lf	Dc, oi	Fever, stomachache, mouth ulcers, hypertension, diabetes, lowering cholesterol, diarrhea, gastritis, wound healing, postpartum recovery, nausea, cough, sore throat, dermatitis, arthritis, menstrual cramps, immunity booster, sprain pain relief.	0.73	3.79
Abrus precatorius L.	Fabaceae	*Saga*	Lf	Dc, oi	Mouth ulcers, swollen gums, sore throat, cough, gout, blood sugar regulation, and headache relief.	0.62	3.39
Achyranthes aspera L.	Amaranthaceae	*Jarong, jarong lalaki*	Lf	Pd, ta, oi	Diuretic, relief pain in rheumatism, joint pain, stomachache, wound healing, urinary infections, diarrhea, postpartum care, blood sugar reduction, body odor reduction, hypertension control, ulcer treatment.	0.88	3.83
Acmella paniculata (Wall. ex DC.) R.K.Jansen	Asteraceae	*Jotang*	Fl	Dc, oi	Skin infection, immune booster, anti-cancer	0.23	1.52
Ageratum conyzoides L.	Asteraceae	*Babadotan*	Lf	Pd, ta	Burns, wound healing, dermatitis, itch relief, fever, eczema, mouth ulcer relief, hypertension, insect repellent, and acne.	0.62	2.68
Aglaia odorata Lour.	Meliaceae	*Pacar cina*	Lf	Dc, oi	Sore throat, cough, labor easing, antipyretic, menstrual regulation, childbirth pain relief, bad breath relief, eczema, postpartum recovery, and stress relief.	0.38	2.16
Allium cepa L.	Amaryllidaceae	*Bawang beureum*	Bb	Pd, ta, oi	Ulcers, acne, fever, cholesterol reduction, hypertension control, blood sugar control, wound disinfectant, and mild analgesic.	0.31	1.56
Allium fistulosum L.	Amaryllidaceae	*Bawang daun*	Lf	Dc, oi	Lowering blood pressure and cholesterol.	0.27	1.44
Allium sativum L.	Amaryllidaceae	*Bawang bodas*	Bb	Dc, oi	Cholesterol reduction, blood pressure control, antibiotics, diabetes, antivirals, immune boosters, and topical antiseptics.	0.96	2.28
Aloe vera (L.) Burm.f.	Asphodelaceae	*Lidah buaya*	Lf	Fc (gel)	Burns, acne, wound healing, hair care, ulcer treatment, immune booster, blood sugar control, eczema relief, hyperlipidemia, sunburn relief, oral ulcers, itch relief, skin dryness, psoriasis treatment.	0.88	2.96
Alpinia galanga (L.) Willd.	Zingiberaceae	*Laja goah*	Rh	Dc, oi	Carminative, rheumatism, back pain, anti-nausea, anti-flatulent, sore throat, cough, asthma, indigestion, diarrhea, cholesterol control, improved circulation, antifungal, blood sugar control, headache relief.	0.96	3.55
Alstonia scholaris (L.) R.Br., *Alstonia angustiloba* Miq.	Apocynaceae	*Lamé, pule, pulai*	Bk	Dc, oi	Sprained ankle, hypertension, respiratory disorders, wound healing, skin diseases, malaria, stomach pain, antiparasitic, dysentery, rheumatism, and immunity booster.	0.73	2.20
Alyxia reinwardtii Blume	Apocynaceae	*Pulasari*	Bk	Dc, oi	Fever, mouth ulcer, cough, and gastritis.	0.38	1.48
Amaranthus spinosus L.	Amaranthaceae	*Bayam duri*	Ap	Dc, oi	Diuretic, hypertension, edema, urinary tract infections, diabetes, body cooling tonic.	0.46	1.48
Amaranthus tricolor L.	Amaranthaceae	*Bayam merah*	Lf	Bl, oi	Diuretic, iron supplement, combats malnutrition, immunity booster, antihypertensive, wound healing, anemia treatment, kidney support, gastritis, and cholesterol lowering.	0.46	1.68
Amomum dealbatum Roxb.	Zingiberaceae	*Kapulaga lokal*	Rh	Dc, oi	Carminative, flatulence relief, diarrhea, indigestion, anti-ulcer, hypertension control, lactation support.	0.27	0.96

Anacardium occidentale L.	Anacardiaceae	*Jambu mede*	Lf	Dc, oi	Lactation support, antidiarrheal, infection, mouth ulcers, diabetes, cholesterol lowering, wound healing, antihypertensive, sore throat relief.	0.50	1.80
Ananas comosus (L.) Merr.	Bromeliaceae	*Ganas*	Fr	Fc	Blood sugar control, digestive aid, anti-bloating, antihypertensive, menstrual regulation, and cough relief.	0.46	1.72
Andrographis paniculata (Burm.f.) Nees	Acanthaceae	*Sambiloto*	Lf,st	Dc, oi	Hypertension control, diabetes, fever treatment, immune booster, detoxification, sore throat relief, joint pain relief, tonic.	0.96	2.96
Annona muricata L.	Annonaceae	*Sirsak*	Lf	Dc, oi	Diabetes, cancer prevention, hypertension, liver protection, wound healing, immune boosting, rheumatism, anemia, and skin diseases.	0.92	3.71
Anredera cordifolia (Ten.) Steenis	Basellaceae	*Binahong*	Lf	Dc, oi	Kidney disorders, fever, diabetes, gout, irregular menstrual cycles, mouth ulcers, hypertension, wound healing, blood sugar control, immunity booster, diuretic, cardiovascular health, menstrual health, migraine relief, nerve pain.	0.96	3.71
Antidesma bunius (L.) Spreng.	Phyllanthaceae	*Bencoy*	Fr	Fc, oi	Hypertension control, gout treatment, cough suppressant, menstrual cramps, immune booster, rheumatism.	0.54	1.80
Apium graveolens L.	Apiaceae	*Saledri*	Ap	Fc, oi	Hypertension, diuretic, cholesterol reduction, heart health, blood detoxification, vision support, kidney detox, appetite stimulant, liver support, menstrual regulation, insomnia treatment, respiratory tonic, lactation aid.	0.96	2.96
Apoballis rupestris (Zoll. & Moritzi ex Zoll.) S.Y.Wong & P.C.Boyce	Araceae	*Jotang*	Ap	Dc, oi	Appetite stimulant, wound healing, digestive health, sore throat remedy, pain relief, toothache, mouth ulcers, reduce bloating, muscle recovery, immune booster, bleeding gums, cough suppressant, and blood pressure regulation.	0.96	3.47
Arachis hypogaea L.	Fabaceae	*Su'uk*	Sd	Fc	Heart health, skin elasticity, digestive support.	0.08	0.56
Areca catechu L.	Arecaceae	*Jambe*	Sd	Fc, ta	Wound disinfectant, stamina enhancement, teeth strengthening, back pain relief, swollen gums, toothache, digestive booster, diuretic, cough relief, fatigue reduction.	0.73	2.80
Arenga pinnata (Wurmb.) Merr.	Arecaceae	*Kawung*	Sh	Dc, oi	Diabetes control, inflammation reduction, heart health, blood sugar regulation, muscle pain relief, relief from constipation, fatigue relief, and blood pressure control.	0.46	1.72
Artocarpus altilis (Park.) Fsb.	Moraceae	*Sukun*	Lf	Dc, oi	Wound healing, lowering blood glucose, lowering cholesterol, cough relief, immunity booster, blood circulation support, and appetite stimulant.	0.58	2.28
Artocarpus heterophyllus Lamk.	Moraceae	*Nangka*	Lf	Dc, oi	Rheumatism and gout treatment, diabetes control, lowering blood pressure, arthritis relief, nerve tonic, bloating relief, and cough suppressant.	0.58	2.12
Averrhoa bilimbi L.	Oxalidaceae	*Calincing*	Fr	Fc	Hypertension, diabetes, wound healing, acne treatment, sore throat, gastrointestinal disorders, insect bites, cholesterol reduction, kidney stones, and constipation relief.	0.81	2.80
Averrhoa carambola L.	Oxalidaceae	*Belimbing*	Fr	Fc	Cholesterol management, rheumatism, sore throat, immune booster, and digestion improvement.	0.65	1.96
Bambusa vulgaris Schrad. ex J.C.Wendl.	Poaceae	*Iwung*	Sh	Dc, bl	Hypertension control, wound healing, digestive health, cholesterol reduction, diabetes, and diarrhea.	0.35	1.04
Bidens pilosa L.	Asteraceae	*Jonqe, Jonqhe, Jeletun, Hareuga*	Lf	Dc	Wound healing, digestive ailments, cough, insect bites, menstrual disorders, gastritis, constipation treatment, and an immune booster.	0.35	1.36
Blumea balsamifera (L.) DC.	Asteraceae	*Sembung awéwé*	Lf, Rt	Dc	Diuretic, hypertension, kidney stone treatment, wound healing, diabetes, gastrointestinal ailments, skin infections, urinary tract infections, and postpartum recovery.	0.65	2.28

Boesenbergia rotunda (L.) Mansf.	Zingiberaceae	*Temu kunci*	Rh	Dc	Digestive health, rheumatism relief, cough and cold treatment, appetite stimulation, blood pressure control, wound healing, menstrual pain relief, postpartum recovery, joint pain relief, arthritis, and constipation treatment.	0.88	3.63
Bouea macrophylla Griff.	Anacardiaceae	*Gandaria*	Fr, Lf	Dc	Diabetes control, hypertension, cough relief, wound healing, digestive disorders, urinary tract infections, immune support, and sore throat.	0.38	1.36
Carica papaya L.	Caricaceae	*Gedang katés*	Lf	Bl	Dengue fever, sore throat, hypertension, diabetes, fever relief, cough, skin infections, ulcers, constipation relief, diarrhea, immune booster, and insect bites.	0.46	1.72
Ceiba pentandra Gaertn.	Malvaceae	*Randu*	Lf	Dc	Wound healing, cough remedy, digestive disorders, constipation relief, skin infections, pain relief, and ulcers.	0.27	1.04
Centella asiatica (L.) Urb.	Apiaceae	*Antanan*	Ap	Fc, Dc	Wound healing, cognitive enhancement, skin care, anxiety relief, memory booster, diabetes, hypertension, gastrointestinal disorders, ulcers, blood circulation improvement, postpartum recovery, cough, fatigue reduction, kidney health, constipation relief, insomnia treatment, respiratory ailments.	0.92	3.75
Chloranthus erectus (Buch.-Ham.) Verdc.	Chloranthaceae	*Cangkring*	Ap	Dc	Fever, rheumatism, arthritis, wound healing, digestive issues, cough, muscle pain, skin infections, diabetes, immune booster, constipation, and appetite stimulation.	0.50	2.08
Cinnamomum burmannii (Nees & T.Nees) Blume	Lauraceae	*Kayumanis cina*	Bk	Dc	Diabetes, hypertension, cholesterol reduction, gastrointestinal disorders, cough, digestive stimulant, appetite stimulant, obesity management, immune booster, and nausea relief.	0.62	2.04
Cinnamomum sintoc Blume	Lauraceae	*Sintok*	Lf	Dc	Wound healing, diabetes, cough remedy, hypertension management, fever, digestive disorders, skin care, rheumatism relief, joint pain management, arthritis, asthma treatment, constipation relief, liver tonic, immune booster, menstrual disorders, anti-aging, urinary tract infections, headache relief, diarrhea, postpartum care.	0.85	3.51
Clitoria ternatea L.	Fabaceae	*Telang*	Fls	Dc	Cognitive enhancer, anxiety reduction, fever relief, diabetes, wound healing, menstrual disorders, urinary disorders, hypertension management, immune booster, constipation relief, headache relief, insomnia relief, cough, and postpartum recovery.	0.81	3.36
Coleus scutellarioides (L.) Benth.	Lamiaceae	*Jawér kotok*	Lf	Dc	Wound healing, digestive disorders, constipation, skin itching relief, fever, headache relief, arthritis management, respiratory ailments, cough relief, anemia relief, blood sugar control (diabetes), hypertension relief, obesity control, eczema treatment, immune booster, stomachache relief.	0.73	2.92
Coriandrum sativum L.	Apiaceae	*Katuncar*	Sd	Dc	Digestive stimulant, appetite enhancer, respiratory ailments, and immune booster.	0.23	0.92
Cosmos caudatus Kunth.	Asteraceae	*Randa midang, kenikir*	Lf	Dc	Lowering blood pressure, diabetes, digestive stimulant, appetite enhancer, immune booster, gastrointestinal disorders, and cholesterol reduction.	0.69	1.92
Costus speciosus J.Koenig	Costaceae	*Pacing*	St	Dc	Controlling blood sugar, hypertension relief, digestive disorders, wound healing, arthritis relief, cough treatment, respiratory conditions, constipation relief, gastrointestinal problems, skin infections, rheumatism management.	0.50	1.92
Crassocephalum crepidioides (Benth.) S.Moore	Asteraceae	*Sintrong*	Lf	Fc	Digestive stimulant, wound healing, diabetes, hypertension relief, arthritis relief, gastrointestinal disorders, immune booster, constipation relief, cough remedy, fever reduction, skin infections, postpartum care, joint pain relief, rheumatism management, appetite enhancement, fatigue reduction.	0.77	3.16

Cucurbita moschata Duchesne	Cucurbitaceae	*Waluh*	Sd	Dc	Diabetes management, hypertension, wound healing, kidney health, constipation relief, obesity management, cardiovascular health, skin care, gastrointestinal disorders, immune booster, cholesterol control, arthritis, joint pain relief, fever relief, urinary tract disorders.	0.88	2.72
Curcuma longa L. *(syn. Curcuma domestica)*	Zingiberaceae	*Konéng lalab*	Rh	Dc, oi	Diabetes control, wound healing, hypertension, digestive aid, immune booster, menstrual pain relief, liver detoxification, cholesterol reduction, obesity management, and gastrointestinal health.	1.00	4.07
Curcuma xanthorrhiza Roxb.	Zingiberaceae	*Temulawak, Konéng gedé*	Rh	Dc, oi	appetite stimulant, liver tonic, digestive aid, diabetes, hypertension, cholesterol reduction, immune booster, menstrual disorders, obesity control, wound healing, gastrointestinal disorders, anemia relief, respiratory disorders, postpartum tonic, and kidney health.	0.96	4.03
Curcuma zedoaria (Christm.) Roscoe	Zingiberaceae	*Konéng bodas*	Rh	Dc, oi	Diabetes control, appetite stimulant, digestive stimulant, wound healing, menstrual pain relief, arthritis relief, cholesterol reduction, hypertension control, gastrointestinal disorders, immune booster, obesity management, postpartum care, anemia treatment, asthma relief, and kidney disorders.	0.77	3.20
Cycas rumphii Miq.	Cycadaceae	*Pakis haji*	Rt	Dc, oi	Rheumatism relief, arthritis, digestive stimulant, diabetes, hypertension management, wound healing, urinary disorders, joint pain relief, gastrointestinal disorders, immune booster, skin infections, and constipation relief.	0.77	2.88
Cyclea barbata Miers	Menispermaceae	*Cincau*	Lf	Pd, oi	Digestive aid, constipation relief, diabetes, hypertension control, fever reduction, urinary disorders, wound healing.	0.77	2.44
Cymbopogon citratus (DC.) Stapf	Poaceae	*Sereh*	Rt	Dc, oi	Anxiety relief, insomnia treatment, fatigue reduction, cough remedy, sore throat, digestive stimulant,	0.96	3.87
Dracaena angustifolia (Medik.) Roxb.	Ruscaceae/ Asparagaceae	*Daun Suji*	Lf	Dc, oi	Wound healing, fever reduction, anemia relief, digestive stimulant, hypertension management, diabetes, immune booster, cough relief, gastrointestinal issues, insomnia relief, and anti-aging.	0.77	3.12
Elephantopus scaber L.	Asteraceae	*Tapak liman*	Rt	Dc, oi	Gastrointestinal health, arthritis management, wound healing, fever reduction, kidney health, digestive disorders, urinary tract infections, cough relief, respiratory ailments, diabetes, hypertension relief, joint pain management, constipation relief, rheumatism relief.	0.85	3.43
Erythrina subumbrans (Hassk.) Merr.	Fabaceae	*Dadap*	Lf	Dc	Hypertension relief, diabetes, fever treatment, wound healing, arthritis relief, cough remedy, respiratory disorders, digestive aid, menstrual disorders, postpartum recovery, gastrointestinal health, constipation relief, anemia relief, immune booster, joint pain relief, kidney disorders, liver protection, urinary infections, obesity management, headache relief, skin health, insomnia relief, rheumatism relief.	0.88	3.71
Ficus septica Burm.f.	Moraceae	*Ki ciyat*	Lt, fr	Ta	Wound healing, skin infections, digestive disorders, constipation relief, diarrhea treatment, skin rashes, and eczema.	0.88	3.63
Ficus virens Aiton	Moraceae	*Bunut*	Lf	Dc, oi	Wound healing, relief of stomachache, cough remedy, relief of pain in arthritis, menstrual disorders, postpartum care, gastrointestinal disorders, constipation relief, anemia treatment, skin infections, joint pain relief, liver protection, kidney health, immune booster, obesity management, headache relief, urinary disorders, insomnia relief, diarrhea treatment, anemia relief.	0.88	3.71
Garcinia mangostana L.	Clusiaceae	*Manggis*	Fr (peel)	Dc, oi	Cancer prevention, diabetes, hypertension relief, immune booster, obesity management, and cholesterol management.	1.00	2.28

Gigantochloa apus (Schult. & Schult.f.) Kurz	Poaceae	*Awi tali, apus*	Lf	Dc, oi	Wound healing, digestive disorders, arthritis relief, joint pain management, constipation relief, and skin infections.	0.23	0.92
Gnetum gnemon L.	Gnetaceae	*Tangkil*	Fr	Dc, oi	Immune booster, constipation relief, wound healing, hypertension relief, diabetes, arthritis management, digestive stimulant, cholesterol control, anemia treatment, gastrointestinal disorders, skin health, and obesity control.	0.62	2.32
Goniothalamus macrophyllus (Blume) Zoll.	Annonaceae	*Ki cantung*	Rt	Dc, oi, ta	Rheumatism, arthritis, gout, digestive disorders, wound healing, hypertension, joint pain, kidney health, gastrointestinal disorders, constipation relief, urinary disorders, and fatigue relief.	0.69	2.72
Graptophyllum pictum (L.) Griff.	Acanthaceae	*Handeuleum*	Lf	Dc, oi, fc	Hemorrhoids, wound healing, fever treatment, diabetes, hypertension relief, postpartum recovery, joint pain management, arthritis relief, immune booster, constipation relief, diarrhea, liver protection, kidney health, skin care, anemia relief, and obesity management.	0.85	3.16
Gynura divaricata (L.) DC.	Asteraceae	*Dewa*	Lf	Dc, oi	Diabetes management, hypertension relief, gastrointestinal health, immune booster, constipation relief, obesity management, fever treatment, cough remedy, diarrhea relief, and fatigue reduction.	0.88	3.47
Gynura procumbens (Lour.) Merr.	Asteraceae	*Sambung nyawa*	Lf	Dc, oi	Diabetes management, hypertension relief, wound healing, cholesterol reduction, immune booster, arthritis management, joint pain relief, menstrual cramps, postpartum care, skin conditions, liver protection, kidney health, headache relief, obesity control, anemia treatment.	0.96	3.39
Hippobroma longiflora (L.) G.Don	Campanulaceae	*Korejat*	Fl	Dc, oi	Eye infections, wound healing, respiratory disorders, cough remedy, gastrointestinal ailments, menstrual cramps, postpartum recovery, and skin infections.	0.73	2.88
Imperata cylindrica (L.) Beauv.	Poaceae	*Jukut eurih (alang-alang)*	Ap	Dc, oi	Kidney stone, diuretic, hypertension relief, cough remedy, digestive aid, joint pain management, obesity management, diarrhea relief, fatigue reduction, and gastrointestinal disorders.	0.92	2.84
Kaempferia angustifolia Roscoe	Zingiberaceae	*Kunci*	Rh	Dc, oi	Digestive ailments, respiratory ailments, cough, wounds, infection, rheumatism, ulcers, toothache, dyspepsia, dizziness, tonic, skin conditions, menstrual disorders, appetite stimulant, nausea, muscular pain.	0.96	4.03
Kaempferia galanga L.	Zingiberaceae	*Kencur*	Rh	Dc, oi	Rheumatism, back pain, joint pain, fever, inflammation, postpartum tonic, menstrual pain, respiratory ailments, cough, digestive disorders, bronchitis.	1.00	4.15
Kalanchoe pinnata (Lam.) Pers.	Crassulaceae	*Cocor bebek*	Lf	Fc, ta, oi	Fever, wound healing, toothache, cough, burns, hypertension, arthritis, rheumatism, eczema, insect bites, urinary infections.	0.54	2.12
Melastoma malabathricum L.	Melastomataceae	*Harendong*	Fr	Dc, oi	Diarrhea, wounds, stomachache, toothache, postpartum care, hemorrhoids, burns, thrush, ulcers, menstrual pain, cuts, infection, fever, bleeding, rheumatism, skin diseases, swelling, cough, sore throat, abdominal cramps.	0.96	3.59
Melochia umbellata (Houtt.) Stapf	Malvaceae	*Bintinu*	Bk	Dc, oi	Fever, cough, wounds, diarrhea, skin infections, bronchitis, dysentery, abdominal pain, diabetes, malaria, hepatitis, rheumatism, stomachache, headache, jaundice, sore throat, insect bites, urinary tract infections.	0.96	3.71
Mimosa pudica L.	Fabaceae	*Putri malu*	Ap	Dc, oi, ta	Rheumatism, wounds, insomnia, bleeding, diarrhea, inflammation, skin infections, anxiety, asthma, bronchitis, toothache, hemorrhoids, fever, diabetes, snake bites, ulcers, hypertension, jaundice, liver disorders, edema, dysentery, swelling.	1.00	3.83

Momordica charantia L.	Cucurbitaceae	*Paria*	Lf, Fr	Dc, oi, ta	Diabetes, gout, hypertension, fever, stomachache, jaundice, wounds, digestive disorders, diarrhea, skin conditions, infections, ulcers, constipation, antiviral, menstrual pain, dysentery, inflammation, malaria, asthma, headache, cough, colds, rheumatism.	0.92	3.20
Morinda citrifolia L.	Rubiaceae	*Cangkudu (mengkudu)*	Fr	Dc, oi, ta	Hypertension, diabetes, digestive disorders, cough, colds, wounds, arthritis, rheumatism, infection, antiviral, cancer prevention, dysentery, menstrual pain, kidney problems, skin infections, inflammation, headache, asthma, liver ailments, ulcers, malaria, diarrhea, depression, immune enhancement, fatigue.	0.96	3.59
Moringa oleifera Lam.	Moringaceae	*Kelor*	Lf	Bl, oi	Toothache, headache, diarrhea, menstrual pain, anemia, diabetes, hypertension, inflammation, arthritis, skin infections, cough, colds, wound healing, liver ailments, urinary infections, edema, malnutrition, asthma, gastrointestinal disorders, fever, eye infections, rheumatism, thyroid dysfunction.	0.88	3.59
Muntingia calabura L.	Muntingiaceae	*Kersen*	Lf, Fr	Dc, oi, ta	Lowering cholesterol, diabetes, hypertension, gout, ulcers, cough, diarrhea, infection, wound healing, headaches, asthma, stomachache, toothache, fever, urinary infections, colds, analgesics, dysentery, skin diseases, insomnia, constipation, kidney problems, liver problems.	0.88	3.43
*Murraya paniculata (*L.) Jack	Rutaceae	*Kamuning*	Lf	Dc, oi, ta	Toothache, skin infections, diarrhea, dysentery, fever, rheumatism, cough, colds, bronchitis, sore throat, menstrual pain, hypertension, diabetes, headaches, joint pain, asthma, digestive disorders, jaundice, snake bites, anxiety, urinary disorders, hair tonic, earache, dizziness.	0.96	3.71
Ocimum basilicum L.	Lamiaceae	*Surawung*	Lf	Dc, oi, ta	Diabetes, cough, cold, headache, fever, digestive ailments, wound healing, insect repellent, stomachache, anxiety relief, nausea, menstrual pain, asthma, respiratory problems, arthritis, toothache, ulcers, skin diseases, insomnia, hypertension, diarrhea, dizziness.	0.85	3.55
Oenanthe javanica DC.	Apiaceae	*Tespong*	Lf	Dc, oi	Hypertension, diabetes, fever, inflammation, liver disorders, digestive problems, respiratory infections, kidney ailments, wound healing, cough, headache, dizziness, bronchitis, urinary disorders, anemia, arthritis, rheumatism, detoxification, menstrual pain, swelling, constipation, appetite stimulant, postpartum tonic, urinary tract infections.	0.92	3.91
Oroxylum indicum (L.) Kurz.	Bignoniaceae	*Pongporang*	Rt	Dc, ta, oi	Rheumatism, diarrhea, inflammation, respiratory diseases, cough, asthma, jaundice, stomachache, dysentery, wounds, ulcers, fever, anticancer, kidney disorders, diabetes, sore throat, earache, liver disorders, hemorrhoids, menstrual disorders, headache, bronchitis, snakebite treatment, hypertension, arthritis.	0.96	3.79
Orthosiphon aristatus (Blume) Miq.	Lamiaceae	*Kumis ucing*	Lf	Dc, oi, ta	Back pain, hypertension, gout, urinary tract infections, kidney stones, muscle soreness, arthritis, inflammation, diabetes, edema, fever, liver disorders, diuretic, rheumatism, digestive problems, cholesterol management, headaches, obesity.	0.81	3.12
Pandanus amaryllifolius Roxb. ex Lindl.	Pandanaceae	*Pandan*	Lf	Dc, oi	Hypertension, muscle soreness, diabetes, diuretic, insomnia, inflammation, arthritis, rheumatism, fever, cold, cough, wounds, skin infections, constipation, postpartum care, urinary disorders, stomach cramps	0.96	3.63
Phyllanthus acidus (L.) Skeels	Phyllanthaceae	*Cereme*	Lf, Fr	Fc, oi	Mouth ulcers, diabetes, hypertension, stomachache, rheumatism, constipation, digestive disorders, and sore throat.	0.85	2.68

Phyllanthus emblica L.	Phyllanthaceae	*Malaka*	Fr	Dc, oi	Diabetes, hypertension, cough, sore throat, inflammation, constipation, cold, and asthma.	1.00	3.47
Physalis angulata L.	Solanaceae	*Cecendet*	Rt	Dc, oi	Diabetes, wound healing, fever, infection, wounds, skin diseases, urinary infections, dermatitis.	1.00	2.60
Piper betle L.	Piperaceae	*Seureuh*	Lf	Dc, oi, ta, gg	Vaginal discharge, postpartum healing, bad breath, antiseptic, wounds, digestive disorders, bleeding gums, toothache, infection, antifungal, cough, diabetes, fever, headache, skin infections, mouth ulcers, respiratory ailments, hypertension, bronchitis, hemorrhoids, rheumatism, throat infections, insect bites.	0.92	3.32
Piper crocatum Ruiz & Pav.	Piperaceae	*Seureuh beureum*	Lf	Fc, oi, gg	Nosebleed, diabetes, wound healing, hypertension, inflammation, menstrual pain, vaginal discharge, cough, asthma, sore throat, headache, diarrhea, urinary infections, stomachache.	1.00	3.67
Piper nigrum L.	Piperaceae	*Lada hitam*	Fr	Dc, oi	Cough, digestive disorders, asthma, arthritis, rheumatism, appetite stimulant, diarrhea, fever, cold remedy, sore throat, skin diseases, fatigue, gastrointestinal ailments.	0.96	3.99
Plantago major L.	Plantaginaceae	*Ki urat*	Rt	Dc, oi, gg	Muscle pain, arthritis, gout, skin burns, inflammation, wound healing, fever, urinary tract infections, bronchitis, cough, diarrhea, diabetes, ulcers, insect bites, rheumatism, kidney disorders, hemorrhoids, hypertension, eczema, constipation, sore throat, and mouth ulcers.	0.96	3.47
Plectranthus scutellarioides (L.) R.Br.	Lamiaceae	*Jawer kotok*	Lf	Fc, oi	Constipation, itchy skin, hemorrhoids, postpartum recovery, wound healing, inflammation, skin diseases, fever, diarrhea, cough, menstrual pain, stomachache, digestive disorders, rheumatism, headache, bronchitis, hypertension, diabetes, anxiety, insect bites, eczema, muscle pain, anemia, dizziness.	0.96	3.87
Pluchea indica (L.) Less.	Asteraceae	*Beluntas*	Lf	Dc, oi, ta	Vaginal discharge, body odor, menstrual pain, acne, digestive disorders, rheumatism, diarrhea, hypertension, skin infections, and bronchitis.	1.00	3.79
Polyscias scutellaria (Burm.f.) Fosb.	Araliaceae	*Mamangkokan*	Lf	Dc, oi, ta	Rheumatism, wounds, postpartum care, hair growth stimulant, diarrhea, inflammation, asthma, headache, bronchitis, anxiety, insomnia, skin disorders, edema, anemia, toothache, stomachache, constipation.	1.00	4.27
Psidium guajava L.	Myrtaceae	*Jambu biji*	Lf, Fr	Dc, oi, ta*	Diarrhea, dysentery, hypertension, diabetes, wounds, skin infections, hemorrhoids, digestive disorders, nausea, gastrointestinal bleeding.	1.00	2.52
Psophocarpus tetragonolobus (L.) DC.	Fabaceae	*Ja'at*	Fr	Dc, oi	Diabetes, infection, hypertension, digestive disorders, cough, kidney disorders, and rheumatism.	1.00	2.36
Pterocarpus indicus Willd.	Fabaceae	*Angsana*	Lt	Ta	Toothache relief, wound healing, infection, ulcers, and hypertension.	0.73	1.92
Punica granatum L.	Lythraceae	*Dalima*	Fr, Peel	Dc, oi, fc	Diarrhea, dysentery, wound healing, hypertension, diabetes, ulcers, skin infections, gastrointestinal disorders, toothache, fever, arthritis, bleeding gums, vaginal discharge, throat infections, menstrual disorders, and constipation.	0.92	3.32
Sandoricum koetjape Merr.	Meliaceae	*Kecapi*	Fr	Dc, ta	Fever, wounds healing, diabetes, digestive disorders, constipation	0.96	4.03
Sauropus androgynus (L.) Merr.	Phyllanthaceae	*Katuk*	Lf	Dc, fc, oi	Breast milk production, anemia, postpartum recovery, urinary infections, and appetite stimulants.	1.00	3.39
Solanum torvum	Solanaceae	*Takokak*	Fr	Dc, oi	Diabetes, hypertension, inflammation, rheumatism, menstrual pain, urinary disorders, and insect bites.	0.96	3.36
Sonchus arvensis L.	Asteraceae	*Tempuyung*	Ap	Dc, oi	Kidney stones, diuretic, hypertension, wound healing, and diabetes.	1.00	2.44

Staurogyne elongata Kuntze	Acanthaceae	*Reundeu*	Lf	Dc, oi	Hypertension, diabetes, diuretic, wounds, rheumatism, asthma, skin infections, ulcers.	0.58	2.12
Strobilanthes crispa (L.) Blume	Acanthaceae	*Pecah beling*	Lf	Dc, oi	Kidney stones, diuretic, hypertension, infection, urinary disorders, skin infections, urinary tract infections.	0.92	2.24
Swietenia mahagoni (L.) Jacq.	Meliaceae	*Mahoni*	Sd	Dc, oi	Diabetes, hypertension, malaria, inflammation, fever, skin diseases, arthritis, wound healing, antiviral, constipation, ulcers, rheumatism, fatigue.	0.96	3.51
Syzygium polyanthum (Wight) Walp.	Myrtaceae	*Salam*	Lf	Dc, oi	Lowering cholesterol, diabetes, hypertension, ulcers, cough, rheumatism, skin infections, and toothache.	1.00	3.00
Tinospora crispa (L.) Hook.f. & Thomson	Menispermaceae	*Bratawali*	St	Dc, ta	Diabetes, appetite stimulant, fever, hypertension, digestive disorders, cough, liver ailments, gout, rheumatism, skin infections, ulcers, diarrhea, constipation, asthma, wounds.	0.92	3.47
Wurfbainia compacta (Sol. ex Maton) Skornick. & A.D.Poulsen	Zingiberaceae	*Kapulaga*	Rh	Dc, oi	Low back pain, arthritis, digestive disorders, cough, stomachache, rheumatism, asthma, dizziness, fatigue.	1.00	3.87
Zingiber cassumunar Roxb. *syn. Zingiber purpureum* Roscoe	Zingiberaceae	*Panglay (bangle)*	Rh	Dc, oi	Rheumatism, arthritis, wounds, stomachache, infection, digestive disorders, constipation, anemia, joint pain, skin infections, gastrointestinal issues, urinary infections.	1.00	3.83
Zingiber zerumbet (L.) Roscoe ex Sm.	Zingiberaceae	*Lampuyang*	Rh	Dc, oi	Hypertension, diabetes, digestive disorders, asthma, wounds, cough, fever, rheumatism, ulcers, menstrual disorders, stomachache, fatigue, headaches, respiratory ailments, arthritis, postpartum tonic, diarrhea.	1.00	4.07

Note: Plant parts used: Aerial part (Ap), Leaf (Lf), Root (Rt), Rhizome (Rh), Bark (Bk), Fruit (Fr), Seed (Sd), Herbs, Flower (Fl), Bulb (Bb), Stem (St), Tuber (Tb), Latex (Lt); Preparation and application methods: Decoction (Dc), Pounding (Pd), Boiling then consumed the plants parts (bl), Grated (gt), fresh consumed as lalapan (fc), Gargled as mouthwash (gg), Oral ingestion (oi), Topical application to the affected site (ta), *Folded then directly stuffed into the nose