



Living laboratories: An urban ethnobotanical survey of medicinal gardens in Baguio City, Philippines

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Research

Abstract

Background: Medicinal gardens are important in addressing common health problems in the local community. In this project, the researchers identified medicinal plants available in the various barangays of Baguio City, Philippines, with an emphasis on plants used to treat the leading causes of morbidity and mortality. Information on the plant habit, conservation status, part/s used, methods of preparation, mode of application, frequency and duration of use, and dosage of the plants was gathered.

Methods: Survey interviews were conducted using a semi-structured questionnaire. Reliable online databases such as Scopus, Elsevier, PubMed, among others, served as sources of information to verify medicinal uses of the plants grown in the different barangays. Data was analyzed using use value (UV), relative frequency of citation (RFC), fidelity level (FL), and informant consensus factor (ICF) as quantitative tools. Multiple correspondence and correlational analyses were done to validate results.

Results: A total of 42 medicinal plant species were recorded as being utilized against the identified 18 health problems. The majority of the plants are herbs (40.48%) and shrubs (38.1%), which are widely cultivated. The most frequently used plant part for preparation was leaves. Boiling and drinking are the most common modes of preparation and administration, respectively. The most important medicinal plant species was lemongrass or *Cymbopogon citratus* (DC.) Stapf (UV 1.348). This is widely used for urinary tract infection, hypertension, sepsis, heart and kidney diseases. The majority of the plants recorded were used to treat hypertension. Upper respiratory tract infection has the highest calculated ICF (0.884) with oregano, or *Coleus amboinicus* Lour. (UV 0.620) used for remedy. The associations observed in the categorical variables such as plant species, disease categories, method of preparation, and parts utilized indicate shared local and traditional knowledge among respondents, supported by ethnobotanical indices, MCA values, and strong positive correlation results.

Conclusion: Urban medicinal gardens, as a community-based initiative, support primary healthcare, serve as repositories of traditional knowledge, and provide valuable sources of medicinal plant diversity in the city. Medicinal plants are locally cultivated and used as health remedies in the different barangays, with some scientific basis from published studies.

Keywords: health remedies, medicinal plants, *Cymbopogon citratus*, hypertension, medicinal garden, food medicine

Background

Community gardens have been associated with improved health outcomes among users of all ages and represent an inexpensive yet effective means of promoting physical and mental well-being (Lampert *et al.* 2021). Health practitioners and researchers have likewise emphasized that the incidence of disease can be reduced through the deliberate design and management of urban environments that foster healing and well-being among populations (Lotfi *et al.* 2020). Within these urban environments, medicinal plants continue to play a significant role in healthcare. Unfortunately, there is a growing threat to the continuity of practice involving the use of medicinal plants grown in gardens due to urbanization and destruction of green spaces (Palheta *et al.* 2017). The lack of knowledge sharing about medicinal plants among the young generation is due to urbanization (Sudhakar & Kannan 2026).

Over the years, medicinal gardens have been used to cultivate plants with medicinal properties across cultures and civilizations (Heywood 1991, Hektoen Institute of Medicine 2025). Despite challenges, self-collected and home-prepared herbal remedies remain common in urban communities, where illness experiences and traditional knowledge often influence traditional medicine use more than poverty or limited access to healthcare services (Van Andel & Carvalheiro 2013).

According to Beltran (2016), herbal gardens have been established to cultivate, preserve, and promote plants with a known history of medicinal use. These gardens provide useful information to the public, especially to students and researchers. In the Philippines, medicinal plants are grown in gardens for home use at selected villages in Inopacan, Leyte (Belonias *et al.* 2014). Other studies have reported medicinal plants in home and barangay gardens (Cordero *et al.* 2022, Cordero *et al.* 2023, Cordero *et al.* 2025, Elefan 2007, Flores *et al.* 2025) and indigenous communities (Cordero *et al.* 2020, Cordero *et al.* 2021, Dapar *et al.* 2020, Tantengco *et al.* 2018). To date, ethnobotanical investigations of medicinal gardens as primary units of urban socio-ecological spaces have not been documented in the country.

Medicinal plants contain bioactive substances that possess therapeutic properties or serve as precursors for pharmaceutical drugs. Their popularity in treating minor ailments has increased in response to rising healthcare costs and growing interest in natural health products. Various scientific communities have given attention to the ethnobotanical information obtained from medicinal plant research in recent years (Silambarasan *et al.* 2017). However, despite their widespread use, some medicinal plants still lack sufficient scientific evidence to support their claimed therapeutic efficacy (Sofowora *et al.* 2013). Consequently, there is a continuing need to validate traditional medicinal claims through scientific investigation. Sanchez *et al.* (2020) reported that medicinal plants commonly used in communities address digestive disorders and respiratory conditions, among others, with several species used concurrently with conventional medications. These findings highlight the growing recognition of medicinal plants as important components of complementary and alternative medicine. As a result, medicinal plants are frequently used as alternatives to, or in combination with, conventional treatments (Bodeker & Kronenberg 2002). Recognizing the importance of traditional medicine, the World Health Organization's strategy for 2014-2023 aimed to strengthen its role in healthcare systems and emphasizes promoting and integrating medicinal plant use within member countries (WHO 2013). This global recognition reflects the increasing reliance on medicinal plants as valuable healthcare resources. The use of medicinal plants has experienced renewed interest in developed countries and remains the primary therapeutic strategy for approximately 80% of the population in developing countries. Moreover, an estimated 87.5% of the global population utilizes traditional herbal medicine to manage various health conditions (Parveen *et al.* 2015).

Medicinal plants serve as affordable, accessible, and potentially effective natural remedies (van Wyk & Prinsloo 2020). With increasing public demand and expanding markets for herbal products, documenting traditional knowledge of medicinal plants and their uses among urban populations has become increasingly important for preserving cultural heritage and conserving biodiversity (Cerqueira *et al.* 2020). Land conversion has contributed to a decline in home gardens, threatening the sustainability of traditional plants for food security and medicinal purposes. Sustainable garden management may help preserve plant diversity and rich ethnobotanical knowledge (Henri *et al.* 2026). Hence, medicinal gardens as "living laboratories" serve as community-based settings for experiential learning, knowledge exchange, biodiversity observation, and future studies. These gardens support research on plant-based medicine and raise awareness of the therapeutic uses of local plants and their importance in maintaining health and wellness, as well as of botanical research, pharmacology, and ethnobotany in an urban setting (NUWAO 2026).

Urban ethnobotany examines the relationship between humans and plants in their environment, generating dynamic and complex knowledge about these plants in urban areas (Hurrell & Pochettino 2014). This study documented the medicinal plants cultivated in barangay gardens of Baguio City and their use in treating the leading causes of mortality and morbidity in the locality. Specifically, the study recorded the plant habit, conservation status, parts used, preparation methods, modes

of application, frequency and duration of use, and dosage for each medicinal plant. The reported medicinal uses were further supported through a review of published scientific literature. In addition, quantitative ethnobotanical indices, including Use Value (UV), Relative Frequency of Citation (RFC), Fidelity Level (FL), and Informant Consensus Factor (ICF), were computed to evaluate the cultural significance and utilization patterns of the documented species.

The findings provide a practical reference for identifying these plants and their medicinal applications within the local community, while also promoting awareness of their importance in addressing common health concerns. Furthermore, the study contributes valuable baseline information that may support future research on medicinal plant conservation, pharmacological validation, and plant-based drug discovery.

Materials and Methods

Study area

Baguio City is located in Northern Luzon Island within the province of Benguet in the Philippines. It is located approximately 250 km north of Manila and serves as the regional center of the Cordillera Administrative Region (CAR), at an altitude of 1,417 meters above sea level. It is also known as the country's "Summer Capital," with an annual average temperature of 19.7°C, which is 8-10°C lower than the low-lying areas of the country (Baloloy *et al.* 2019). The city has a land area of 57.51 km² (22.20 square miles). The survey covered all 129 barangays (Figure 1). According to PhilAtlas (2026), its population was 366,358, representing 20.38% of CAR's total population.

The city features uneven, hilly terrain with land elevation ranging from 900 to 1,600 meters. About 78% of the total area is characterized by gentle to moderately steep slopes, and the remaining area is composed of steeper slopes. As urbanization progresses, residential areas occupy the largest share of the city's land (56.35%), commercial areas 5.52%, and private and public institutions 4.07%. Open or pine forested areas account for 4.18% of the city's total land area, usually found near the city boundary (City Government of Baguio Ecological Profile 2018).

Data collection and analysis

The researchers employed qualitative and quantitative methods. Data were collected through interviews with informed consent from March to April 2022 (Research Clearance No. 2022-041) with field assistance. The semi-structured questionnaire was based on Philpott (2020). With permission, the researchers modified some questions to fit the study. Purposive sampling was done to identify 92 key informants based on the inclusion criteria: 1) knowledgeable on the medicinal plants, and 2) with at least a year of experience in maintaining the medicinal garden. One (1) key informant was identified per barangay with a medicinal garden. The following primary information was obtained: plant name, part/s used, methods of preparation, mode of application, frequency and duration of use, and dosage. The full questionnaire is provided in Appendix 5.

All of the plants were identified with their local and scientific name after gross morphological examination of parts. Plant habit and conservation status based on IUCN Red List categories were recoded. Sample plants were collected from the barangay for documentation purposes. All plant parts were deposited as voucher specimens at the Fr. Braeckman Museum of Natural History in Saint Louis University, Baguio City. Online plant databases such as Co's Digital Flora of the Philippines (Pelser *et al.* 2011 onwards), StuartXchange (Stuart 2002-present), and Plants of the World Online by Royal Botanic Gardens, Kew (POWO 2026) were used for plant ID verification. Published studies and literatures that indicate the medicinal applications of the identified medicinal plants were accessed through the following reliable and credible databases: (1) Scopus; (2) Elsevier; (3) PubMed; (4) Education Resource Information Center (Institute of Education Sciences); (5) JSTOR; (6) EBSCO Host; (7) Directory of Open Access Journals; (8) CORE (Connecting Repositories); (9) ScienceOpen, and; (10) Public Library of Science. Key words were used to filter online resources such as health condition and scientific name of the medicinal plant.

This study focused only on communal medicinal gardens managed by local government units. Light, temperature, soil pH, soil nutrients, pests, and other factors that may influence the number and uses of the plants were not studied.

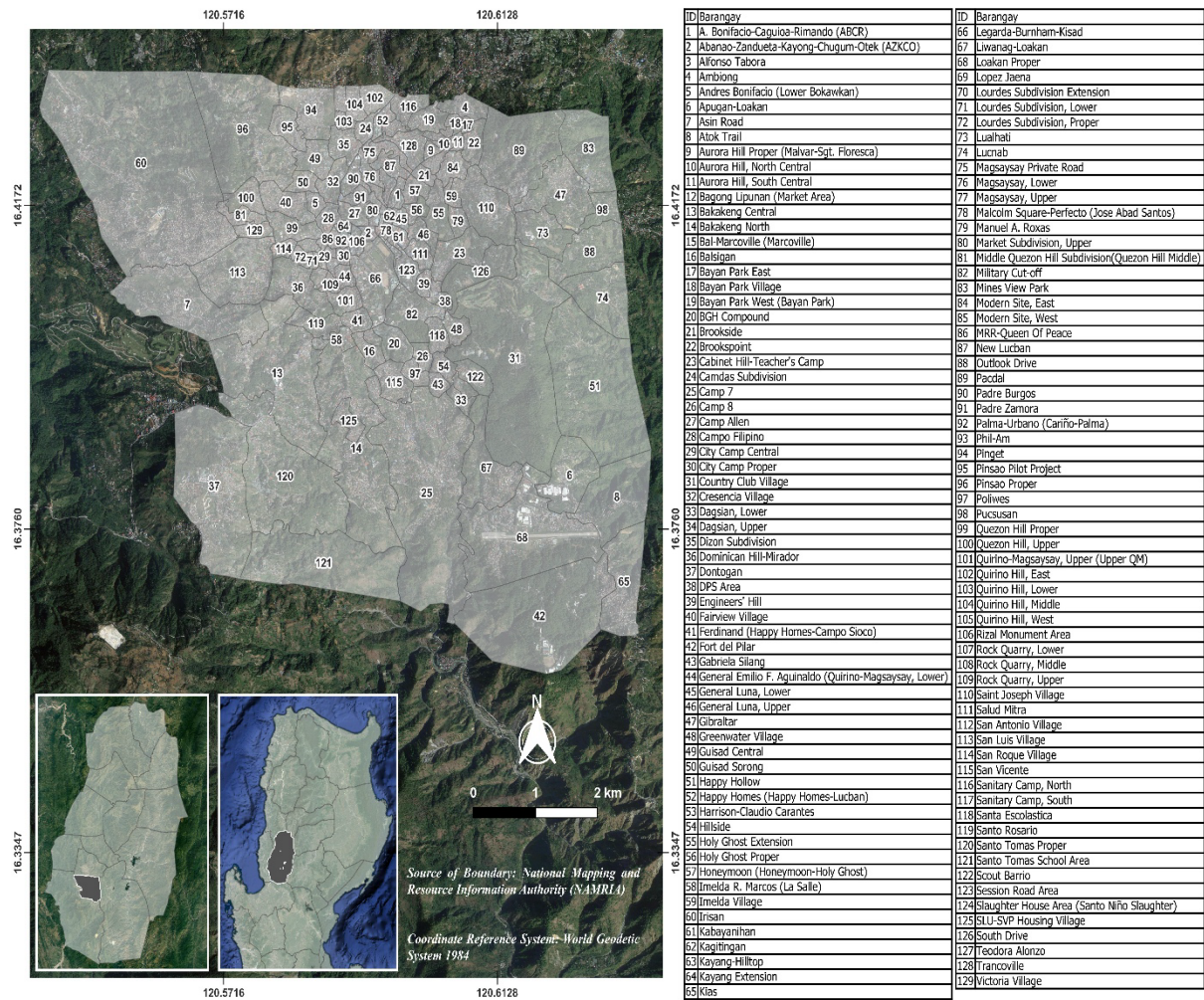


Figure 1. Map of Baguio City, Benguet province, Philippines showing the study area (barangays).

Quantitative ethnobotanical indices were computed namely:

Use Value (UV)

The UV of a particular plant was established by the number of uses it is attributed to with correlation on the number of participants. It was computed using the formula $UV = \sum U/N$, where U is the recorded number of uses for each plant species and N is the number of respondents (Albuquerque *et al.* 2006).

Relative Frequency of Citation (RFC)

The number of informants who mentioned the use of a particular species (FC) was divided by the total number of informants participating in the survey (N) to obtain the RFC index (Tardio & Pardo-De-Santayana 2008).

$$RFC = FC/N$$

Where, RFC is relative frequency of citation, FC is number of informants who mentioned a particular species and N is the total number of informants.

Fidelity level (FL)

This refers to the percentage of informants that claim a medicinal use of a plant species to treat a particular health problem was derived based on (Alexiades 1996):

$$FL \% = \frac{N_p \times 100}{N}$$

Where, N_p = number of informants that claim a use of a plant species to treat a particular health problem; N = number of informants that use the plants as a medicine to treat any given health problem.

Informant Consensus Factor (ICF)

ICFs were identified for each plant used, and the homogeneity of information collected was confirmed. ICF was computed using the formula $ICF = (N_p - 1) / (N - 1)$, where N_p pertains to the cumulative number of use reports per disease. At the same time, N is the number of plant species used per disease (Faruque *et al.* 2018).

Data acquired from the respondents were analyzed using multiple correspondence and correlational analysis in Statistical Package for the Social Sciences (SPSS) statistical software 31.0. MCA was used as a complementary multivariate technique to explore associations among the categorical characteristics recorded for the medicinal plants and their reported uses. It was not used to provide evidence of therapeutic efficacy or causal relationships. Hence, the ethnobotanical indices quantified specific dimensions of ethnobotanical importance and consensus, while MCA was used to examine the categorical plant-use data.

Results and Discussion

Socio-demographic characteristics of respondents

A total of 92 key informants were chosen as respondents in the survey. The majority were men (69.57%) compared to women (30.43%). Informants included barangay captains (88.04%), kagawads (9.78%), volunteers, and Sangguniang Kabataan chairpersons (2.17%). The chief executive officer, who manages the barangay's resources, is called the barangay captain or Punong Barangay. Various committees on health, education, etc. are formed at the barangay level, which are headed by barangay kagawads who assist the captain. Young leaders and volunteers aid in the barangay by leading projects related to gardening, clean-up, health, among others (Pasquin 2023).

Barangay medicinal gardens as urban ethnobotanical spaces: diversity, families, life forms, uses and conservation status

Medicinal plants as a treatment for common symptoms remains a practice in barangays with community gardens in Baguio City. A similar practice has been observed in an urban community in Iloilo City, Philippines, where despite the availability of modern medicine, the use of medicinal plants remains prevalent (Cordero *et al.* 2025). A total of 42 plant species were documented as being used by various barangays in Baguio City to treat the leading causes of mortality and morbidity (Appendix 1 and Figure 2a-e). The distribution of plant families ($n=29$) is generally varied, but a few repeated occurrences of plant species belonging to the *Lamiaceae*, *Amoryllidaceae*, and *Rutaceae* families are observed. In Heredia City (Costa Rica), *Lamiaceae* was reported to be the most common plant family in an urban home garden survey of medicinal plants (González-Ball *et al.* 2022) and in Pagadian City, Zamboanga del Sur, Philippines (Fabie-Agapin 2020). This is also the most well-represented family of medicinal plants in Tacas barangay at Iloilo City (Cordero *et al.* 2025). *Lamiaceae* and *Rutaceae* belong to the list of Most Important Medicinal Plant Families (MIMFs) in the world. This finding may be related to the fact that these families include many widespread species with physiologically active compounds used for medicinal purposes (Phumthum *et al.* 2019). Majority of the medicinal plants are herbs (40.48 %), followed by subshrubs or shrubs (38.1 %), vines (14.29%), trees (4.76%), and grasses (2.38%). Similar observation was noted in the studies conducted by Caballero-Serrano *et al.* (2019) and Andalan *et al.* (2024) that herbs are the most abundant group of medicinal plants with 62 (43%) and 13 (46.4 %) species, respectively. The preponderance of herbaceous species in the various barangays may be attributed to their ability to grow rapidly, disperse with ease, and require only a small lot for their growth, making them better adapted to the disturbed environments (Silva *et al.* 2018), such as roadsides and congested neighborhoods where they are subject to pollution and unsuitable landscapes, of which the community gardens are situated.

Meanwhile, based on our survey, about 97% of the plants are of least concern and widely cultivated. Since the pandemic, many local barangays have had urban gardening initiatives. Individual efforts to grow different plants such as vegetables, herbs, medicinal plants, and flowers were strengthened. Various programs provided financial and logistical support, such as "Ahon Lahat, Pagkaing Sapat" (ALPAS COVID-19), "Plant, Plant, Plant" by the Department of Agriculture, and seed distribution by the City Veterinary and Agriculture Office (Quitason 2020). Barangay officials and volunteers monitored and maintained the plants, including food and medicinal plants. The gardens provide for shared responsibility and proprietorship of the land (See 2023a). Information about the medicinal plants and their uses was passed on orally as local residents seek help for remedies to different health problems. "Gulayan sa Barangay" promoted indigenous health practices through major healing modalities such as use of medicinal plants, therapeutic massage and healing rituals (See 2023b). The local government continues to implement programs and opportunities such as 4H (head, hands, heart, health) program in collaboration with

the Department of Education (DepEd) and Agricultural Training Institute (ATI) that taps the potentials of young people to be engaged in practical gardening activities, peer-to-peer learning, and leadership development (Agoot 2025).



Figure 2a. Medicinal garden plants in Baguio City.

1. **onion bulb** (*Allium cepa* L.), 2. **onion leeks** (*Allium porrum* L.), 3. **garlic** (*Allium sativum* L.), 4. **chives** (*Allium schoenoprasum* L.), 5. **aloe vera** (*Aloe vera* (L.) Burm.f.), 6. **slender spinach** (*Amaranthus viridis* L.), 7. **celery** (*Apium graveolens* L.), 8. **cabbage** (*Brassica oleracea* L.), 9. **tea** (*Sarcandra glabra* (Thunb.) Nakai)

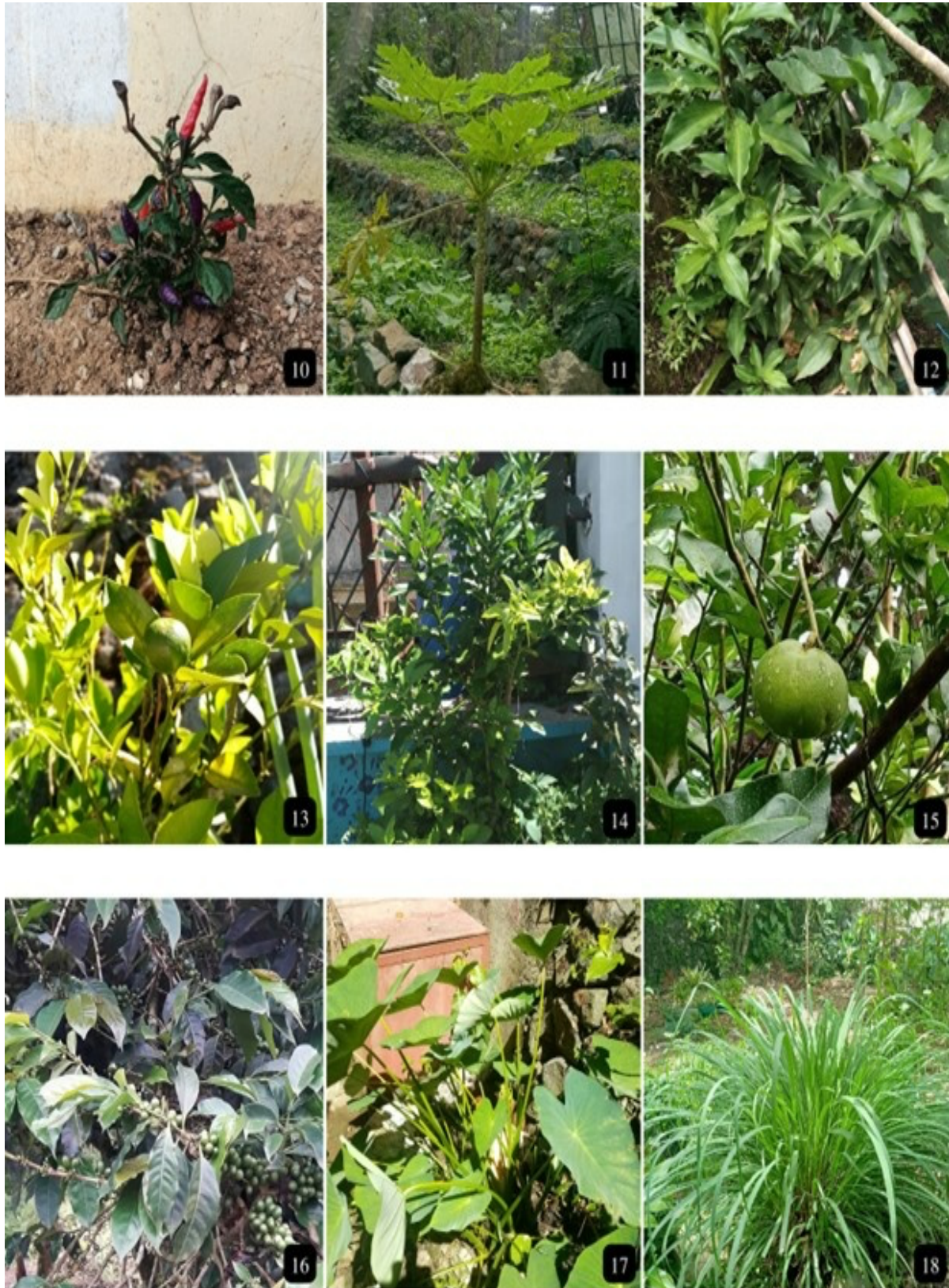


Figure 2b. Medicinal garden plants in Baguio City.

10. **sili** (*Capsicum annum* L.), 11. **papaya** (*Carica papaya* L.), 12. **insulin plant** (*Chamaecostus cuspidatus* (Nees & Mart.) C.D.Specht & D.W.Stev.), 13. **calamansi** (*Citrus × microcarpa* Bunge), 14. **lemon** (*Citrus × limon* (L.) Osbeck), 15. **pomelo** (*Citrus maxima* (Burm.) Merr.), 16. **coffee** (*Coffea arabica* L.), 17. **gabi** (*Colocasia esculenta* (L.) Schott), 18. **lemon grass** (*Cymbopogon citratus* (DC.) Stapf)



Figure 2c. Medicinal garden plants in Baguio City.

19. **strawberry** (*Fragaria vesca* L.), 20. **African rosemallow** (*Sabdariffa acetosella* (Welw. ex Hiern) M. M. Hanes & R. L. Barrett), 21. **camote** (*Ipomoea batatas* (L.) Lam.), 22. **katakataka** (*Kalanchoe pinnata* (Lam.) Pers.), 23. **Mint** (*Mentha x villosa* Huds.), 24. **bitter melon** (*Momordica charantia* L.), 25. **noni** (*Morinda citrifolia* L.), 26. **oregano** (*Coleus amboinicus* Lour.), 27. **balbas pusa** (*Orthosiphon aristatus* (Blume) Miq.)



Figure 2d. Medicinal garden plants in Baguio City.

28. **pandan** (*Pandanus amaryllifolius* Roxb.), 29. **masaprola** (*Passiflora edulis* Sims), 30. **avocado** (*Persea americana* Mill.), 31. **parsley** (*Petroselinum crispum* (Mill.) Fuss), 32. **betel leaf** (*Piper betle* L.), 33. **guava** (*Psidium guajava* L.), 34. **rosemary** (*Salvia rosmarinus* Spenn.), 35. **sayote** (*Sicyos edulis* Jacq.), 36. **mustard** ($\times$ *Brassarda juncea* (L.) Su Liu & Z.H.Feng)



Figure 2e. Medicinal garden plants in Baguio City.

37. **tomato** (*Solanum lycopersicum* L.), 38. **common spinach** (*Spinacia oleracea* L.), 39. **stevia** (*Stevia rebaudiana* (Bertoni) Bertoni), 40. **makabuhay** (*Tinospora crispa* (L.) Hook.f. & Thomson), 41. **lagundi** (*Vitex negundo* L.), 42. **ginger** (*Zingiber officinale* Roscoe)

Only one (1) plant is endangered, which is coffee. Coffee's genetic diversity in the Philippines is very low (ranging from 0 to 0.36). This is attributed to urbanization and the promotion of popular varieties in the country (Argana & Pelegrina 2018). Quinley (2023) added that inadequate knowledge and technology among many coffee farmers, depletion of soil nutrients post-harvest, high production costs, and limited capital and government support contribute. In Baguio City, skills enhancement for coffee growers and farmers through the establishment of the Baguio City Coffee Processing (Ordinance No. 02, series of 2021) (See 2021). Regenerative agriculture through intercropping, or growing vegetables and coffee plants together, may also help farmers improve soil biodiversity. Trees with crops can prevent soil erosion. Cover cropping practice using ground-covering crops may hold topsoil and enhance soil nutrition (Quinley 2023).

Based on the survey, the top 10 most abundant medicinal plants in Baguio city are as follows (in decreasing order): *Coleus amboinicus* Lour. **oregano** (located in 50 barangays), *Aloe vera* (L.) Burm.f. **aloe** (42), *Cymbopogon citratus* (DC.) Stapf **lemon grass** (42), *Citrus × limon* (L.) Osbeck **lemon** (29), *Mentha × villosa* Huds. **mint** (25), *Allium schoenoprasum* L. **chives** (23), *Brassica oleracea* L. **cabbage** (18), *Citrus × microcarpa* Bunge **calamansi** (17), *Ipomoea batatas* (L.) Lam. **camote** (17) and *Solanum lycopersicum* L. **tomato** (14) (Figure 3). Only four (4) species belong to the medicinal plants approved and recommended by the Department of Health (DOH) (Boy *et al.* 2018). These plants include *Allium sativum* L. (**garlic**), *Momordica charantia* L. (**bitter melon**), *Psidium guajava* L. (**guava**) and *Vitex negundo* L. (**lagundi**).

The dominant medicinal plants identified in this study have been also documented in the medicinal gardens of other urban cities. Aloe and mint at Heredia city, Costa Rica (González-Ball *et al.* 2022); lemon, oregano, mint, aloe, and tomato at Chachapoyas city, Peruvian Andes in Peru (Corroto *et al.* 2021); oregano at Tacas barangay at Iloilo City (Cordero *et al.* 2025),

barangays Abut, Bacsil, and Saoay of San Fernando City, La Union (Flores *et al.* 2025) and, Pagadian City, Zamboanga del Sur, Philippines (Fabie-Agapin 2020).

■ African rosemallow ■ Aloe vera ■ Avocado ■ Balbas pusa ■ Betel ■ Bitter melon ■ Cabbage ■ Calamansi ■ Camote
 ■ Common spinach ■ Celery ■ Chives ■ Coffee ■ Gabi ■ Garlic ■ Ginger ■ Guava ■ Insulin Plant ■ Katakataka ■ Lagundi
 ■ Lemon ■ Lemon Grass ■ Makabuhay ■ Masaprola ■ Mint ■ Mustard ■ Noni ■ Onion bulb ■ Onion leeks ■ Oregano ■ Pandan
 ■ Papaya ■ Parsley ■ Pomelo ■ Rosemary ■ Sayote ■ Sili ■ Slender spinach ■ Stevia ■ Strawberry ■ Tea ■ Tomato



Figure 3. Packed bubble chart illustrating the most abundant medicinal plant species across all the barangays in Baguio city.

The abundance of these plants in the different barangays of Baguio city is mainly due to plant familiarity, ease of cultivation, favorable environmental growth conditions, availability of sources, and multiple medicinal uses. The plants mentioned are known to individuals in-charge of maintaining the gardens and were responsible for their cultivation. Medicinal plants were either donated or bought from nearby areas or local markets in the city proper. The climate and type of soil allow the easy and fast growth of the plants in the city. Moreover, the plants were used to treat various common health problems such as acute and upper respiratory tract infection (oregano), skin diseases and wounds (aloe), and hypertension (lemon grass).

Several ethnomedicinal surveys conducted support the aforementioned reasons. Medicinal gardens as maintained human-mediated environments for provisioning healthcare services are influenced by the geographic distribution of the plants, accessibility, cultivation, diversification, or the ability to cure health problems using introduced plants, and therapeutic versatility or multiple medicinal plant uses (Hart *et al.* 2017, Flores *et al.* 2025). Among the medicinal plants identified at Maale and Ari communities in southern Ethiopia, familiarity index was calculated. The plants mentioned with high familiarity indices were used widely by the respondents. The medicinal-plant knowledge was transferred vertically through oral transmission thus, cultivation practices contribute to the availability of the medicinal plants, and familiarity was based on cultural knowledge and repeated exposure (Kidane *et al.* 2014).

According to the Baguio Health Department (2021), there are 18 leading causes of morbidity and mortality in Baguio City. These are Upper Respiratory Tract Infection (URTI), Acute Respiratory Infection (ARI), Urinary Tract Infection (UTI), Hypertension, Covid-19, Post-Covid, Cancer, Wounds, Pneumonia, Vascular Diseases, Allergy, Accident and Trauma, Skin Disease, Kidney Disease, Sepsis, Diabetes Mellitus, Heart Disease, and Alzheimer's Disease.

Among these health problems, hypertension (HP9) has the highest number of plants used in its treatment (Figure 4). A total of 29 barangay garden plants is used to address this problem. On the other hand, sepsis (HP13) has the least number of plants used to manage it with only 8 medicinal plants identified. The 29 plants used in the treatment of hypertension include aloe, avocado, 'balbas pusa', bitter melon, cabbage, calamansi, camote, common spinach, garlic, ginger, lemon, lemon grass, 'makabuhay', 'masaprola', mint, mustard, onion bulb, onion leeks, oregano, 'pandan', parsley, pomelo, rosemary, 'sayote', 'sili', slender spinach, strawberry, tea, and tomato. On the other hand, only eight plants are used in the treatment of sepsis which include camote, common spinach, lemon, lemongrass, mint, rosemary, strawberry, and tea.

Hypertension remains to be among the major causes of death not only in the city but in the country as a whole (Kabagani 2022, Dela Rosa *et al.* 2024). It is a serious global public health problem that needs to be addressed (Sumridpiem *et al.* 2025). According to the World Health Organization (2025), high blood pressure affects one in three adults. About 16.8 million adults are living with this condition. In addition, the Cordillera Administrative Region (CAR) has the second-highest percentage of prevalence in hypertension among adults, with a value of 26.5%, following Central Luzon (National Nutrition Council 2020). It is the second leading cause of morbidity, with 8,535 total cases in 2018 based on the Ecological Profile of Baguio (City Government of Baguio 2018). A total of 21.25% identified hypertensive adults was reported (Baniwas 2021). The City Health Services Office cited 10,705 hypertension cases with a rate of 2,775.90 per 100,000 population from January to September 2025. This is mainly attributed to sedentary lifestyle, poor diet, stress and inadequate physical activity (Agoot 2025).

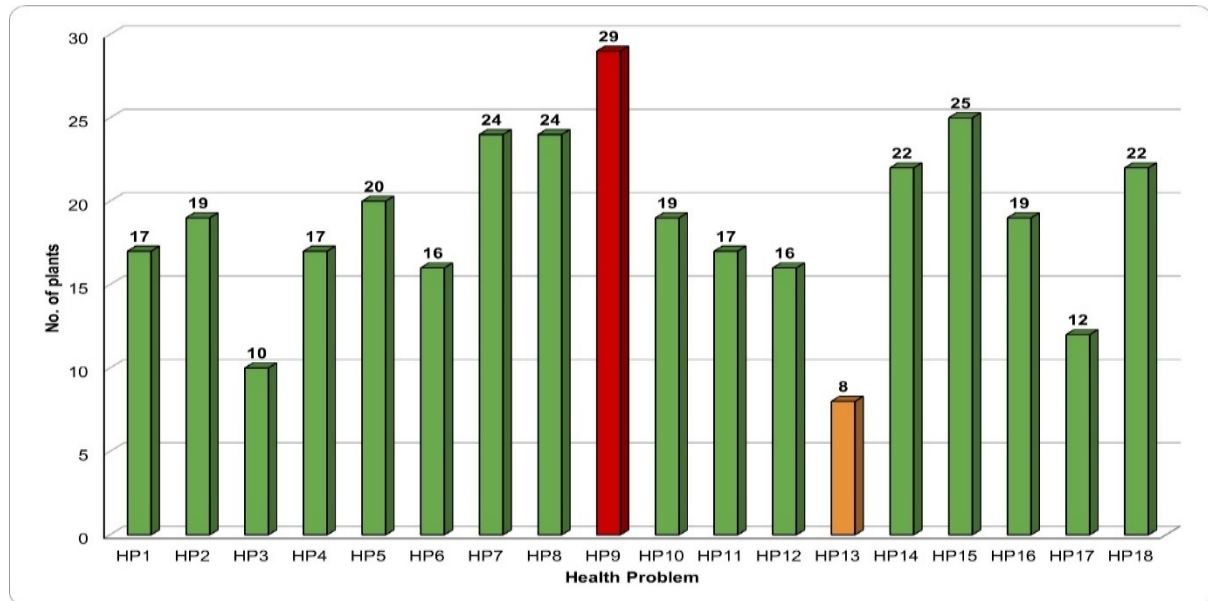


Figure 4. Diversity of medicinal plants per health problem.

Legend:

HP1-Accident and Trauma	HP7-Diabetes Mellitus	HP13-Sepsis
HP2-Allergy	HP8-Heart Disease	HP14-Skin Disease
HP3-Alzheimer's Disease	HP9-Hypertension	HP15-Upper Respiratory Tract Infection
HP4-Acute Respiratory Infection	HP10-Kidney Disease	HP16-Urinary Tract Infection
HP5-Cancer	HP11-Pneumonia	HP17-Vascular Disease
HP6-Coronavirus disease (COVID 19)	HP12-Post-COVID	HP18-Wounds

Based on the calculated % fidelity level and use value, lemongrass ranked 1st for treating hypertension, with 19.167% and 0.250, respectively. The leaves, roots, stem, or whole plant are boiled or juiced. About 4-7 leaves per stalk or a bundle of lemon grass is used. After preparation, drink or inhale once to three times a day for a week, or as needed. Lemon or sugar may be added to the juice upon drinking. To date, the DOH in the Philippines has only recommended 'sambong' (*Blumea balsamifera*) and garlic (*Allium sativum*) for hypertension and regulation of blood pressure (Boy *et al.* 2018). However, similar findings that lemongrass is used for hypertension were reported in studies conducted by Cordero *et al.* (2025) in Iloilo City, (Fabie-Agapin 2020) in Pagadian City, Zamboanga del Sur, in the Philippines, and (Sumridpiem *et al.* 2025) in northern Thailand, with the same method of preparation and administration, which are boiling and drinking, respectively. Silva & Barbara (2022) presented a pharmacological basis, such as *in vitro*, *ex vivo*, animal, and human studies, indicating that lemongrass and its major constituent, citral, have antihypertensive effects resulting in vasorelaxation, modulation of endothelial nitric oxide and prostanoid pathways, among others. Moreover, Reyes (2025) determined the effectiveness of lemongrass capsule as an adjunct therapy to Losartan (50mg tablet) in the treatment of newly diagnosed hypertensive patients of a local hospital. Based on the results, lemongrass capsule was effective, safe, and cost-effective.

Other plants with scientific literature review, experimental or laboratory-based evidences for hypertension (Appendix 1) are avocado (Anaka *et al.* 2025, Ojewole *et al.* 2007, Sutningsih *et al.* 2022), 'Balbas pusa' (Illahi *et al.* 2024, Matsubara *et al.* 1999, Ohashi *et al.* 2000), common spinach (Jovanovski *et al.* 2015), garlic (Ried *et al.* 2010), ginger (Hasani *et al.* 2019), lemon (Kato *et al.* 2014, Nakamura *et al.* 2023), 'makabuhay' (Anjum *et al.* 2024, Praman *et al.* 2011, Praman *et al.* 2012),

'masaprola' (Juan Camilo *et al.* 2018, Ichimura *et al.* 2006, Konta *et al.* 2013, Lewis *et al.* 2013), mint (Guedes *et al.* 2002), onion bulb (Brüll *et al.* 2015), 'pandan' (Safitri *et al.* 2021), parsley (Ajebli & Eddouks 2019), pomelo (Obob *et al.* 2014), rosemary (Sahinturk & Isbil 2025), 'sayote' (Madrigal-Santillan *et al.* 2024, Gordon *et al.* 2000, Lombardo-Earl *et al.* 2014), 'sili' (Sun *et al.* 2016, Salvador *et al.* 2015, Sanati *et al.* 2018), slender spinach (Olaewaju *et al.* 2018), and tomato (Rezaei Kelishadi *et al.* 2022, Rattanavipanon *et al.* 2021, Murcia-Lesmes *et al.* 2023).

In 2020, about 49 million cases and 11 million sepsis-related deaths worldwide were reported. This accounted for 20% of deaths globally (Rudd *et al.* 2020). Sepsis is serious health and life-threatening condition that occurs when the body responds to infection, resulting in organ dysfunction (Singer *et al.* 2016). In the Philippines, this has been a public health concern with 11 million deaths of individuals occur annually (Rudd *et al.* 2020). In Baguio City, 42 deaths with a morbidity rate of 11.123 per 100,000 population and 63 deaths with a morbidity rate of 16.54 per 100,000 population were recorded in 2023 and 2024 respectively (Refuerzo 2025). Early identification and appropriate management in the initial hours after the development of sepsis improve outcomes (Evans *et al.* 2021).

In our survey, no direct experimental evidence supported the eight (8) plants listed for sepsis. According to Mousavi *et al.* (2016), the treatment of sepsis is still challenging despite the development of intensive care technologies and modern antibiotics. Furthermore, reliance on antibiotics and other methods targeting the modulation of the systemic inflammatory response, which include hemofiltration, cytokine antagonist, and steroids, has not led to a successful and reliable treatment for inflammation- and infection-related shock. Researchers continue to study alternative or complementary medicine, especially herbal medicine for treatment that could halt sepsis. However, there is a need for vigorous and basic investigation to examine the efficacy of herbal medicine in the treatment of septic patients. Also, due to the complex pathways in sepsis, it is unlikely to attain the status of complete therapy using a monovalent approach in isolation. Thus, the use of botanical extracts, which provide anti-inflammatory, anti-infective, and cytoprotection activities in addition to immunomodulatory properties necessary to achieve clinical success.

Medicinal plant parts, method of preparation and mode of application

Different barangays had identified parts of plants that are used in treating certain health problems. The most frequently used parts are the leaves (48.6%) followed by stems (25.40%), fruits (20.82%), roots (2.05%), whole plant (1.40%), flowers (1.03%), bark (0.56%), and seeds (0.09%). The most common medicinal plants and their dominantly used parts are shown in Figure 5. Our results are similar with other studies (Abe & Ohtani 2013, Morilla *et al.* 2014, Palheta *et al.* 2017, Caballero-Serrano *et al.* 2019, González-Ball *et al.* 2022, Ombat *et al.* 2024, Cordero *et al.* 2025, Flores *et al.* 2025, Rani & Kustiawan 2025) which showed that leaves are the most commonly used part. Leaves are found to be more sustainable and accessible than other plant parts. Obtaining leaves is easier since they are usually the most abundant part of the plant (Morilla *et al.* 2014, Brito & Senna-Valle 2011). Therefore, collecting them is less harmful to the plant itself compared to seeds or roots (Tantengco *et al.* 2018). Furthermore, leaves contain many chemical compounds such as alkaloids, tannins, coumarins, flavonoids, essential oils, and inulins, which are essential as active ingredients for medication (Morilla *et al.* 2014, Zahoor *et al.* 2017). The least used plant parts in this study were bark and seeds (Figure 6b). A similar finding was observed in Butuan City, Iloilo City, and San Fernando City in the Philippines wherein the use of bark and reproductive parts was limited (Ombat *et al.* 2024, Cordero *et al.* 2025, Flores *et al.* 2025). This may be due to the destruction on the plant when bark is removed (Tugume *et al.* 2016, Demetillo *et al.* 2019, Cordero *et al.* 2022) and the limited availability and quantity of bioactive constituents in seeds upon preparation and use (Farooq *et al.* 2019, Awan *et al.* 2021).

Various preparation practices recorded involving the documented plants, such as boiling, crushing, juicing, raw consumption, extraction of gel or sap, oil infusion, cooking, powdering, and roasting or heating. There are several plants with multiple preparation methods. The most common mode of preparation of medicinal plants among the barangays is through boiling with a frequency of 40.99% (Figure 6a). Similar results were reported from Morilla *et al.* (2014), Palheta *et al.* (2017), Caballero *et al.* (2019), Fabie-Agapin *et al.* (2020), Cordero *et al.* (2025), and Flores *et al.* (2025). Boiling the plant part for long periods of time causes its rigid exterior to soften and ultimately release its beneficial constituents towards certain ailments (Morilla *et al.* 2014, Fabie-Agapin *et al.* 2020). The extract obtained from this process is further subjected to the desired route of administration. Decoction is commonly used as a method of preparation. This involves boiling water with a single fresh/dried material or combining with other herbs or sugar (Sumridpiem *et al.* 2025). Other extraction methods however, may add to the efficacy of the plant. These are juicing (18.67%), ingesting the plant raw (14.57%), crushing (10.08%), extraction of sap (4.202%), as ingredient in cooking (5.696%), roasting or heating (2.054%), other methods of preparation such as powder (0.84%) and oil infusion (2.894%), respectively.

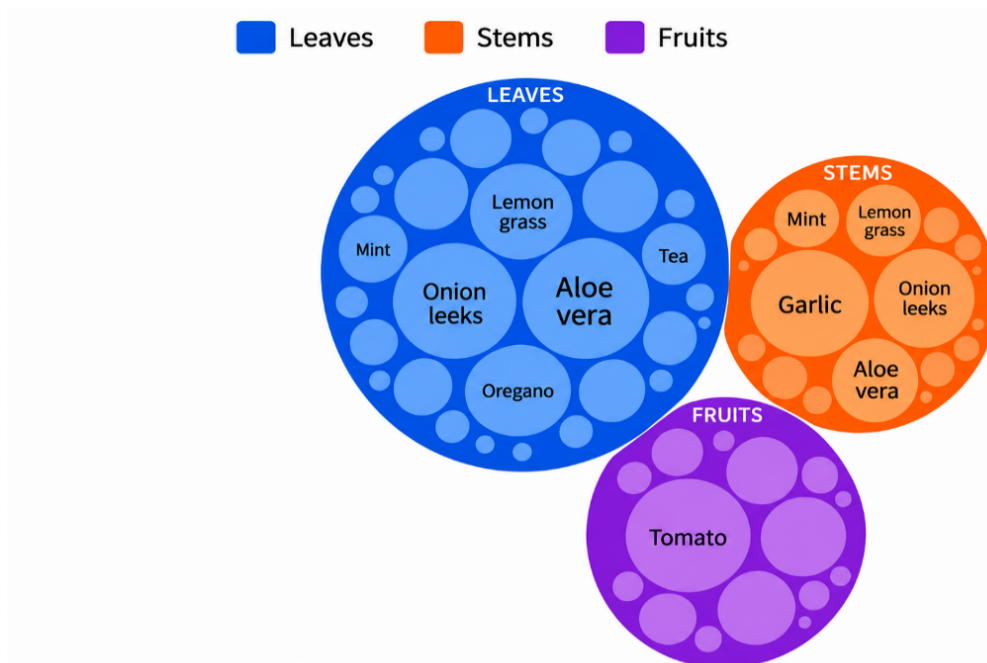


Figure 5. Hierarchical circle packing chart showing the most common medicinal plant species categorized by the specific plant part utilized.

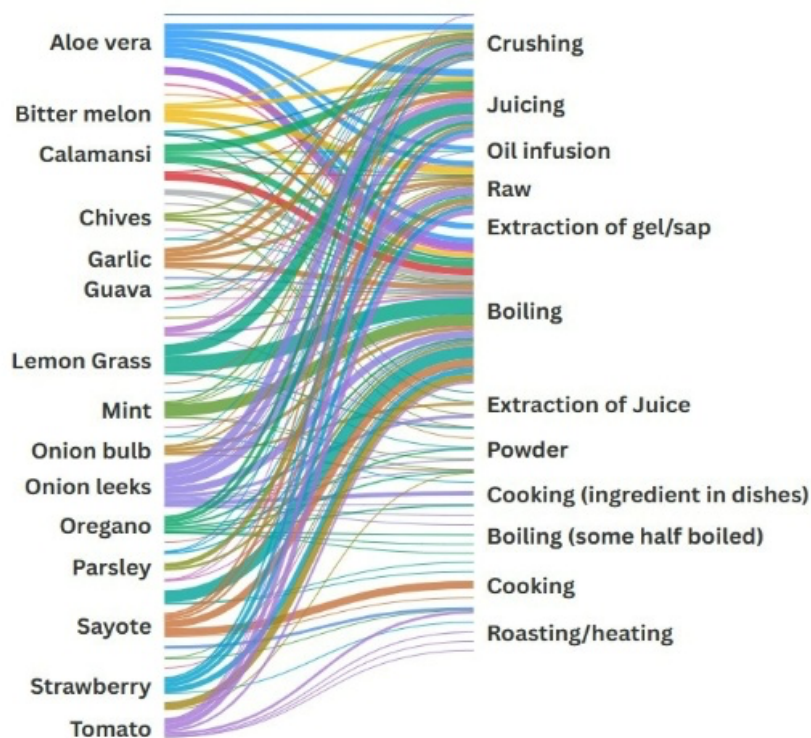


Figure 6a. Alluvial diagram illustrating the relationship between medicinal plant species and their respective methods of preparation.

To examine the relationship between health problems, plant parts utilized and methods of preparation, the Multiple Correspondence Analysis was performed (Figure 6b). This is an exploratory correspondence technique. Results showed Eigenvalues of 1.421 and 1.287 for Dimensions 1 and 2, respectively for the two-dimensional analysis with corresponding inertias of 0.474 and 0.429. The overall configuration was contributed by the method of preparation based on the discrimination measures (0.578) followed by health problem (0.401) and plant part (0.376). Both dimensions were substantially contributed by method of preparation (0.590 and 0.566). The health problem was more discriminating on

Dimension 1 (0.547) while the plant part was more discriminating on Dimension 2 (0.468). Distinct pattern in the reported health problems which can be seen in the joint category plot. The method of preparation and health problems are primarily located in Dimension 1. The practices such as extraction of sap, oil infusion, crushing and powder were found toward the negative side of the axis, with health problems such as wounds, skin disease, accident and trauma, and allergy. On the other hand, juicing, boiling, roasting or heating and raw preparations were positioned toward the positive side, with health problems such as diabetes, respiratory infection, and cancer. Greater differentiation was evident in Dimension 2 based on plant part, with the whole plant, bark and seeds occupying the peripheral positions compared with other major plant parts (leaves, roots, stems and flowers) which were near the centroid. Further, the MCA plot indicates that common methods of preparation (in blue circle) e.g. decoction using plant parts may apply to some health problems, thus overlapping correspondence patterns. The proximity of categories suggests correspondence. The MCA plot configuration supports the method of preparation for various health problems and the frequency of use of plant parts (Appendix 1). The bark, whole plant, and seeds (in orange circles) were positioned farther from the central cluster, being the least used parts in this study in contrast to leaves as the dominant parts. Meanwhile, the method of preparation may occur relatively close to health problems such as juicing of fruits (calamansi, lemon, tomato, strawberry, bitter melon) for cancer, crushing (garlic, leeks, oregano) for COVID-19 and post-COVID, among others. Alzheimer's disease and sepsis had the least number of medicinal plants recoded (in green circle).

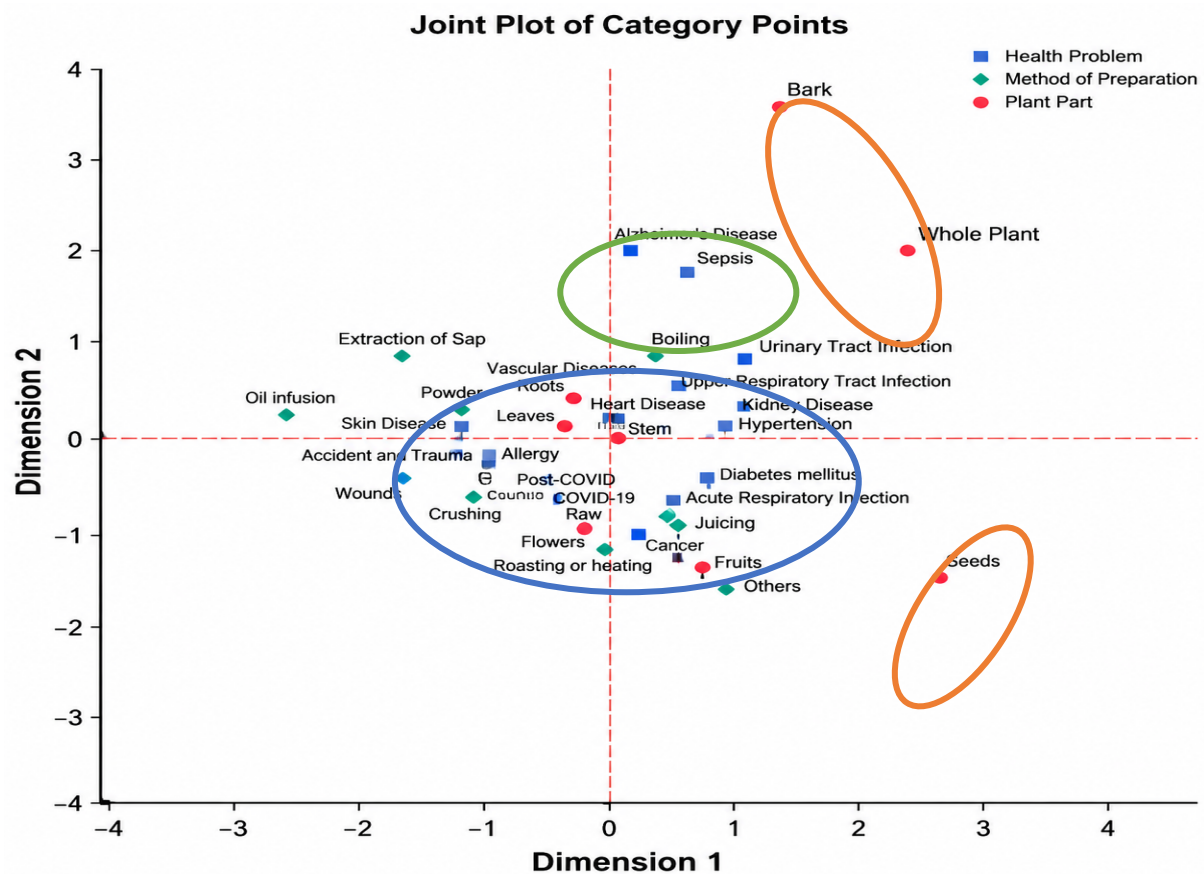


Figure 6b. Joint plot of category points from a Multiple Correspondence Analysis (MCA) mapping medicinal plant use, method of preparation and plant part.

There are various modes of application or administration recorded from the barangays. Most of the herbal preparations are taken orally, specifically by drinking, with a frequency of 56.21% (Figure 7a). According to Tantengco *et al.* (2018), oral intake of decoction is the most common mode of administration of herbal plants. Other studies reported similar results from Cordero *et al.* (2025) and Flores *et al.* (2025). The routes of how a plant is administered vary depending on the type of disease to be treated (Gruyal 2014). In relation to this, majority of the methods of administration are via internal routes, such as drinking, swallowing, chewing, and inhalation, since the recorded list of top morbidities in Baguio City are internal disorders such as non-communicable, respiratory, cardiovascular, vascular, and neurodegenerative disorders (Refuerzo 2025). Morilla *et al.* (2014), stated that numerous medicinal plants are also applied to the skin for rashes, wounds, or other parts of the

body as topical pain-relieving remedies. In relation to this, external routes by direct application (11.86%) come in second after drinking, which is consistent with the study. Other methods of administration are eating of medicinal plant as part of a cooked dish (8.68 %) swallowing (8.12%), poultice (3.92%), chewing (5.32%), other means such as bathing (3.45%), and lastly by inhalation (2.43%) (Figure 7b). Notably, some medicinal plants recorded in this study are also food plants hence, used as ingredients in cooking such as onion leeks, 'sayote', 'sili', slender spinach, and tomato. According to Gruca *et al.* (2014), most medicinal plants may also serve primarily as food plants such as additives or resources. This reflects multifunctionality of the plants, thereby increasing their practical value and retention in the medicinal gardens. In addition, plants used in cooking become eaten as health food (Sumridpiem *et al.* 2025).

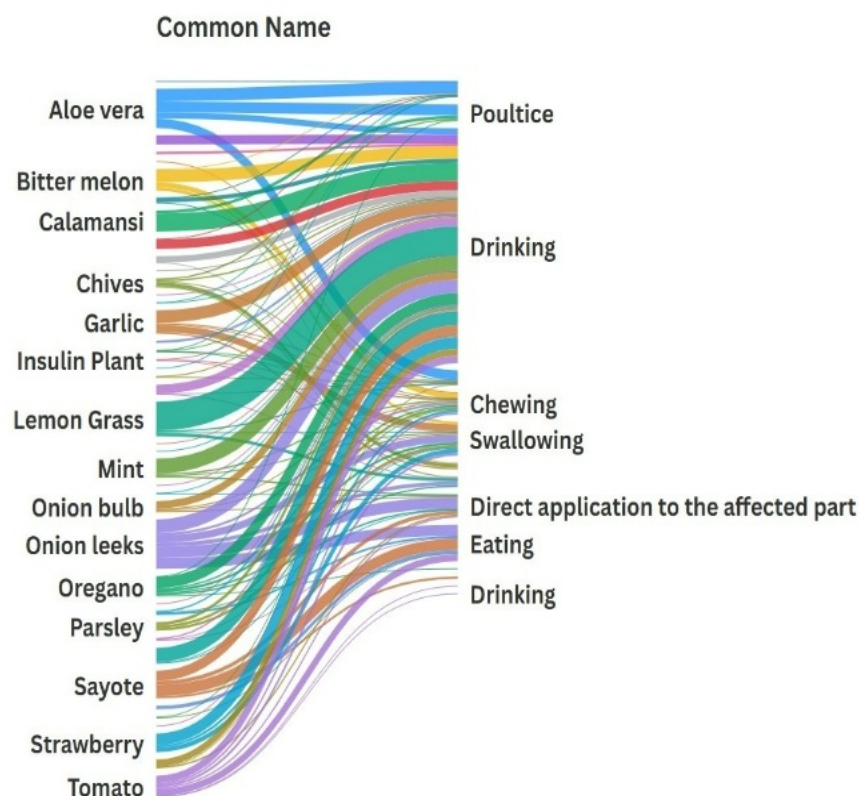


Figure 7a. Alluvial diagram mapping the flow from medicinal plant species to their corresponding methods of preparation or administration.

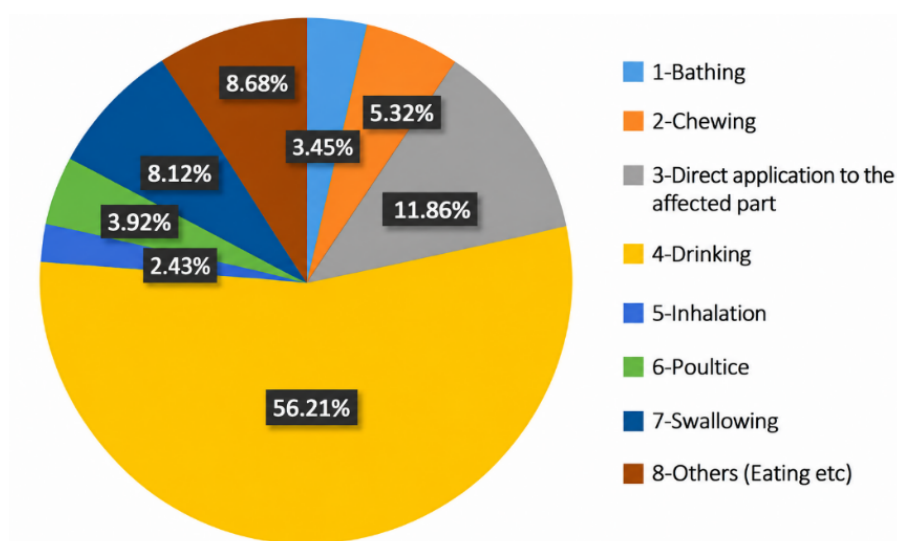


Figure 7b. Pie distribution chart on modes of application.

Quantitative assessment of the ethnobotanical importance of the medicinal plants

The UV index was used to determine the importance of each medicinal plant. High use value indicates that the plant is medicinally important (Albuquerque *et al.* 2006). On the other hand, RFC value ranges from 0-1. The degree of usefulness is indicated by a higher RFC closest to 1. Thus, a “0” value has no use (Tardio & Pardo-De-Santayana 2008).

The use values calculated ranged from 0.011 to 1.348. In descending order, based on over-all use value, the top ten commonly used medicinal plants used to treat the leading causes of mortality and morbidity in Baguio City include lemon grass (1.348), oregano (1.087), aloe (0.804), mint (0.772), lemon (0.761), onion leeks (0.598), tomato (0.533), ‘sayote’ (0.500), calamansi (0.467), and cabbage (0.391) (Appendix 2-3). A strong positive association between use value and relative frequency of citation (Pearson's $r = 0.949$, $p < 0.001$, $n = 42$) was obtained (Figure 8). This indicates that medicinal plant species with higher UV were more frequently cited by informants. Thus, important based on the considerable agreement between the frequency with which the plants were cited and their reported medicinal uses. Our results are consistent with previous studies. Amjad *et al.* (2017) conducted a systematic documentation of medicinal plants in Toli Peer National Park, Azad Jammu and Kashmir, Pakistan, and reported $r = 0.881$ between UV and RFC, with RFC explaining approximately 77% of the variation in UV. In addition, Bano *et al.* (2014) also presented a strong positive correlation ($r = 0.732$) involving native medicinal plants in Skardu Valley, Pakistan. These findings suggest that medicinal plants widely recognized within the community have higher perceived medicinal importance.

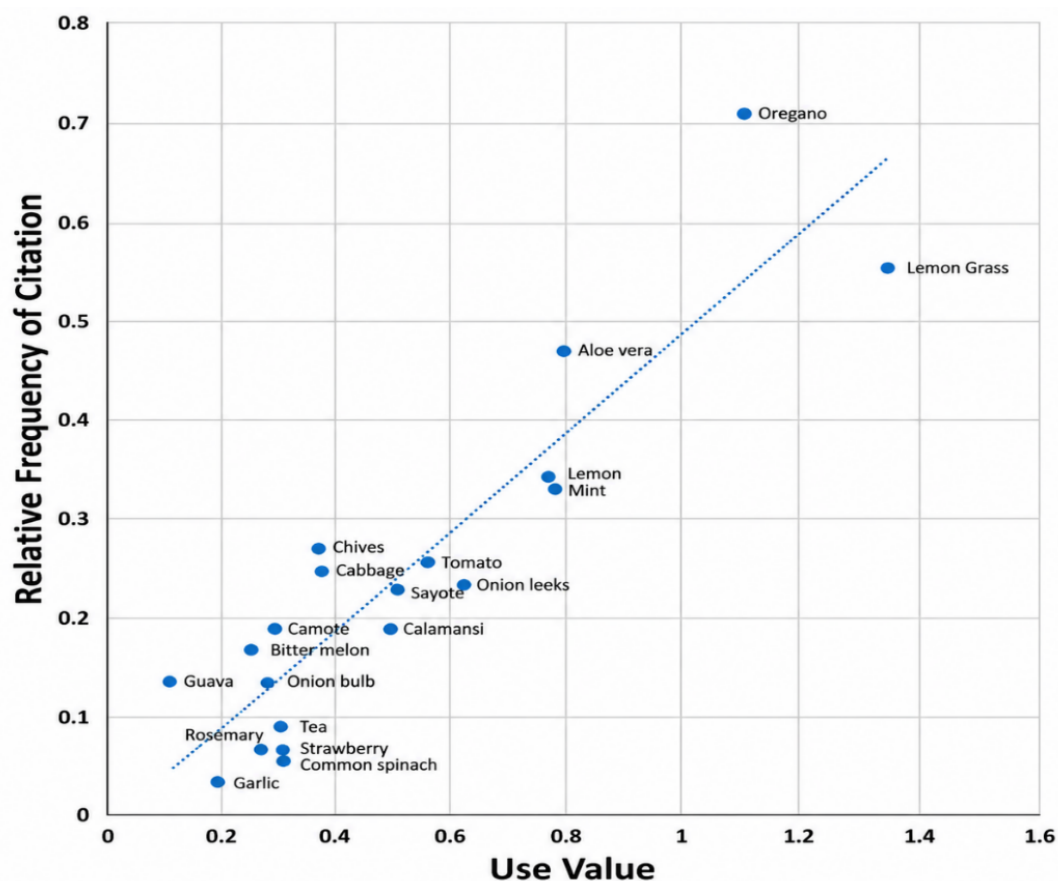


Figure 8. Correlational analysis of medicinal plants based on use value and relative frequency of citation.

Based on the reported use, lemon grass is a common remedy for all 18 health problems, which are the causes of morbidity and mortality in the city (Appendix 1). However, only the following health problems were found to have scientific literature or laboratory-based evidence as a probable support such as allergy (Machado *et al.* 2015), Alzheimer's Disease (Madi *et al.* 2020), cancer (Bidinotto *et al.* 2010, Kieltyka-Dadasiewicz *et al.* 2024, Ruvinov *et al.* 2019), diabetes (Adeneye & Agbaje 2007, Borges *et al.* 2021), hypertension (Silva & Barbara 2022), skin disease (Schweitzer *et al.* 2022, Kim *et al.* 2022), and wounds (Wisdawati & Razak 2024).

Lemon grass is a tropical grass with thin, long leaves that belongs to the Poaceae family. Because of its rich essential oil content, it is one of the most important medicinal aromatic plants cultivated in tropical and subtropical regions of Asia, South

America, and Africa (Sahal *et al.* 2020). This plant is widely distributed in cultivation in the Philippines, other tropical countries in Southeast Asia (Pelser *et al.* 2011-present). It is used in traditional medicine worldwide for its antimicrobial and pharmacological properties. The most bioactive compound in the plant are flavonoids. These are responsible for its antioxidant, anti-inflammatory, antimicrobial, and antidiabetic effects (Tazi *et al.* 2024; Kouame *et al.* 2016).

Other compounds identified in lemon grass are mainly terpenes, alcohols, ketones, and esters. There are also other essential oils such as Nerol Geraniol, Citronellal, Terpinolene, Geranyl acetate, Myrcene, and Terpinol Methylheptenone. Further, various therapeutic effects such as anti-amoebic, antidiarrheal, antifilarial, antimalarial, antimutagenicity, neuroprotective, anti-tumor, anti-hyperalgesic, and antifungal properties were revealed (Shah *et al.* 2011, Campos *et al.* 2019, Du *et al.* 2023). These indicate that the herb is a candidate species which must be cultivated more and grown in different barangays to maximize the use as alternative medicine for the aforementioned uses.

Multiple correspondence analysis was performed to examine the relationships between medicinal plant species and the health problems they were used to treat (Figure 9). The associations observed between plant species and disease categories indicate shared local and traditional knowledge among respondents. A two-dimensional result (Cronbach's alpha 0.646) with eigenvalues of 1.523 and 1.431 for Dimensions 1 and 2, respectively, corresponding to inertias of 0.762 and 0.716 was obtained. A moderate correspondence between the categorical variables can be seen with $r=0.523$ value. This indicates that the plants and their reported medicinal uses are related. The numerous categories concentrated around the centroid reflect a shared or common medicinal uses, while the peripheral categories refer to less frequent medicinal uses within the data set. In Dimension 1, 'katakataka', African rosemallow, aloe vera and guava were located toward the negative side, in association with respiratory tract infections, whereas 'makabuhay', bittermelon, coffee, mustard and other plants were found toward the positive side along with health problems such as diabetes mellitus, vascular diseases, sepsis and Alzheimer's disease. Over-all, the MCA plot exhibits correspondence-based patterns of reported use, which indicates that the medicinal plants were categorized based on various classified plant-health problem profiles. Pharmacological evidence are required to warrant clinical efficacy.

Bitter melon, insulin plant, and 'balbas pusa', are associated with diabetes mellitus, hypertension, and kidney-related disorders. These findings indicate the importance of these species in managing chronic metabolic and cardiovascular conditions. Cardiovascular diseases remain first in rank among the causes of death in the city (Comanda 2023, See 2023c). Based on latest statistics, a total of 502 deaths or a morbidity rate of 130.17 per 100,000 population, was recorded (Refuerzo 2025).

Another cluster consisted of lemon, calamansi, oregano, 'lagundi' and lemongrass were closely associated with respiratory-related illnesses, including upper respiratory tract infection, acute respiratory infection, pneumonia, COVID-19, and post-COVID conditions. This clustering suggests a strong consensus among community members regarding the use of these plants for respiratory ailments. Medicinal plants used for wounds, skin diseases, and accident-related injuries formed a separate grouping characterized by species commonly applied externally, including aloe, guava, 'katakataka', and chives (Appendix 2).

Fidelity level measures the proportion of informants reporting the use of a specific plant species. It is used to indicate the most preferred plant species used by the respondents to treat various health problems (Farooq *et al.* 2019). The FL level of reported species was ranged from 1.176 to 40.541 % (Appendix 2). Figure 10a-b shows the relationship between UV and % FL of the top-ranking medicinal plants across all the health problems.

The medicinal uses of the plants were categorized into 18 health problems. The ICF values were calculated for all the health problems in this study (Appendix 4). A high ICF value obtained is significant as it indicates repeated medicinal use of plant species for a particular disease. Hence, it can be related to perceived effectiveness by the users (Faruque *et al.* 2018). The correlation analysis result (Figure 11) shows that the use report (UR) has a strong positive correlation with the ICF ($r = 0.742$, $p < 0.001$, $n = 18$) whereby the health problems (use categories) with a higher number of UR have higher levels of ICF; thus, greater consensus among informants.

Based on the ICF values, the highest ICF was obtained for Upper Respiratory Tract Infections (URTIs) (0.884). High ICF values demonstrate agreement between informants on the plant species used to treat a particular ailment category. Therefore, the respondents share local traditional knowledge and practices in addressing common health ailments that provide rapid and immediate relief using available and abundant medicinal plants in 42 barangays (Appendix 1). Similar high ICF values of 0.98, 0.961, and 0.84 for respiratory health problems were reported in studies conducted by Dapar *et al.* (2020), Sing *et al.* (2020),

and Cordero *et al.* (2025), respectively. The respiratory ailments included asthma, pneumonia, emphysema, pulmonary tuberculosis, cough, cold, rhinitis, tracheitis, bronchitis, sore throat (tonsillitis), influenza, among others. According to Assen *et al.* (2021) plants with high ICF have high potential for healing. Thus, phytochemical research must prioritize these plants. Hence, the medicinal uses of the plants may be attributed to their bioactive compounds present.

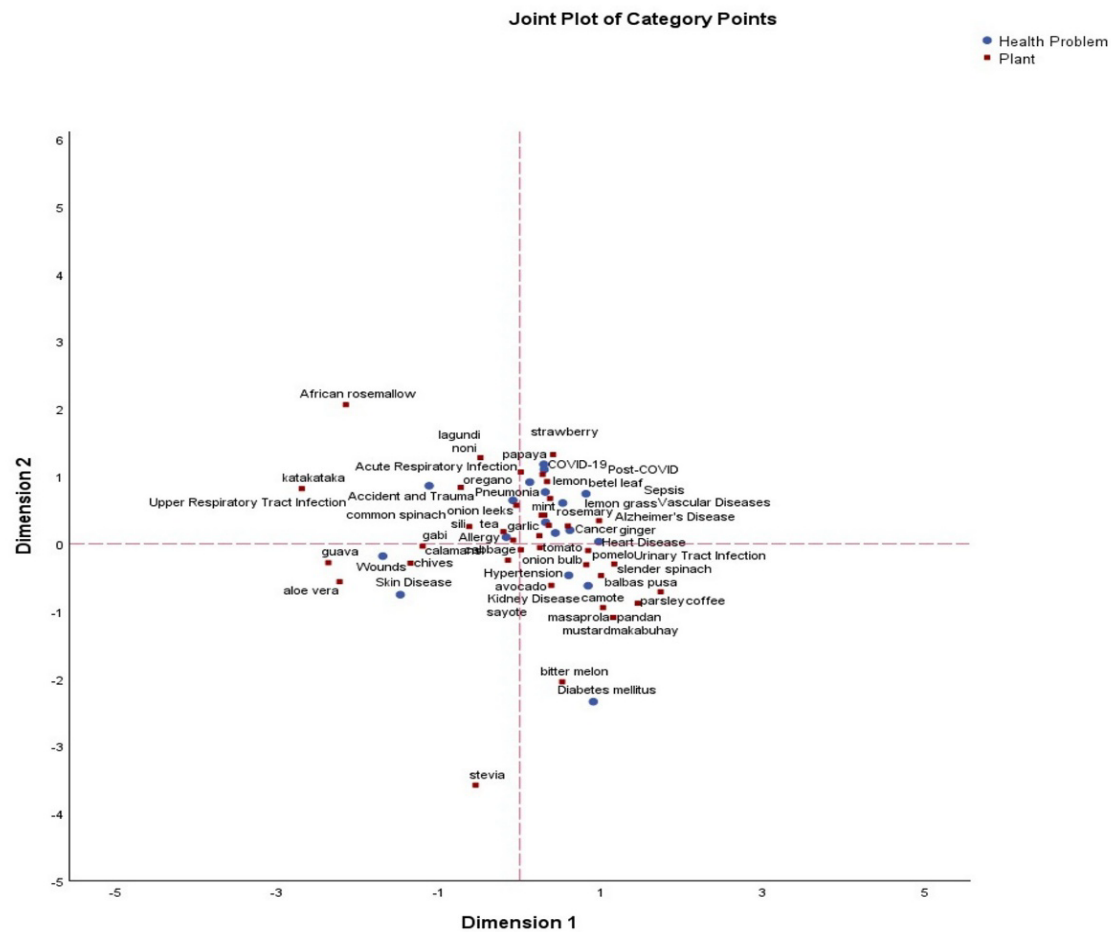


Figure 9. Joint plot of category points from a Multiple Correspondence Analysis (MCA) mapping plant species against health problems.

Low ICF values, on the other hand, indicate a wide variety of plant species used by the informants to treat diseases (Andrade-Cetto & Heinrich 2011). This was observed in Alzheimer's Disease (ICF = 0). A total of ten (10) plants were identified (Appendix 2). However, only five (5) medicinal plants such as aloe (Khedraoui *et al.* 2025), common spinach (Jiraungkoorskul 2016), lemon (Sharaf *et al.* 2025, Dolma *et al.* 2024), lemon grass (Madi *et al.* 2020), and rosemary (Dabaghzadeh *et al.* 2022, Singh *et al.* 2024, Habtemariam 2016) were found to have scientific literature and experimental laboratory findings as probable support.

URTIs are infectious diseases widely occurring globally with an incidence rate of 162,484 per 100,000 population (Tobin *et al.* 2025). In 2021, acute respiratory infection was the leading illness in the Philippines followed by hypertension, with about 598,591 people. The morbidity rate was nearly 543.2 per hundred thousand population (Statista Research Department 2024). In Baguio City, URTIs has been listed among the major causes of morbidity. A total of 10,705 reported cases, equivalent to a rate of 2,775.90 per 100,000 population, reported from January to September 2025. Specifically, 2,760 cases for pneumonia. In 2024, 21,431 cases of acute URTIs or 5,627.49 per 100,000 population, were reported (Refuerzo 2025). Other ailments such as tuberculosis, cough, asthma, influenza and acute bronchitis were identified. Cases of influenza, a viral infection, had a 265 percent increase, with 5,851 cases compared to 1,556 cases in 2023. Highest number of cases was in Benguet province (2,249), followed by Baguio City (2,235) (Dar 2024).

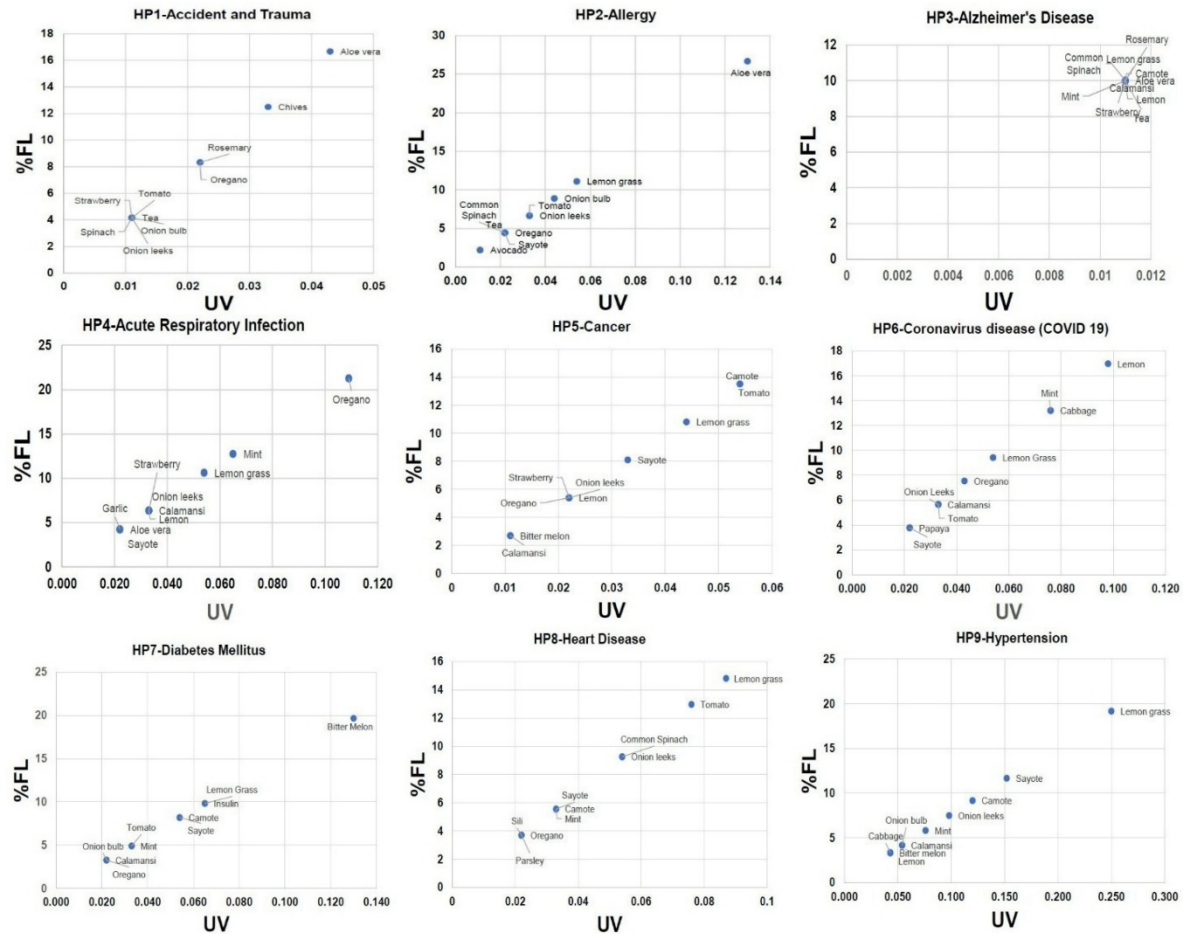


Figure 10a. Relationship between use value and fidelity level of medicinal plant species utilized for health problems.

The DOH has recommended three (3) plants, namely 'sambong' *Blumea balsamifera* (L.) DC., which has steroids or 2-deoxysugars, flavonoids, tannins, polyphenols, and alkaloids as bioactive metabolites for colds, cough, and respiratory infection; 'yerba buena' *Clinopodium douglasii* (Benth.) Kuntze, which is rich in tannins, carbonyls, and flavonoids for cold and cough; and 'lagundi' *Vitex negundo* L. containing tannins, volatile oils, glycosides, balsams, resins, saponins, flavonoids, among others for cough, asthma, and pharyngitis (Boy *et al.* 2018).

In this study, oregano (UV 0.620) ranked 1st among the medicinal plants used in treating URTIs such as cough (Appendix 2). Different preparation methods using the leaves include boiling (some half-boiled), crushing and extraction, juicing, powder, raw, and roasting/heating, while modes of administration range from drinking, chewing, swallowing, inhalation, and application to the body with oil. Use 1-3x a day for 3 to 7 days, or until symptoms subside. Other studies by Cordero *et al.* (2025) and Flores *et al.* (2025) also identified this plant as being used for cough, specifically using the leaves in decoction and drinking, crushing and drinking the extract, and soaking in hot water prior to drinking. Moreover, Arumugam *et al.* (2016) reviewed the medicinal uses and pharmacological properties of oregano as a treatment for respiratory problems (coughs, asthma, bronchitis and sore throat) in India and Eastern Cuba. The herb contains phytochemicals such as terpenoids, phenolics, flavonoids, esters, alcohols, aldehydes, carvacrol, and thymol, making it effective against different diseases (respiratory, cardiovascular, oral, skin, digestive, and urinary). Further, documentation surveys conducted in an urban (González-Ball *et al.* 2022) and rural barangay (Cabreza 2021) garden revealed that most of the medicinal plants present were used for respiratory problems by the communities.



Figure 10b. Relationship between use value and fidelity level of medicinal plant species utilized for health problems.

Conclusion and Recommendations

This study documented 42 medicinal plant species cultivated in barangay gardens across Baguio City and used in addressing 18 leading causes of morbidity and mortality. The findings demonstrate that medicinal gardens continue to play an important role in urban primary healthcare despite the widespread availability of modern medical services. Leaves were the most frequently utilized plant part, while decoction and oral administration were the predominant methods of preparation and use. Among the documented species, *C. citratus* (lemon grass) exhibited the highest use value, reflecting its broad therapeutic applications and strong acceptance among community members.

Correlation analysis revealed strong positive associations among the ethnobotanical indices. Between use value and relative frequency of citations, as well as the informant consensus factors. The high informant consensus observed for respiratory illnesses and hypertension highlights the persistence of shared traditional knowledge and the continued reliance on medicinal plants for common health concerns. Furthermore, scientifically supported medicinal uses for many documented species strengthen the relevance of traditional ethnobotanical knowledge as a complementary healthcare resource. Throughout this study, the reported medicinal uses were based on community-reported practices rather than evidence of therapeutic efficacy.

Beyond their medicinal value, barangay medicinal gardens contribute to urban biodiversity conservation, cultural heritage preservation, and community resilience. The study provides baseline ethnobotanical information that may support local

health programs and interventions, public education efforts, conservation initiatives, and future pharmacological investigations. Strengthening community-based medicinal plant cultivation and promoting evidence-based utilization of validated species may further enhance primary healthcare delivery and sustainable urban development in Baguio City.

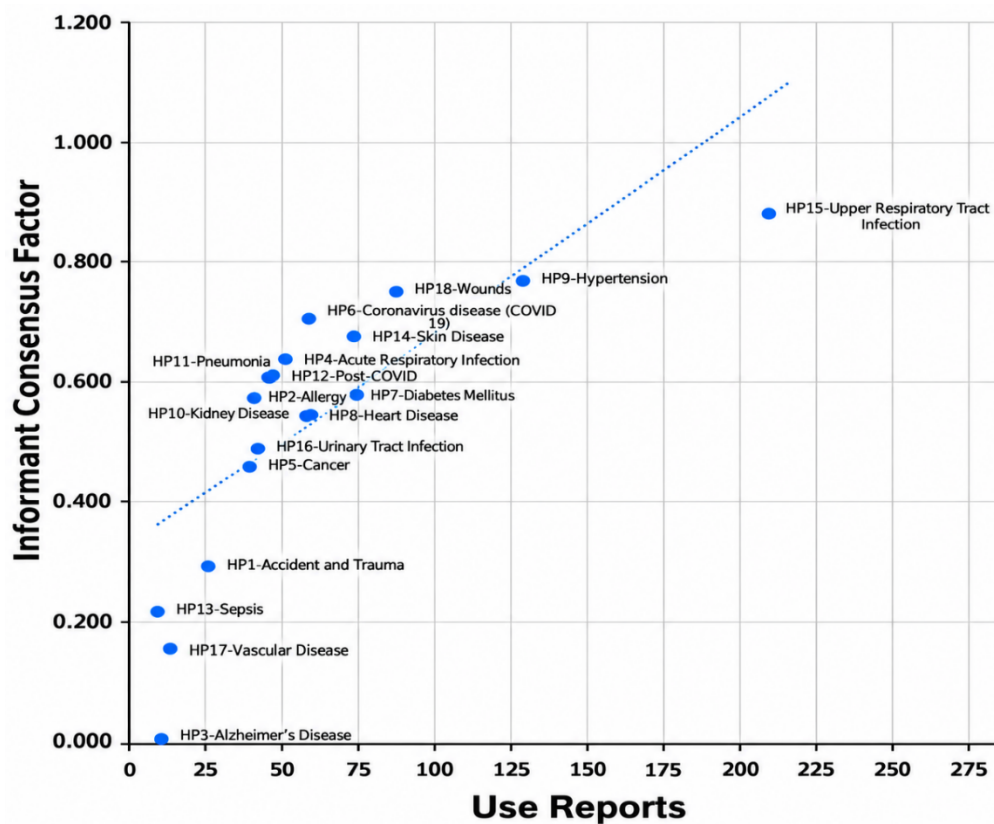


Figure 11. Correlation of health problems treated based on use value and informant consensus factor.

Declarations

Ethics approval and consent to participate:

The project passed the institutional review board of Saint Louis University (SLU-REC-2022-041). Field data were recorded with respondents' permission.

Consent for publication: Not applicable.

Availability of data and materials: Raw data gathered and correspondence analysis results from this project may be requested, as necessary, from the corresponding author.

Competing interests: The authors declare no competing interests. The corresponding author (RB) submitted this manuscript prior to their appointment to the Editorial Board of *Ethnobotany Research and Applications*. Following their appointment, the author was fully recused from all editorial discussions, reviewer selections, and decision-making regarding this manuscript to ensure a completely independent peer-review process.

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Authors' contributions: RCB as principal investigator, conceptualized and designed the project, analyzed the gathered data, finalized figures and tables, wrote the final manuscript. JRM gathered data, assisted with data analysis, drafted figures, and helped write the paper. The authors read, reviewed, and approved the manuscript.

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Appendix 1. Summary table of common medicinal garden plants, their recorded ethnobotanical information in the barangays and use reference literature.

Common Name (English or Filipino) Scientific Name	Habit	Conservation Status	Health Related Problem Treated (Cause of Morbidity/Mortality)	Part/s Used	Methods of preparation	Mode of application/ administration	Frequency and duration of use	Dosage	Use Value	RFC	Scientific Literature
African rosemallow <i>Sabdariffa acetosella</i> (Welw. ex Hiern) M. M. Hanes & R. L. Barrett Family Name: Malvaceae Voucher No. GM-17 Location: 86	Subshrub	NE, Widely cultivated	Accident and Trauma	2	Extraction of sap	Direct Application	As needed	1 flower	0.011	0.011	None
Aloe vera <i>Aloe vera</i> (L.) Burm.f. Family name: Asphodelaceae Voucher No. MG-03 Location: 1, 3, 5, 6, 8, 18, 19, 27, 36, 37, 45, 48, 52, 56, 57, 58, 59, 65, 67, 70, 71, 75, 76, 85, 86, 89, 90, 92, 94, 95, 102, 103, 104, 107, 111, 114, 120, 121, 122, 124, 127, 128	Herb	LC	Accident and Trauma	1	Crushing, Juicing, Oil infusion, Raw	Direct Application	2-3x a day/As needed	1-4 leaves	0.043	0.467	None
			Allergy	1	Crushing, Extraction of gel/sap, Juicing, Raw	Direct Application, Poultice	1-2x a day for 3-4 days/3x a week/As needed	1-3 leaves	0.130		None
			Alzheimer's Disease	1	Juicing	Drinking	As needed	Depends on the user	0.011		Khedraoui <i>et al.</i> (2025)
			Acute Respiratory Infection	1	Crushing, Juicing, Raw	Drinking	As needed	2 leaves	0.022		Sun <i>et al.</i> (2018)
			Heart Disease	1	Extraction of gel/sap, Juicing	Drinking	As needed	4 leaves	0.011		None

Common Name (English or Filipino) Scientific Name	Habit	Conservation Status	Health Related Problem Treated (Cause of Morbidity/Mortality)	Part/s Used	Methods of preparation	Mode of application/ administration	Frequency and duration of use	Dosage	Use Value	RFC	Scientific Literature
			Hypertension	1, 5	Extraction of gel/sap, Juicing	Drinking	1x a day for 4 days/As needed	1-4 leaves, 2 stems	0.033		None
			Skin Disease	1, 5	Boiling, Crushing, Extraction of gel/sap, Juicing, Oil infusion, Raw	Bathing, Direct Application, Poultice	1-3x a day	1-4 leaves, 2 stems	0.293		Abid <i>et al.</i> (2025)
			Upper Respiratory Tract Infection	1, 5	Boiling, Crushing, Juicing	Drinking	1-2x a day	1-10 leaves, 2 stems	0.065		Hwang <i>et al.</i> (2021)
			Wounds	1, 5	Boiling, Crushing, Extraction of gel/sap, Juicing, Oil infusion, Raw	Bathing, Direct Application, Poultice	1-3x a day	1-4 leaves, 2 stems	0.196		Molazem <i>et al.</i> (2014); Moriyama <i>et al.</i> (2016); Surjushe <i>et al.</i> (2008)
Avocado <i>Persea americana</i> Mill. Family name: Lauraceae Voucher No. BG-58 Location: 25	Tree	LC	Allergy	1, 3, 5, 8	Boiling	Drinking	1x a day/As needed	Depends on the user	0.011	0.011	None
			Heart Disease	1, 3, 5, 8	Boiling	Drinking	1x a day/As needed	Depends on the user	0.011		Pacheco <i>et al.</i> (2022); Chibueze <i>et al.</i> (2025)
			Hypertension	1, 3, 5, 8	Boiling	Drinking	1x a day/As needed	Depends on the user	0.011		Anaka <i>et al.</i> (2025); Ojewole <i>et al.</i> (2007);

Common Name (English or Filipino) Scientific Name	Habit	Conservation Status	Health Related Problem Treated (Cause of Morbidity/Mortality)	Part/s Used	Methods of preparation	Mode of application/ administration	Frequency and duration of use	Dosage	Use Value	RFC	Scientific Literature
											Sutiningsih <i>et al.</i> (2022)
			Kidney Disease	1, 3, 5, 8	Boiling	Drinking	1x a day/As needed	Depends on the user	0.011		Gondwe <i>et al.</i> (2008)
			Skin Disease	1, 3, 5, 8	Boiling	Drinking	1x a day/As needed	Depends on the user	0.011		Hürkul <i>et al.</i> (2021)
			Urinary Tract Infection	1, 3, 5, 8	Boiling	Drinking	1x a day/As needed	Depends on the user	0.011		Kendir & Koroglu (2018)
Balbas pusa <i>Orthosiphon aristatus</i> (Blume) Miq. Family Name: Lamiaceae (Labiales) Voucher No. GM-18 Location: 65, 86	Subshrub/ Shrub	NE, Widespread and cultivated	Diabetes Mellitus	1	Boiling	Drinking	Several leaves, 1 cup a day/3x a week	Depends on the user	0.011	0.022	Wang <i>et al.</i> (2022); Aisyah <i>et al.</i> (2025)
			Heart Disease	1	Boiling	Drinking	Several leaves, 1 cup a day/3x a week	Depends on the user	0.011		None
			Hypertension	1	Boiling	Drinking	Several leaves, 1 cup a day/3x a week	Depends on the user	0.011		Illahi <i>et al.</i> (2024); Matsubara <i>et al.</i> (1999); Ohashi <i>et al.</i> (2000)
			Pneumonia	1	Boiling	Drinking	Several leaves, 1 cup a day/3x a week	Depends on the user	0.011		None

Common Name (English or Filipino) Scientific Name	Habit	Conservation Status	Health Related Problem Treated (Cause of Morbidity/Mortality)	Part/s Used	Methods of preparation	Mode of application/ administration	Frequency and duration of use	Dosage	Use Value	RFC	Scientific Literature
			Upper Respiratory Tract Infection	1	Boiling	Drinking	Several leaves, 1 cup a day/3x a week	Depends on the user	0.022		None
			Urinary Tract Infection	1	Boiling	Drinking	Several leaves, 1 cup a day/3x a week	Depends on the user	0.011		Deipenbrock <i>et al.</i> (2021)
Betel <i>Piper betle</i> L. Family Name: Piperaceae Voucher No. GM-01 Location: 84	Vine	NE, Widespread and cultivated	Heart Disease	1	Raw	Chewing	As needed	Depends on the user	0.011	0.011	Savsani <i>et al.</i> (2020)
			Upper Respiratory Tract Infection	1	Raw	Chewing	As needed	Depends on the user	0.011		None
Bitter melon <i>Momordica charantia</i> L. Family Name: Cucurbitaceae Voucher No. BG-53 Location: 6, 8, 18, 42, 52, 57, 59, 60, 75, 94, 107, 111, 120	Vine	LC	Allergy	1	Raw	Direct Application	As needed	5 leaves	0.011	0.163	None
			Cancer	1,3	Boiling, Juicing, Raw	Chewing, Drinking	1x a week	½ fruit, several leaves	0.011		Dandawate <i>et al.</i> (2016); Fang <i>et al.</i> (2012)
			Diabetes Mellitus	1,2,3, 5	Boiling, Crushing, Juicing, Raw	Chewing, Drinking	1-3x a day	1-10 leaves with stem, fruit and flower	0.130		Cortez- Navarrete <i>et al.</i> (2018); Fuangchan <i>et al.</i> (2011); Joseph & Jini (2013)

Common Name (English or Filipino) Scientific Name	Habit	Conservation Status	Health Related Problem Treated (Cause of Morbidity/Mortality)	Part/s Used	Methods of preparation	Mode of application/ administration	Frequency and duration of use	Dosage	Use Value	RFC	Scientific Literature
			Hypertension	1,3	Boiling, Juicing, Raw	Chewing, Swallowing, Drinking	1x a day/1x a week	1-6 leaves/ 0.5-1 fruit for 1 cup	0.043		None
			Kidney Disease	1,3	Boiling, Juicing, Raw	Chewing, Swallowing, Drinking	As needed	1 bundle of leaves/2 fruits	0.011		None
			Pneumonia	1	Boiling, Crushing	Drinking	As needed	1 bundle of leaves	0.011		None
			Skin Disease	1,3	Boiling, Juicing, Raw	Chewing, Swallowing, Drinking	As needed	1 bundle of leaves/2 fruits	0.022		Manju <i>et al.</i> (2025)
			Upper Respiratory Tract Infection	1	Boiling, Raw	Chewing, Swallowing, Drinking	3x a day/as needed	5 leaves	0.011		None
			Wounds	1	Boiling, Crushing	Drinking, Direct application	As needed	1-6 leaves	0.011		Teoh <i>et al.</i> (2009)
Cabbage <i>Brassica oleracea</i> L. Family Name: Brassicaceae	Subshrub	LC	COVID-19	1, 5	Boiling	Drinking	1-3x a day	Stem with many leaves (> 5)	0.076	0.239	None
			Diabetes Mellitus	3	Boiling, Juicing	Drinking	2-3x a day	5-10 fruits	0.011		Gupta <i>et al.</i> (2022)

Common Name (English or Filipino) Scientific Name	Habit	Conservation Status	Health Related Problem Treated (Cause of Morbidity/Mortality)	Part/s Used	Methods of preparation	Mode of application/ administration	Frequency and duration of use	Dosage	Use Value	RFC	Scientific Literature
Voucher No. BG-15 Location: 1, 6, 51, 52, 56, 57, 59, 67, 68, 69, 73, 74, 84, 85, 94, 111, 124, 127											
			Hypertension	3	Juicing	Drinking	1x a day/ As needed	3-5 fruits	0.043		None
			Pneumonia	1, 5	Boiling, Juicing	Drinking	1x a day/ As needed	Stem with many leaves (> 5)	0.033		None
			Post-COVID	3	Juicing,	Drinking	1x a day/ As needed	3-5 fruits	0.033		None
			Skin Disease	1, 5	Boiling	Bathing	1x a day as needed	2 leaves	0.022		None
			Upper Respiratory Tract Infection	1, 5	Boiling	Drinking	1-3x a day	Stem with many leaves (> 5)	0.152		None
			Urinary Tract Infection	3	Juicing	Drinking	2x a day	7 pcs fruits	0.011		None
			Wounds	3	Juicing	Direct Application	2x a day /As needed	2 pcs fruits	0.011		None
Calamansi <i>Citrus × microcarpa</i> Bunge	Shrub	NE, Widely cultivated	Allergy	3	Juicing	Drinking	2x a day/As needed	3 fruits	0.011	0.185	None
			Alzheimer's Disease	1,3	Boiling, Extraction of Juice	Drinking	3-5x a day	3 leaves, 2 fruits	0.011		None

Common Name (English or Filipino) Scientific Name	Habit	Conservation Status	Health Related Problem Treated (Cause of Morbidity/Mortality)	Part/s Used	Methods of preparation	Mode of application/ administration	Frequency and duration of use	Dosage	Use Value	RFC	Scientific Literature
Family Name: Rutaceae Voucher No. GM-02 Location: 4, 11, 18, 27, 28, 31, 34, 36, 43, 70, 76, 86, 90, 91, 95, 128, 129			Acute Respiratory Infection	1, 3	Boiling, Juicing	Drinking	3x a week/As needed	5-8 pieces leaves and fruits	0.033		None
			Cancer	3	Juicing	Drinking	2x a day /As needed	3 fruits	0.011		Palma <i>et al.</i> (2019); Ples <i>et al.</i> (2023)
			COVID-19	1,3	Boiling, Juicing	Drinking	2x a day	5-8 pieces leaves, 3- 5 fruits	0.033		None
			Diabetes Mellitus	1,3	Boiling, Juicing	Drinking	2x a day	5-8 pieces leaves, 3- 5 fruits	0.022		Siner <i>et al.</i> (2020)
			Heart Disease	1,3	Boiling, Juicing	Drinking	As needed	5-8 pieces leaves, 3- 5 fruits	0.011		None
			Hypertension	1,3	Boiling, Juicing	Drinking	3-5x a day /As needed	5-8 pieces leaves, 3- 5 fruits	0.054		None
			Kidney Disease	1,3	Boiling, Juicing	Drinking	3-5x a day /As needed	5-8 pieces leaves, 3- 5 fruits	0.011		None

Common Name (English or Filipino) Scientific Name	Habit	Conservation Status	Health Related Problem Treated (Cause of Morbidity/Mortality)	Part/s Used	Methods of preparation	Mode of application/ administration	Frequency and duration of use	Dosage	Use Value	RFC	Scientific Literature
			Pneumonia	1,3	Boiling, Juicing	Drinking	2x a day	5-8 pieces leaves, 3- 5 fruits	0.043		None
			Post-COVID	1,3	Boiling, Juicing	Drinking	2-5x a day /As needed	5-8 pieces leaves, 3- 5 fruits	0.054		None
			Skin Disease	1,3	Raw, Oil infusion, Juicing	Poultice, Drinking	As needed	5-8 pieces leaves, 3- 5 fruits	0.011		None
			Upper Respiratory Tract Infection	1,3	Boiling, Juicing	Drinking	3x a day	5-8 pieces leaves, 3- 5 fruits	0.152		None
			Wounds	1,3	Raw, Oil infusion, Juicing	Poultice, Drinking	As needed	5-8 pieces leaves, 3- 5 fruits	0.011		None
Camote <i>Ipomoea batatas</i> (L.) Lam. Family Name: Convolvulaceae Voucher No. GM-03	Vine	NE, Cultivated	Allergy	1,4	Raw, Juicing	Direct Application, Drinking	1 week/ As needed	3-4 leaves, 1 tuber	0.011	0.185	None
			Alzheimer's Disease	1,4	Boiling	Drinking	1-2x a day	3-4 leaves, 1 tuber	0.011		None
			Cancer	1,4,5, 7	Boiling	Drinking	1-2x a day	Stem with 3-4	0.054		Chowdhury <i>et al.</i> (2025);

Common Name (English or Filipino) Scientific Name	Habit	Conservation Status	Health Related Problem Treated (Cause of Morbidity/Mortality)	Part/s Used	Methods of preparation	Mode of application/ administration	Frequency and duration of use	Dosage	Use Value	RFC	Scientific Literature
Location: 1, 7, 18, 23, 31, 37, 57, 59, 65, 70, 72, 94, 104, 109, 114, 116, 128								leaves, 1 tuber			Silva-Correa <i>et al.</i> (2022)
			Heart Disease	1,4,7	Boiling	Drinking	1-2x a day	3-4 leaves, 1 tuber or whole plant	0.033		Escobar- Puentes <i>et al.</i> (2022)
			Hypertension	1,4,5, 7	Boiling	Drinking	1-2x a day/ As needed	stem with >10 leaves, 1tuber or whole plant	0.120		None
			Kidney Disease	1,4,5, 7	Boiling	Drinking	2x a day / As needed	stem with >10 leaves, 1tuber or whole plant	0.011		None
			Sepsis	1	Boiling	Drinking	1x a week	3-4 leaves	0.011		None
			Diabetes Mellitus	1,4,5, 7	Boiling	Drinking	1-2x a day	stem with >10 leaves, 1tuber or whole plant	0.054		Akhtar <i>et al.</i> (2018); Naomi <i>et al.</i> (2021)
Common spinach	Herb	NE, Widely cultivated	Accident and Trauma	1	Boiling	Drinking	1x a day/ As needed	3-5 leaves	0.011	0.054	None

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<i>Spinacia oleracea</i> L. Family Name: Amaranthaceae Voucher No. GM-19 Location: 57, 70, 111			Allergy	1	Boiling	Drinking	1x a day/ As needed	3-5 leaves	0.022		None
			Alzheimer's Disease	1	Boiling	Drinking	1x a day/ As needed	3-5 leaves	0.011		Jiraungkoorsk ul (2016)
			Acute Respiratory Infection	1	Boiling	Drinking	1- 3x a day/ As needed	3-5 leaves	0.011		None
			Cancer	1	Boiling	Drinking	1x a day/ As needed	3-5 leaves	0.011		Sarkar (2024)
			COVID-19	1	Boiling	Drinking	1x a day/ As needed	3-5 leaves	0.022		None
			Diabetes Mellitus	1	Boiling	Drinking	1x a day/ As needed	3-5 leaves	0.011		Kumar <i>et al.</i> (2023)
			Heart Disease	1	Boiling	Drinking	1x a day/ As needed	3-5 leaves	0.054		Panda <i>et al.</i> (2019)
			Hypertension	1	Boiling	Drinking	1x a day/ As needed	3-5 leaves	0.022		Jovanovski <i>et al.</i> (2015)
			Kidney Disease	1	Boiling	Drinking	1s a day/ As needed	3-5 leaves	0.022		Flores- Estrada <i>et al.</i> (2025)
			Pneumonia	1	Boiling	Drinking	1xa day/ As needed	3-5 leaves	0.033		None
			Post-COVID	1	Boiling	Drinking	1x a day/ As needed	3-5 leaves	0.011		None

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			Sepsis	1	Boiling	Drinking	1x a day/ As needed	3-5 leaves	0.011		None
			Skin Disease	1	Extraction of Juice	Direct application	As needed	3 leaves	0.011		None
			Upper Respiratory Tract Infection	1	Boiling	Drinking	1- 3x a day/ As needed	3-5 leaves	0.011		None
			Urinary Tract Infection	1	Boiling	Drinking	1x a day/ As needed	3-5 leaves	0.011		None
			Vascular Diseases	1	Boiling	Drinking	1x a day/ As needed	3-5 leaves	0.011		None
			Wounds	1	Extraction of Juice	Direct application	As needed	3 leaves	0.011		Rahati <i>et al.</i> (2023)
Celery <i>Apium graveolens</i> L. Family Name: Apiaceae Voucher No. GM-04 Location: 101	Herb	LC	Diabetes Mellitus	1, 5	Boiling	Drinking	As needed	Many stalks with leaves (for one glass)	0.011	0.011	Wasfi & Al kabi (2019); Yusni <i>et al.</i> (2018)
Chives <i>Allium schoenoprasum</i> L. Family name:	Herb	LC	Accident and Trauma	1	Raw, Crushing	Direct application	2-3x a day until symptoms subside as needed	2-10 leaves/ depends on the number of	0.033	0.261	None

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Amaryllidaceae Voucher No. BG-05 Location: 11, 23, 31, 43, 45, 51, 57, 59, 65, 66, 67, 74, 79, 83, 86, 99, 101, 103, 107, 121, 122, 125, 127								petechia e			
			Allergy	1	Raw, Crushing	Direct application	As needed	10 leaves	0.011		None
			Acute Respiratory Infection	1	Boiling	Drinking	3x a day for 3 days	> 10 leaves	0.011		None
			Diabetes Mellitus	1	Raw, Boiling	Chewing, Drinking	1x a day	1-2 leaves	0.011		None
			Pneumonia	1	Boiling	Inhalation	As needed	10 leaves	0.011		None
			Post-COVID	1	Boiling	Inhalation	As needed	10 leaves	0.011		None
			Skin Disease	1	Raw, Crushing, Oil Infusion	Direct application, Poultice	As needed	3-5 leaves	0.033		None
			Upper Respiratory Tract Infection	1	Boiling	Drinking, Inhalation	3x a day as needed	5-10 leaves	0.043		None
			Vascular Disease	1	Boiling	Drinking	As needed	10 leaves	0.011		None
			Wounds	1	Raw, Crushing, Oil Infusion	Direct application, Poultice	2-3x a day for 2-3 days as needed	5-10 leaves	0.207		None
Coffee <i>Coffea arabica</i> L. Family name: Rubiaceae	Shrub	EN	Kidney Disease	3	Boiling	Drinking	As needed	Depends on the user	0.011	0.011	Srithongkul & Ungprasert (2020); Jhee <i>et al.</i> (2018); Kennedy <i>et</i>

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Voucher No. BG-29											<i>al.</i> (2020)
Location: 49			Urinary Tract Infection	3	Boiling	Drinking	As needed	Depends on the user	0.011		None
Gabi <i>Colocasia esculenta</i> (L.) Schott Family name: Araceae Voucher No. BG-30 Location: 6, 65	Herb	LC	Wounds	1	Crushing	Direct Application	As needed	Depends on size of wound	0.011	0.022	Rustiani (2022)
			Heart Disease	7	Boiling	Drinking	1x a day	1-10 leaves	0.011		None
Garlic <i>Allium sativum</i> L. Family name: Amaryllidaceae Voucher No. BG-04 Location: 11, 49, 124	Herb	NE, Widely cultivated	Allergy	5	Boiling, Raw, Crushing, Juicing	Bathing, Chewing, Direct application, Drinking	As needed	1 clove	0.011	0.033	None
			Acute Respiratory Infection	5	Boiling, Crushing, Juicing	Drinking	1x a day as needed	1-5 cloves/ 1 bulb	0.022		None
			Cancer	5	Boiling, Crushing, Juicing, Raw	Drinking, Swallowing	2x a day for 1 week as needed	1 clove	0.011		Milner (2001); Shukla & Kalra (2007)
			COVID-19	5	Boiling, Crushing, Juicing, Raw	Drinking, Swallowing	2x a day for 1 week as needed	1 clove	0.011		Abozaid (2021)

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			Diabetes Mellitus	5	Boiling, Crushing, Juicing, Raw	Drinking, Swallowing	2x a day for 1 week as needed	1 clove	0.011		Wang <i>et al.</i> (2017)
			Heart Disease	5	Boiling, Crushing, Juicing, Raw	Drinking, Swallowing	2x a day for 1 week as needed	1 clove	0.011		Rahman & Lowe (2006)
			Hypertension	5	Boiling, Crushing, Juicing, Raw	Drinking, Swallowing	2x a day for 1 week as needed	1 clove	0.022		Ried <i>et al.</i> (2010)
			Kidney Disease	5	Boiling, Crushing, Juicing, Raw	Drinking, Swallowing	2x a day for 1 week as needed	1 clove	0.011		None
			Pneumonia	5	Boiling, Crushing, Juicing, Raw	Drinking, Swallowing	2x a day for 1 week as needed	1 clove	0.011		None
			Post-COVID	5	Boiling, Crushing, Juicing, Raw	Drinking, Swallowing	As needed	1 clove	0.011		None
			Skin Disease	5	Boiling, Raw, Crushing, Juicing	Bathing, Chewing, Direct application, Drinking	As needed	1 clove	0.011		Ledezma <i>et al.</i> (2011); Pazyar & Feily (2011)
			Upper Respiratory Tract Infection	5	Boiling, Crushing, Juicing	Drinking	1x a day as needed	1-5 cloves/ 1 bulb	0.022		Josling (2001); Lissiman <i>et al.</i> (2014)
			Urinary Tract Infection	5	Boiling, Crushing,	Drinking	1x a day as needed	1 clove	0.011		None

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					Juicing						
			Vascular Disease	5	Boiling, Crushing, Juicing, Raw	Drinking, Swallowing	2x a day for 1 week as needed	1 clove	0.011		Ribeiro <i>et al.</i> 2021
			Wounds	5	Boiling, Raw, Crushing, Juicing	Bathing, Direct application, Drinking	As needed	1 clove	0.011		None
Ginger <i>Zingiber officinale</i> Roscoe Family name: Zingiberaceae Voucher No. BG-88 Location: 6, 65, 111	Herb	NE, Widely cultivated	COVID-19	5	Boiling	Drinking	2x a day as needed	1 stem (depends on size)	0.011	0.033	Ameri <i>et al.</i> (2024)
			Heart Disease	5	Boiling	Drinking	1-3x a day as needed	1 stem	0.011		Li <i>et al.</i> (2012)
			Hypertension	5	Boiling	Drinking	1-3x a day as needed	1 stem	0.011		Hasani <i>et al.</i> 2019
			Kidney Disease	5	Boiling	Drinking	1-3x a day as needed	1 stem	0.011		Veisi <i>et al.</i> (2022)
			Upper Respiratory Tract Infection	5	Boiling	Drinking	1-3x a day as needed; once a day everyday	1 stem (depends on size)	0.022		Chang <i>et al.</i> (2013); Mbaoji <i>et al.</i> (2026); Akoachere <i>et al.</i> (2002)
			Urinary Tract Infection	5	Boiling	Drinking	1-3x a day as needed	1 stem	0.011		Mohammed <i>et al.</i> (2019)
Guava	Shrub	LC	Skin Disease	1	Boiling	Bathing	Once a day; depends on the	5-10 leaves,	0.011	0.130	Qadan <i>et al.</i> 2005

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<i>Psidium guajava</i> L. Family name: Myrtaceae Voucher No. GM-05 Location: 6, 17, 34, 39, 51, 58, 93, 99, 111, 122, 124, 126							user	depends on the user			
			Upper Respiratory Tract Infection	1	Boiling	Drinking	2x a day as needed	5-10 leaves	0.022		Halim & Day (2022); Sriwilaijaroen <i>et al.</i> (2012)
			Wounds	1,3	Raw, Crushing	Direct Application, Chewing	1-3x a day for at least 7 days/ as needed	1-5 leaves	0.098		Ekou & Tamokou (2018); Delorino <i>et al.</i> (2021); Jayakumari <i>et al.</i> (2023); Bilal <i>et al.</i> (2024)
Insulin Plant <i>Chamaecostus cuspidatus</i> (Nees & Mart.) C.D. Specht & D.W. Stev. Family name: Costaceae Voucher No. GM-06 Location: 19, 38, 49, 51, 59, 65, 94, 119	Herb	NE, Widely cultivated	Diabetes Mellitus	1	Boiling, Raw, Juicing	Drinking, Chewing, Swallowing	1-2x a day everyday/as needed	2-5 leaves/ depends on the user	0.065	0.065	Ponnanikaja mideen <i>et al.</i> (2016); Ponnanikaja mideen <i>et al.</i> (2019); Shetty <i>et al.</i> (2010); Deogade <i>et al.</i> (2017)
Katakataka	Herb	NE, Widely	Accident and Trauma	1	Crushing	Direct	As needed	5 leaves	0.011	0.022	None

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<i>Kalanchoe pinnata</i> (Lam.) Pers. Family name: Crassulaceae Voucher No. GM-07 Location: 63, 84		Naturalized/ Introduced				Application					
			Wounds	1	Crushing	Direct Application	1x a day/As needed	Depends on the user	0.011		Coutinho <i>et al.</i> (2020); Sharma <i>et al.</i> (2023)
Lagundi <i>Vitex negundo</i> L. Family name: Lamiaceae Voucher No. GM-08 Location: 17, 36, 31, 97, 104, 120	Shrub	LC	Acute Respiratory Infection	1	Boiling	Drinking	As needed	5-10 leaves	0.011	0.065	Alegado- Bagaoisan <i>et al.</i> (2020); Haq <i>et al.</i> (2012)
			Skin Disease	1	Boiling	Bathing	As needed	Depends on user	0.011		None
			Upper Respiratory Tract Infection	1,5	Boiling	Drinking	3x a day for at least 7 days/As needed	More than 6 leaves/D depends on the user	0.054		Yadav <i>et al.</i> (2025)
Lemon <i>Citrus × limon</i> (L.) Osbeck Family name: Rutaceae	Shrub	NE, Widely cultivated	Accident and Trauma	3	Juicing	Drinking	As needed	1 fruit	0.011	0.337	None
			Allergy	3	Juicing	Drinking	As needed	1 fruit	0.011		None
			Alzheimer's Disease	3	Juicing	Drinking	As needed	1 fruit	0.011		Sharaf <i>et al.</i> (2025); Dolma <i>et al.</i> (2024)

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Voucher No. GM-09 Location: 36, 56, 17, 104, 87, 1, 37, 42, 51, 57, 69, 92, 93, 99, 109, 116, 124, 127, 122, 126, 90, 6, 21, 49, 84, 11, 8, 4, 83			Acute Respiratory Infection	3	Boiling, Crushing, Juicing,	Drinking	As needed	1 fruit	0.033		None
			Cancer	3	Juicing	Drinking	As needed	1-2 fruits	0.022		Poulose <i>et al.</i> (2006); Alam <i>et al.</i> (2021)
			COVID-19	3	Boiling	Drinking, Inhalation	3x a day/As needed	1-3 fruits	0.098		Khan <i>et al.</i> (2021)
			Diabetes Mellitus	3	Juicing	Drinking	As needed	1-2 fruits	0.011		El-Feky <i>et al.</i> (2024); Mantur <i>et al.</i> (2023)
			Heart Disease	3	Juicing	Drinking	1x-2x a day/As needed	1-2 fruits	0.011		Mahmoud <i>et al.</i> (2019)
			Hypertension	1, 3	Boiling, Juicing	Drinking	1x-2x a day/As needed	3-5 leaves, 2- 3 big fruits	0.043		Kato <i>et al.</i> (2014); Nakamura <i>et al.</i> (2023)
			Kidney Disease	3	Juicing	Drinking	1x-2x a day/As needed	1-2 fruits	0.011		None
			Pneumonia	1,3	Boiling, Juicing	Drinking	As needed	3-5 leaves, 1- 2 fruits	0.054		None
			Post-COVID	3	Juicing	Drinking	1-3x a day/As needed	1-2 fruits	0.087		None
			Sepsis	3	Juicing	Drinking	As needed	1 fruit	0.011		None

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			Skin Disease	3	Boiling	Bathing	As needed	1-2 fruits	0.033		None
			Upper Respiratory Tract Infection	1, 3	Boiling, Juicing	Drinking	1x-2x a day/As needed	3-5 leaves, 1- 3 fruits	0.272		None
			Urinary Tract Infection	1, 3	Boiling, Juicing	Drinking	1x-2x a day/As needed	3-5 leaves, 1- 2 fruits	0.022		Sharma <i>et al.</i> (2023); Liya <i>et al.</i> (2018)
			Vascular Disease	3	Juicing	Drinking	1x-2x a day/As needed	1 fruit	0.011		Mahmoud <i>et al.</i> (2019); Ebrahimi <i>et al.</i> (2023)
			Wounds	3	Juicing	Drinking	As needed	1-2 fruits	0.011		Hashempur <i>et al.</i> (2025)
Lemon Grass <i>Cymbopogon citratus</i> (DC.) Stapf Family Name: Poaceae Voucher No. MG-24 Location: 6, 7, 23, 25, 27, 31, 34, 37, 42, 43, 44, 45, 48, 51, 52, 57, 60, 63, 65, 66, 68, 70, 74,	Grass	NE, Widely cultivated	Accident and Trauma	1, 5	Boiling	Drinking	As needed	1 stalk with leaves	0.011	0.554	None
			Allergy	1, 5	Boiling, Juicing	Bathing, Drinking, Inhalation	1x a day/As needed	1-2 stalks, 3 leaves or 1 bundle	0.054		Machado <i>et al.</i> (2015)
			Alzheimer's Disease	1, 5	Boiling	Drinking	1x a day	1 stalk, 5-6 leaves	0.011		Madi <i>et al.</i> (2020)
			Acute Respiratory Infection	1, 5	Boiling, Crushing, Juicing	Drinking, Inhalation, Swallowing	1-2x a day/As needed	1 stalk, 3 leaves or 1 bundle (w/	0.054		None

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79, 80, 81, 86, 90, 92, 93, 99, 101, 102, 104, 107, 119, 120, 124, 125, 126, 128, 129								lemon, sugar)			
			Cancer	1, 5	Boiling	Drinking	2-3x a day/ Everyday/ As needed	1 stalk, 5-6 leaves	0.044		Bidinotto <i>et al.</i> (2010); Kieltyka- Dadasiewicz <i>et al.</i> (2024); Ruvinov <i>et al.</i> (2019)
			COVID-19	1, 5	Boiling, Juicing	Drinking	1-2x a day for 5-7 days /As needed	1 stalk, 5-6 leaves, depends on the size of leaves	0.054		None
			Diabetes Mellitus	1, 4, 5	Boiling, Juicing	Drinking	1-3x a day/ As needed	1 stalk, 2-3 leaves, several roots	0.065		Adeneye & Agbaje (2007); Borges <i>et al.</i> (2021)
			Heart Disease	1, 5	Boiling, Juicing	Drinking	1-3x a day/ As needed	1 stalk, 3 leaves, or 1 bundle (w/ lemon, sugar)	0.087		None
			Hypertension	1,4, 5, 7	Boiling, Juicing	Drinking, Inhalation	1-3x a day for 7 days /As needed	1 stalk, 4-7 leaves,	0.250		Silva & Barbara (2022)

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								or 1 bundle (w/ lemon, sugar)			
			Kidney Disease	1, 5, 7	Boiling, Juicing	Drinking	1-3x a day for 5-7 days /As needed	1 stalk, 1-10 leaves (optional : with ginger, and/or lemon; and honey or sugar or evaporat ed milk)	0.174		None
			Pneumonia	1, 5	Boiling, Juicing	Drinking	3x a day for 1 week /As needed	1 stalk, 3 leaves or 1 bundle (w/ lemon, sugar)	0.043		None
			Post-COVID	1, 5	Boiling, Juicing, Powder	Drinking	1x a day /As needed	1 stalk, 3 leaves or 1 bundle (w/ lemon, sugar)	0.043		None
			Sepsis	1, 5	Boiling,	Drinking	2-3x a day / As	1 stalk, 3	0.022		None

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					Juicing		needed	leaves			
			Skin Disease	1, 5	Boiling,	Bathing	1-2x a day /As needed	1 stalk; 3 leaves	0.033		Schweitzer <i>et al.</i> (2022); Kim et al. (2022)
			Upper Respiratory Tract Infection	1, 5, 7	Boiling, Juicing,	Drinking	1-3x a day for 7 days /As needed	1 stalk, 5-10 leaves or 1 bundle (w/ honey or sugar)	0.217		None
			Urinary Tract Infection	1, 5, 7	Boiling, Juicing	Drinking	1-3x a day for 7 days /As needed	1 stalk, 2-8 leaves; or 1 bundle (w/ sugar)	0.163		None
			Vascular Diseases	1, 5	Boiling, Juicing,	Drinking	2x a day for 5-7 days /As needed	1 stalk; 3 leaves	0.011		None
			Wounds	1, 5	Boiling	Drinking	As needed/ Everyday	1 stalk; 2 leaves	0.011		Wisdawati & Razak(2024)
Makabuhay <i>Tinospora crispa</i> (L.) Hook.f. & Thomson Family:	Woody Vine	NE, Widely distributed across South East Asia and tropical regions	Hypertension	5	Juicing	Drinking	As needed	Depends on the user	0.011	0.011	Anjum <i>et al.</i> (2024); Praman <i>et al.</i> (2011); Praman <i>et al.</i> (2012)

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Menispermaceae Voucher No. MG-57 Location: 124											
Masaprola <i>Passiflora edulis</i> Sims Family: Passifloraceae Voucher No. GM-10 Location: 97	Vine	LC	Hypertension	1	Boiling	Drinking	As needed	Depends on the user	0.011	0.011	Juan Camilo <i>et al.</i> (2018); Ichimura <i>et al.</i> (2006); Konta <i>et al.</i> (2013); Lewis <i>et al.</i> (2013)
Mint <i>Mentha × villosa</i> Huds. Family: Lamiaceae Voucher No. GM-11 Location: 1, 7, 31, 43, 45, 51, 57, 60, 65, 70, 74, 86, 90, 92, 93, 101, 104, 111, 114, 119, 121, 122, 124, 126, 128	Herb	NE, Widely cultivated	Accident and Trauma	1, 5	Boiling	Drinking	Everyday/ As needed	1 stalk, 5 leaves	0.011	0.326	Sousa <i>et al.</i> (2009)
			Allergy	1, 5	Boiling	Drinking	Everyday/ As needed	1 stalk, 5 leaves	0.011		None
			Alzheimer's Disease	1, 5	Boiling	Drinking	Everyday/ As needed	1 stalk, 5 leaves	0.011		None
			Acute Respiratory Infection	1, 5	Boiling	Drinking	2-3x a day as needed	1 stalk, 5-20 leaves (w/ or w/o calamans i, lemon)	0.065		None

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			Cancer	1, 2, 5	Boiling, Crushing, Juicing	Chewing, Drinking, Swallowing	Everyday/ As needed	1 stalk with flower, 5 leaves	0.011		Rodriguez <i>et al.</i> (2024)
			COVID-19	1, 5	Boiling	Drinking	1-3x a day (daily until symptoms subside)	1 stalk, 2-20 leaves	0.076		None
			Diabetes Mellitus	1	Boiling, Raw	Drinking, Chewing	1x a day everyday/As needed	3 leaves	0.033		None
			Heart Disease	1, 5	Boiling	Drinking	1x a day everyday / As needed	1 stalk, 2-5 leaves;	0.033		None
			Hypertension	1, 5	Boiling	Drinking	1x a day everyday/ As needed	1 stalk, 2-20 leaves (w/ or w/o calamans i, lemon)	0.076		Guedes <i>et al.</i> (2002)
			Kidney Disease	1, 5	Boiling	Drinking	2x a day everyday/As needed	1 stalk, 5 leaves	0.022		None
			Pneumonia	1, 5	Boiling	Drinking	2x a day everyday/ As needed	1 stalk, 2-20 leaves (w/ calamans	0.043		None

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								i, lemon)			
			Post-COVID	1, 5	Boiling	Drinking	2x a day everyday/ As needed	1 stalk, 5- 20 leaves (w/ calamans i, lemon)	0.033		None
			Sepsis	1, 5	Boiling	Drinking	As needed/ everyday	1 stalk, 5 leaves	0.011		None
			Skin Disease	1, 5	Boiling	Drinking	Everyday/ As needed	1 stalk, 5 leaves	0.011		None
			Upper Respiratory Tract Infection	1, 2, 5	Boiling	Drinking	1-3x a day everyday/ until symptoms subside	1 stalk, 2-20 leaves	0.239		None
			Urinary Tract Infection	1, 5	Boiling	Drinking	2x a day everyday/ As needed	1 stalk, 5-15 leaves	0.022		None
			Vascular Diseases	1, 5	Boiling	Drinking	Everyday/ As needed	1 stalk, 5 leaves	0.022		None
			Wounds	1, 5	Heating, Extraction of Sap	Direct application to the affected part	1x a day depends on the user	1 stalk, 3-5 leaves, depends on the user	0.043		None
Mustard	Herb	NE, Widely	Hypertension	1, 5	Boiling	Drinking	As needed	Depends	0.011	0.011	None

Common Name (English or Filipino) Scientific Name	Habit	Conservation Status	Health Related Problem Treated (Cause of Morbidity/Mortality)	Part/s Used	Methods of preparation	Mode of application/ administration	Frequency and duration of use	Dosage	Use Value	RFC	Scientific Literature
<i>× Brassarda juncea</i> (L.) Su Liu & Z.H.Feng Family: Brassicaceae Voucher No. BG-14 Location: 19		cultivated						on the user			
Noni <i>Morinda citrifolia</i> L. Family Name: Rubiaceae Voucher No. GM-20 Location: 129	Shrub	LC	Cancer	3	Decoction	Drinking	Once a day	1 fruit	0.011	0.011	Brown (2012); Chanthira Kumar <i>et al.</i> (2022); Kitic <i>et al.</i> (2024); Wang & Su (2001)
Onion bulb <i>Allium cepa</i> L. Family Name: Amaryllidaceae Voucher No. BG-02 Location: 57, 59, 90, 92, 94, 104, 109,	Herb	NE, Widely cultivated	Accident and Trauma	5	Crushing	Direct application to the affected part	As needed	1 bulbous stem	0.011	0.130	None
			Acute Respiratory Infection	5	Raw	Chewing, Swallowing	Once a day until symptoms subside	1 bulbous stem /depends on the user	0.011		Beigoli <i>et al.</i> (2021)
			Allergy	5	Crushing, Raw	Direct application to the affected	Until the allergy	1 bulbous	0.044		Kaiser <i>et al.</i> (2009)

Common Name (English or Filipino) Scientific Name	Habit	Conservation Status	Health Related Problem Treated (Cause of Morbidity/Mortality)	Part/s Used	Methods of preparation	Mode of application/ administration	Frequency and duration of use	Dosage	Use Value	RFC	Scientific Literature
111						part	disappears	stem			
			Cancer	1,5	Boiling, Extraction of Juice	Drinking	As needed (daily)	5 fleshy leaves, bulbous stem with leaves	0.011		Fadholly <i>et al.</i> (2019)
			Diabetes Mellitus	3	Raw	Chewing, Swallowing	As needed (daily)	1 bulbous stem	0.022		Eldin <i>et al.</i> (2010); Choji <i>et al.</i> (2021); Esakki <i>et al.</i> (2024)
			Heart Disease	1,5	Boiling, Extraction of Juice	Drinking	As needed (daily)	5 fleshy scale leaves and stem	0.011		Saleem <i>et al.</i> (2025)
			Hypertension	5	Raw	Chewing, Swallowing	1-3x a day	1 medium sized bulbous stem/de pends on the user	0.054		Brüll <i>et al.</i> (2015)
			Post COVID	1	Boiling	Drinking	2x a day (7 days)	15 fleshy scale leaves	0.011		None
			Kidney Disease	1,5	Boiling, Extraction of Juice	Drinking	As needed (daily)	5 fleshy scale leaves	0.011		None

Common Name (English or Filipino) Scientific Name	Habit	Conservation Status	Health Related Problem Treated (Cause of Morbidity/Mortality)	Part/s Used	Methods of preparation	Mode of application/ administration	Frequency and duration of use	Dosage	Use Value	RFC	Scientific Literature
								and stem			
			Skin Disease	5	Extraction of Sap	Direct application to the affected part	Everyday/As needed	1 bulbous stem	0.033		None
			Upper Respiratory Tract Infection	5	Boiling	Drinking	As needed (2 or 3x a day)	1 bulbous stem /depends on the user	0.043		None
			Urinary Tract Infection	5	Boiling	Drinking	2x a day (1 week)	2-3 bulbous stem (15 fleshy scale leaves)	0.011		None
			Vascular Disease	1,5	Boiling, Extraction of Juice	Drinking	As needed (daily)	1 bulbous stem (5 fleshy scale leaves), 3-5 leaves	0.011		None
Onion leeks <i>Allium porrum</i> L.	Herb	NE, Domesticated	Accident and Trauma	1	Crushing	Direct application to the affected part	As needed	2 leaves	0.011	0.228	None
Family Name:			Allergy	1, 5	Crushing, Extraction of	Chewing, Direct application to the	1-3x a day	1-2 leaves, 2	0.033		None

Common Name (English or Filipino) Scientific Name	Habit	Conservation Status	Health Related Problem Treated (Cause of Morbidity/Mortality)	Part/s Used	Methods of preparation	Mode of application/ administration	Frequency and duration of use	Dosage	Use Value	RFC	Scientific Literature
Amaryllidaceae Voucher No. BG-03 Location: 7, 28, 59, 67, 72, 90, 92, 93, 103, 111, 113, 128					Sap, Juicing, Oil infusion, Powder, Raw, Heating, Cooking (ingredient in dishes)	affected part, Swallowing, Eating		stems			
			Acute Respiratory Infection	1, 5	Boiling, Oil Infusion, Raw, Cooking (ingredient in dishes)	Drinking, Inhalation, Eating	As needed	1 leaf and stem	0.033		None
			Cancer	1, 5	Boiling, Raw, Cooking (ingredient in dishes)	Drinking, Eating	As needed	5-8 leaves and stem	0.022		Iwar <i>et al.</i> (2024)
			COVID-19	1, 5	Boiling, Crushing, Juicing, Oil Infusion, Raw, Heating	Drinking, Chewing, Swallowing, Inhalation, Eating	As needed	1 leaf and stem	0.033		None
			Diabetes Mellitus	1	Raw	Chewing, Swallowing	As needed	Depends on the user	0.011		None
			Heart Disease	1, 5	Boiling, Crushing, Raw, Cooking (ingredient in dishes)	Drinking, Chewing, Swallowing, Eating	3x a day/As needed	1-8 leaves and stem	0.054		None

Common Name (English or Filipino) Scientific Name	Habit	Conservation Status	Health Related Problem Treated (Cause of Morbidity/Mortality)	Part/s Used	Methods of preparation	Mode of application/ administration	Frequency and duration of use	Dosage	Use Value	RFC	Scientific Literature
			Hypertension	1, 5	Boiling, Crushing, Juicing, Raw, Roasting/ Heating, Cooking (ingredient in dishes)	Drinking, Chewing, Swallowing, Eating	3x a day/As needed	1-8 leaves and stem /Depend s on the user	0.098		None
			Kidney Disease	1, 5	Boiling, Crushing, Juicing, Raw, Cooking (ingredient in dishes)	Drinking, Chewing, Swallowing, Eating	As needed	1 leaf and stem	0.033		None
			Pneumonia	1	Boiling, Crushing, Juicing, Oil Infusion, Raw	Drinking, Chewing, Swallowing, Inhalation, Eating	As needed	1 leaf	0.011		None
			Post-COVID	1, 4, 5	Boiling, Crushing, Juicing, Oil Infusion	Drinking, Inhalation, Swallowing	2-3x a day for 4 days/As needed	1 leaf, stem and roots	0.033		None
			Skin Disease	1, 5	Crushing, Raw, Roasting/ Heating	Direct application to the affected part	1-3x a day/As needed	2 leaves, 2 stems	0.033		Gavanji <i>et al.</i> (2023)
			Upper Respiratory Tract Infection	1, 5	Boiling, Crushing, Juicing, Oil Infusion, Raw	Drinking, Swallowing, Inhalation, Eating	1-3x a day/As needed	1 leaf, 2 stems/D depends on the	0.076		None

Common Name (English or Filipino) Scientific Name	Habit	Conservation Status	Health Related Problem Treated (Cause of Morbidity/Mortality)	Part/s Used	Methods of preparation	Mode of application/ administration	Frequency and duration of use	Dosage	Use Value	RFC	Scientific Literature
								user			
			Vascular Diseases	1	Boiling, Crushing, Juicing, Raw, Cooking (ingredient in dishes)	Drinking, Swallowing, Eating	As needed	1-8 leaves	0.033		None
			Wounds	1, 4, 5	Boiling, Crushing, Juicing, Raw, Extraction of Sap (Chinese)	Drinking, Direct application to the affected part	2-3x a day for 4 days/As needed	1-2 leaves, 2 stems, roots	0.087		None
Oregano <i>Coleus amboinicus</i> Lour. Family Name: Lamiaceae Voucher No. MG-46 Location: 1, 15, 23, 27, 31, 34, 38, 42, 43, 44, 45, 48, 51, 52, 57, 59, 63, 65, 66, 67, 68, 70, 71, 74, 76, 79, 86, 90, 91, 92, 93, 94, 95, 99, 101, 102, 104, 105, 107, 109, 111, 114, 118, 119, 122,	Subshrub	LC	Accident and Trauma	1	Extraction of Sap, Juicing	Direct application to the affected part	1-2x a day/As needed	1-3 leaves	0.022	0.707	None
			Allergy	1	Boiling, Crushing, Juicing	Drinking	2x a day/As needed	2-6 leaves	0.022		None
			Acute Respiratory Infection	1	Boiling (some half boiled), Crushing, Juicing, Powder, Roasting/ Heating	Drinking, Inhalation, Swallowing	1-6x a day for 3 days to 1 week/As needed	4-15 leaves	0.109		Arumugam <i>et al.</i> (2016)
			Cancer	1	Boiling (half boiled), Crushing, Juicing,	Drinking, Swallowing	1x a day for 7 days/ As needed	2-3 leaves	0.022		Gurning <i>et al.</i> (2025); Stefanowicz-Hajduk <i>et al.</i>

Common Name (English or Filipino) Scientific Name	Habit	Conservation Status	Health Related Problem Treated (Cause of Morbidity/Mortality)	Part/s Used	Methods of preparation	Mode of application/ administration	Frequency and duration of use	Dosage	Use Value	RFC	Scientific Literature
124, 126, 127, 128, 129					Powder						(2025)
			COVID-19	1	Boiling (some half-boiled), Crushing, Extraction of Sap, Juicing, Powder, Raw	Drinking, Chewing, Swallowing, Inhalation	2-6x a day for 5 days to 1 week/As needed	10-15 leaves	0.043		None
			Diabetes Mellitus	1	Boiling	Drinking	2x a day/As needed	2-3 leaves	0.022		Koti <i>et al.</i> (2011)
			Heart Disease	1, 6	Boiling, Juicing	Drinking	As needed	Depends on the user	0.022		None
			Hypertension	1	Boiling, Juicing	Drinking	2x a day/As needed	Depends on the user	0.011		None
			Pneumonia	1	Boiling (some half boiled), Extraction of Sap, Crushing, Juicing, Powder, Roasting/ Heating	Drinking, Chewing, Swallowing, Inhalation	3-6x a day for 1 week/As needed	5-15 leaves	0.065		None
			Post-COVID	1	Boiling (some half boiled), Crushing, Extraction of Sap, Juicing,	Drinking, Chewing, Swallowing, Inhalation	6x a day for 1 week/As needed	5-15 leaves	0.054		None

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					Roasting/ Heating						
			Skin Disease	1	Boiling, Juicing, Roasting/ Heating	Drinking, Direct application to the affected part, Poultice	1x a day for 1 week/As needed	2-15 leaves	0.043		None
			Upper Respiratory Tract Infection	1	Boiling (some half boiled), Crushing, Extraction of Sap, Juicing, Powder, Raw, Roasting/ Heating	Drinking, Chewing, Swallowing, Inhalation, Applied on body with oil	1-3x a day for 3 to 7 days or until symptoms subside	1-15 leaves	0.620		Arumugam <i>et al.</i> (2016)
			Urinary Tract Infection	1	Boiling, Juicing,	Drinking	As needed	5 leaves	0.011		None
			Wounds	1	Boiling, Crushing	Drinking, Direct application to the affected part, Poultice	As needed	1-6 leaves	0.022		Rathinavel <i>et al.</i> (2023); Jain <i>et al.</i> (2024)
Pandan <i>Pandanus amaryllifolius</i> Roxb. Family Name: Pandanaceae Voucher No. GM-12	Shrub	NE, Cultivated	Hypertension	1	Boiling	Drinking	As needed	2 leaves	0.011	0.011	Safitri <i>et al.</i> (2021)

Common Name (English or Filipino) Scientific Name	Habit	Conservation Status	Health Related Problem Treated (Cause of Morbidity/Mortality)	Part/s Used	Methods of preparation	Mode of application/ administration	Frequency and duration of use	Dosage	Use Value	RFC	Scientific Literature
Location: 86											
Papaya <i>Carica papaya</i> L. Family Name: Caricaceae Voucher No. BG-23 Location: 25, 34, 65, 92, 93, 111	Herb	LC	COVID-19	3	Boiling, Raw	Eating	Depends on the user/As needed	½ fruit	0.022	0.065	Cao <i>et al.</i> (2024)
			Heart Disease	1, 3	Boiling, Raw	Drinking, Eating	1 cup a day	Depends on the user	0.011		None
			Upper Respiratory Tract Infection	1, 2, 3	Boiling, Raw	Drinking, Eating	As needed	2 leaves, 10 flower buds, fruit depends on user	0.033		None
			Urinary Tract Infection	1, 3	Boiling, Raw	Drinking, Eating	Depends on the user/As needed	Depends on the user	0.011		Inah <i>et al.</i> (2024)
			Wounds	1	Crushing	Direct application to the affected part	2x a day/As needed	Small portion of one leaf	0.011		Gurung & Skalko-Basnet (2009); Istiqomah <i>et al.</i> (2023)
Parsley <i>Petroselinum crispum</i> (Mill.) Fuss Family Name:	Herb	LC	Diabetes Mellitus	1	Boiling	Drinking	2x a day/As needed	1 cup of leaves/ 4 leaves	0.022	0.076	Yanardag <i>et al.</i> (2003)
			Heart Disease	1	Boiling, Raw	Drinking, Chewing, Swallowing	1- 2x a day/depends on the user/As	1 cup of leaves/ 1 bunch	0.022		None

Common Name (English or Filipino) Scientific Name	Habit	Conservation Status	Health Related Problem Treated (Cause of Morbidity/Mortality)	Part/s Used	Methods of preparation	Mode of application/ administration	Frequency and duration of use	Dosage	Use Value	RFC	Scientific Literature
Apiaceae Voucher No. GM-13 Location: 45, 51, 52, 57, 65, 86, 111							needed				
			Hypertension	1, 5	Boiling, Raw	Drinking, Chewing, Swallowing	1x a day/Everyday / As needed	5 stalks/4 leaves; Depends	0.043		Ajebli & Eddouks (2019)
			Kidney Disease	1, 5	Boiling, Raw	Drinking, Chewing, Swallowing	1x a day/Everyday / As needed	5 stalks with leaves/ depends on the user	0.033		None
			Urinary Tract Infection	1, 5	Boiling, Raw	Drinking, Chewing, Swallowing	Everyday/As needed	5 stalks with leaves	0.011		None
Pomelo <i>Citrus maxima</i> (Burm.) Merr. Family Name: Rutaceae Voucher No. BG-25 Location: 5, 7, 70, 121	Tree	LC	Cancer	1, 3	Boiling, Raw	Drinking, Eating	Depends on the user/As needed	At least 1 cup of leaves, At least 1 fruit	0.011	0.044	Jha <i>et al.</i> (2025); KunduSen <i>et al.</i> (2011); Mursiti <i>et al.</i> (2021); Monteiro <i>et al.</i> (2025)
			Diabetes Mellitus	1	Boiling	Drinking	2x a day	3-5 leaves	0.011		Mohammed <i>et al.</i> (2021); Somanathan Karthiga <i>et al.</i> (2021); Ani & Aginam (2018);

Common Name (English or Filipino) Scientific Name	Habit	Conservation Status	Health Related Problem Treated (Cause of Morbidity/Mortality)	Part/s Used	Methods of preparation	Mode of application/ administration	Frequency and duration of use	Dosage	Use Value	RFC	Scientific Literature
			Heart Disease	1	Crushing	Swallowing	2x a day	3-5 leaves	0.011		Mahmoud <i>et al.</i> (2019)
			Hypertension	1	Boiling	Drinking	2x a day	3-5 leaves	0.011		Oboh <i>et al.</i> (2014)
			Upper Respiratory Tract Infection	1, 3	Boiling, Raw	Drinking, Eating	1x a week/ Depends on the user	At least 1 cup of leaves/ At least 1 fruit	0.022		None
Rosemary <i>Salvia rosmarinus</i> Spenn. Family Name: Lamiaceae Voucher No. MG-48 Location: 52, 57, 65, 72, 94, 111	Shrub	LC	Accident and Trauma	1, 3	Boiling	Drinking	As needed	5 leaves, 1 fruit	0.022	0.065	Ghasemzadeh Rahbardar & Hosseinzadeh (2020)
			Allergy	1, 3	Boiling	Drinking	As needed	5 leaves, 1 fruit	0.011		Yousef <i>et al.</i> (2020); Inoue <i>et al.</i> (2005)
			Alzheimer's Disease	1, 3	Boiling	Drinking	As needed	5 leaves, 1 fruit	0.011		Dabaghzadeh <i>et al.</i> (2022); Singh <i>et al.</i> (2024); Habtemariam (2016)
			Acute Respiratory Infection	1, 3	Boiling	Drinking	As needed	5 leaves, 1 fruit	0.011		None
			Cancer	1, 3	Boiling	Drinking	As needed	5 leaves, 1 fruit	0.011		González- Vallinas <i>et al.</i> (2015); Li & Cao (2023)

Common Name (English or Filipino) Scientific Name	Habit	Conservation Status	Health Related Problem Treated (Cause of Morbidity/Mortality)	Part/s Used	Methods of preparation	Mode of application/ administration	Frequency and duration of use	Dosage	Use Value	RFC	Scientific Literature
			COVID-19	1, 3	Boiling	Drinking	As needed	5 leaves, 1 fruit	0.011		Shiravi <i>et al.</i> (2021)
			Diabetes Mellitus	1, 3	Boiling	Drinking	As needed	5 leaves, 1 fruit	0.011		Bao <i>et al.</i> (2020); Tu <i>et al.</i> (2013); Quirarte-Baez <i>et al.</i> (2019)
			Heart Disease	1, 3	Boiling	Drinking	As needed	5 leaves, 1 fruit	0.011		None
			Hypertension	1, 3	Boiling, Roasting/Heating, Drying	Drinking, Chewing, Swallowing	2x a day as needed, 2x a week if used as maintenance	5 leaves, 1-5 fruits, depends on the user	0.043		Sahinturk & Isbil (2025)
			Kidney Disease	1, 3	Boiling	Drinking	3x a day for every other day as needed	5 leaves, 1-5 fruits, depends on the user	0.033		None
			Pneumonia	1, 3	Boiling	Drinking	3x a day as needed	5 leaves, 1 fruit	0.011		None
			Post-COVID	1, 3	Boiling	Drinking	As needed	5 leaves, 1 fruit	0.011		None
			Sepsis	1, 3	Boiling	Drinking	As needed	5 leaves, 1 fruit	0.022		None

Common Name (English or Filipino) Scientific Name	Habit	Conservation Status	Health Related Problem Treated (Cause of Morbidity/Mortality)	Part/s Used	Methods of preparation	Mode of application/ administration	Frequency and duration of use	Dosage	Use Value	RFC	Scientific Literature
			Skin Disease	1, 3	Boiling	Drinking	1x a day as needed	5 leaves, 1 fruit	0.011		Li Pomi <i>et al.</i> (2023)
			Upper Respiratory Tract Infection	1, 3	Boiling	Drinking	As needed	5 leaves, 1 fruit	0.011		None
			Urinary Tract Infection	1, 3	Boiling	Drinking	As needed	5 leaves, 1 fruit	0.011		None
			Vascular Diseases	1, 3	Boiling	Drinking	As needed	5 leaves, 1 fruit	0.011		None
			Wounds	1, 3	Boiling	Drinking	As needed	5 leaves, 1 fruit	0.011		Farahpour <i>et al.</i> (2020); Hadizadeh- Talasaz <i>et al.</i> (2022)
Sayote <i>Sicyos edulis</i> Jacq Family Name: Cucurbitaceae Voucher No. GM-14 Location: 27, 57, 59, 74, 87, 90, 92, 94, 104, 111,128	Vine	NE, Cultivated	Allergy	1, 3	Boiling, Crushing, Juicing, Raw, Cooking	Drinking, Direct application to the affected part, Eating	2x a day for 3-4 days or as needed	4 leaves, 1 fruit	0.022	0.228	None
			Acute Respiratory Infection	1, 3	Boiling, Cooking	Drinking, Eating	1-2x a day for 3-4 days or until symptoms subside	7-10 leaves, 1 fruit	0.022		None
			Cancer	1, 3	Boiling, Juicing, Cooking	Drinking, Eating	1x a day as needed	4-5 leaves, 1 fruit	0.033		Iñiguez-Luna <i>et al.</i> (2021)
			COVID-19	3	Boiling, Juicing, Raw, Cooking	Drinking, Eating	2x a day for 3-4 days	1 kilo fruit	0.022		None

Common Name (English or Filipino) Scientific Name	Habit	Conservation Status	Health Related Problem Treated (Cause of Morbidity/Mortality)	Part/s Used	Methods of preparation	Mode of application/ administration	Frequency and duration of use	Dosage	Use Value	RFC	Scientific Literature
			Diabetes Mellitus	1, 5	Boiling	Drinking	1-2x a day for 3-4 days; everyday if used as maintenance	2-5 leaves with stem	0.054		Arista-Ugalde <i>et al.</i> (2025); Sendico <i>et al.</i> (2026)
			Heart Disease	1, 3	Boiling, Cooking	Drinking, Eating	1-2x a day for 3-4 days or as needed	4 leaves, 1 fruit	0.033		None
			Hypertension	1, 3, 5	Boiling, Cooking, Pickling	Drinking, Eating	1-2x a day for 3-4 days; once a week as needed	4-5 leaves with stem, 1-3 fruits	0.152		Madrigal- Santillan <i>et al.</i> (2024); Gordon <i>et al.</i> (2000); Lombardo- Earl <i>et al.</i> (2014)
			Kidney Disease	1, 3, 5	Boiling, Cooking	Drinking, Eating	2x a day for 3-4 days or as needed	3-5 leaves with stem, 1 fruit	0.033		Castaneda <i>et al.</i> (2023)
			Pneumonia	1, 3	Boiling, Cooking	Drinking, Eating	2x a day for 3-4 days or as needed	4 leaves, 1 fruit	0.033		None
			Post-COVID	3	Cooking	Eating	As needed	At least 1 fruit	0.011		None
			Skin Disease	1, 3	Boiling, Crushing, Juicing, Raw,	Drinking, Direct application to the affected part,	2x a day for 3-4 days or as needed	4 leaves, 1 fruit	0.022		None

Common Name (English or Filipino) Scientific Name	Habit	Conservation Status	Health Related Problem Treated (Cause of Morbidity/Mortality)	Part/s Used	Methods of preparation	Mode of application/ administration	Frequency and duration of use	Dosage	Use Value	RFC	Scientific Literature
					Cooking	Eating					
			Upper Respiratory Tract Infection	1	Juicing	Drinking	As needed	Depends on user	0.011		None
			Urinary Tract Infection	1, 3	Boiling, Cooking	Drinking, Eating	2x a day for 3-4 days or as needed	4 leaves, 1 fruit	0.022		None
			Wounds	1, 3	Crushing, Juicing, Raw, Cooking	Direct application to the affected part, Eating	As needed	4 leaves, 1 fruit	0.033		Hartati <i>et al.</i> (2023)
Sili <i>Capsicum annum</i> L. Family Name: Solanaceae Voucher No. GM-21 Location: 65, 116	Subshrub/ Shrub	LC	Accident and Trauma	1, 3	Cooking (as ingredient)	Eating	As needed	2-5 leaves, 2-3 fruits	0.011	0.022	Ngalamulume <i>et al.</i> (2022)
			Cancer	1	Cooking (as ingredient)	Eating	3x a day as needed	at least 1 cup of leaves	0.011		Arul & Kothai (2020); Bley <i>et al.</i> (2012); Brown <i>et al.</i> (2023); Chapa-Oliver <i>et al.</i> (2016); Costa & Cadona (2024); Sukmanadi <i>et al.</i> (2020)
			Heart Disease	1, 3	Cooking (as ingredient)	Eating	3x a day as needed	2-5 leaves, 2-3 fruits or at least 1	0.022		Sun <i>et al.</i> (2016)

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								cup of leaves			
			Hypertension	1, 3	Cooking (as ingredient)	Eating	3x a day as needed	2-5 leaves, 2- 3 fruits	0.011		Sun <i>et al.</i> (2016); Salvador <i>et al.</i> (2015); Sanati <i>et al.</i> (2018)
			Wounds	1, 3	Cooking (as ingredient)	Eating	As needed	2-5 leaves, 2- 3 fruits	0.011		Ekong <i>et al.</i> (2021); Huang <i>et al.</i> (2023)
Slender spinach (kalkalunay) <i>Amaranthus viridis</i> L. Family name: Amaranthaceae Voucher No. GM-22 Location: 65	Herb	LC	Cancer	1	Boiling, Cooking (as ingredient)	Drinking, Eating	As needed	Depends on the user	0.011	0.011	Jin <i>et al.</i> (2013);
			Hypertension	1	Boiling, Cooking (as ingredient)	Drinking, Eating	As needed	Depends on the user	0.011		Olarewaju <i>et al.</i> (2018)
Stevia <i>Stevia rebaudiana</i> (Bertoni) Bertoni Family Name: Asteraceae Voucher No. MG-51	Subshrub	NE, Cultivated	Diabetes Mellitus	1	Boiling	Drinking	1x a day/ as needed	Depends on the user	0.011	0.022	Anker <i>et al.</i> (2019); Chowdhury <i>et al.</i> (2022); Ilić <i>et al.</i> (2017); Lestari <i>et al.</i> (2019); Harismah <i>et</i>

Common Name (English or Filipino) Scientific Name	Habit	Conservation Status	Health Related Problem Treated (Cause of Morbidity/Mortality)	Part/s Used	Methods of preparation	Mode of application/ administration	Frequency and duration of use	Dosage	Use Value	RFC	Scientific Literature
Location: 65, 111											<i>al. (2018); Raghavan et al. (2023)</i>
			Skin Disease	1	Boiling	Drinking	Everyday/ as needed	1 bunch	0.011		<i>Singh et al. (2024)</i>
Strawberry <i>Fragaria vesca</i> L. Family Name: Rosaceae Voucher No. GM-15 Location: 57, 104, 111	Herb	LC	Accident and Trauma	1	Boiling,	Drinking	As needed	10 leaves	0.011	0.065	None
			Allergy	1	Boiling	Drinking	As needed	10 leaves	0.011		None
			Alzheimer's Disease	1	Boiling	Drinking	As needed	10 leaves	0.011		None
			Acute Respiratory Infection	1, 3	Juicing, Crushing, Raw	Drinking, Chewing, Swallowing	As needed	10 leaves 5 fruits/ ¼ kilogram s of fruit	0.033		None
			Cancer	1, 3	Boiling, Juicing, Raw	Drinking, Chewing, Swallowing	As needed	10 leaves; ½ kilogram s of fruit	0.022		<i>Oldani et al. (2025); Somasagara et al. (2012)</i>
			COVID-19	1, 3	Boiling, Juicing, Raw	Drinking, Chewing, Swallowing	As needed	10 leaves; ¼ kilogram s of fruit	0.022		None
			Diabetes Mellitus	1	Boiling	Drinking	As needed	10 leaves	0.011		None
			Heart Disease	1	Boiling	Drinking	3x a day/ everyday/ as needed	10 leaves/ many leaves	0.022		None

Common Name (English or Filipino) Scientific Name	Habit	Conservation Status	Health Related Problem Treated (Cause of Morbidity/Mortality)	Part/s Used	Methods of preparation	Mode of application/ administration	Frequency and duration of use	Dosage	Use Value	RFC	Scientific Literature
			Hypertension	1	Boiling	Drinking	As needed	10 leaves	0.011		None
			Kidney Disease	1	Boiling	Drinking	As needed	10 leaves	0.011		None
			Pneumonia	1, 3	Boiling, Juicing, Raw	Drinking, Chewing, Swallowing	As needed	10 leaves/ ¼ kilogram s of fruit	0.022		None
			Post-COVID	1, 3	Boiling, Juicing, Raw	Drinking, Chewing, Swallowing	As needed	10 leaves/ ¼ kilogram s of fruit	0.022		None
			Sepsis	1	Boiling	Drinking	As needed	10 leaves	0.011		None
			Skin Disease	1	Boiling	Drinking	As needed	10 leaves	0.011		None
			Upper Respiratory Tract Infection	1, 3	Boiling, Juicing, Raw	Drinking, Chewing, Swallowing	3x a day/ as needed	10 leaves/ depends on the size of the leaf/ 5 fruits/ ¼ kilogram s of fruit	0.043		None
			Urinary Tract Infection	1	Boiling	Drinking	As needed	10 leaves	0.011		None
			Vascular Diseases	1	Boiling	Drinking	As needed	10 leaves	0.011		None
			Wounds	1	Boiling	Drinking	As needed	10 leaves	0.011		None

Common Name (English or Filipino) Scientific Name	Habit	Conservation Status	Health Related Problem Treated (Cause of Morbidity/Mortality)	Part/s Used	Methods of preparation	Mode of application/ administration	Frequency and duration of use	Dosage	Use Value	RFC	Scientific Literature
Tea (wild) <i>Sarcandra glabra</i> (Thunb.) Nakai Family Name: Chloranthaceae Voucher No. GM-16 Location: 57, 72, 92, 94, 97, 104	Shrub	LC	Accident and Trauma	1	Boiling	Drinking	As needed	5 leaves	0.011	0.087	None
			Allergy	1	Boiling, Extraction of Sap	Direct application to the affected part; Drinking	As needed	3-5 leaves	0.022		None
			Alzheimer's Disease	1	Boiling	Drinking	As needed	5 leaves	0.011		None
			Acute Respiratory Infection	1	Boiling	Drinking	As needed	5 leaves	0.011		Cao <i>et al.</i> (2012)
			Cancer	1	Boiling	Drinking	As needed	5 leaves	0.011		Li <i>et al.</i> (2007); Kang <i>et al.</i> (2008); Shen <i>et al.</i> (2022); Liu & Ou (2025);
			COVID-19	1	Boiling	Drinking	As needed	5 leaves	0.011		None
			Diabetes Mellitus	1	Boiling	Drinking	As needed	5 leaves	0.011		Liu <i>et al.</i> (2014); Liu <i>et al.</i> (2017);
			Heart Disease	1	Boiling	Drinking	As needed	5 leaves	0.011		None
			Hypertension	1	Boiling	Drinking	3x a day/ as needed	5 leaves for ½ cup	0.033		None
			Kidney Disease	1	Boiling	Drinking	As needed	5 leaves	0.022		Tang <i>et al.</i> (2026)
			Pneumonia	1	Boiling	Drinking	As needed	5 leaves	0.011		Cao <i>et al.</i> (2012)

Common Name (English or Filipino) Scientific Name	Habit	Conservation Status	Health Related Problem Treated (Cause of Morbidity/Mortality)	Part/s Used	Methods of preparation	Mode of application/ administration	Frequency and duration of use	Dosage	Use Value	RFC	Scientific Literature
			Post-COVID	1	Boiling	Drinking	As needed	5 leaves	0.011		None
			Sepsis	1	Boiling	Drinking	As needed	5 leaves	0.011		None
			Skin Disease	1	Boiling	Bathing, Direct application to the affected part, Drinking	As needed	2-5 leaves	0.022		None
			Upper Respiratory Tract Infection	1	Boiling	Drinking	3x a day/ as needed	2-5 leaves/ depends on the size of the leaf	0.043		Cao <i>et al.</i> (2012)
			Urinary Tract Infection	1	Boiling	Drinking	As needed	5 leaves	0.022		None
			Vascular Diseases	1	Boiling	Drinking	As needed	5 leaves	0.011		None
			Wounds	1	Boiling	Drinking, Direct application to the affected part	As needed	3-5 leaves	0.022		None
Tomato <i>Solanum lycopersicum</i> L. Family Name: Solanaceae Voucher No. BG-77	Subshrub	LC	Accident and Trauma	3	Raw	Direct application to the affected part (accident minor burns)	1x a day/ as needed	1-2 fruits	0.011	0.250	None
			Allergy	3	Juicing, Raw,	Drinking, Eating	1-2x a day/ as needed	Depends on the user	0.033		None
			Acute Respiratory Infection	3	Boiling, Crushing,	Drinking, Chewing,	1x a day/3x a week	3-10 fruits	0.022		None

Common Name (English or Filipino) Scientific Name	Habit	Conservation Status	Health Related Problem Treated (Cause of Morbidity/Mortality)	Part/s Used	Methods of preparation	Mode of application/ administration	Frequency and duration of use	Dosage	Use Value	RFC	Scientific Literature
Location: 1, 6, 31, 42, 57, 59, 65, 70, 103, 104, 111, 114, 118, 128					Juicing, Raw, Roasting/hea ting	Swallowing					
			Cancer	3	Boiling, Juicing, Raw, Roasting/hea ting	Drinking, Chewing, Eating	1x a day/ as needed	1-3 fruits/ depends on the user	0.054		Basu & Imrhan (2006); Giovannucci (1999); Jurado-Fasoli <i>et al.</i> (2023); Moran <i>et al.</i> (2022); Jiménez <i>et al.</i> (2024)
			COVID-19	3	Raw	Eating	1x a day/ as needed	2-3 fruits depend on size	0.033		None
			Diabetes Mellitus	3	Boiling, Juicing, Raw, Roasting/hea ting, Cooking (as ingredient)	Drinking, Chewing, Swallowing, Eating	As needed	3 fruits/ depends on the user	0.033		Banihani (2018); Alam <i>et al.</i> (2019)
			Heart Disease	3	Boiling, Crushing, Juicing, Raw, Roasting/hea ting, Cooking (as ingredient)	Drinking, Chewing, Swallowing, Eating	1x a day/ as needed	1-10 fruits/ depends on the user	0.076		Przybylska (2022)

Common Name (English or Filipino) Scientific Name	Habit	Conservation Status	Health Related Problem Treated (Cause of Morbidity/Mortality)	Part/s Used	Methods of preparation	Mode of application/ administration	Frequency and duration of use	Dosage	Use Value	RFC	Scientific Literature
			Hypertension	3	Juicing, Raw, Roasting/hea ting, Cooking (as ingredient)	Drinking, Chewing, Swallowing, Eating	As needed	Depends on the user	0.043		Rezaei Kelishadi <i>et al.</i> (2022); Rattanaivan on <i>et al.</i> (2021); Murcia- Lesmes <i>et al.</i> (2023)
			Kidney Disease	3	Juicing, Raw, Cooking (as ingredient)	Drinking, Chewing, Swallowing, Eating	As needed	Depends on the user	0.011		None
			Pneumonia	3	Juicing, Raw	Drinking, Eating	1x a day/ as needed	4- 10 fruits	0.022		None
			Post-COVID	3	Juicing, Raw, Cooking (as ingredient)	Drinking,Eating	As needed	4 fruits	0.011		None
			Skin Disease	3	Boiling, Juicing, Extraction of sap, Raw	Direct application to the affected part, Drinking, Eating	1x a day as needed	4- 10 fruits	0.043		None
			Upper Respiratory Tract Infection	3	Boiling, Juicing, Raw, Cooking (as ingredient)	Drinking, Eating	1-2x a day/ 3x a week/ everyday	1-10 fruits	0.043		None
			Urinary Tract Infection	3	Juicing, Raw, Cooking (as ingredient)	Drinking, Eating	As needed	Depends on the user	0.011		None

Common Name (English or Filipino) Scientific Name	Habit	Conservation Status	Health Related Problem Treated (Cause of Morbidity/Mortality)	Part/s Used	Methods of preparation	Mode of application/ administration	Frequency and duration of use	Dosage	Use Value	RFC	Scientific Literature
			Vascular Diseases	3	Juicing, Raw, Cooking (as ingredient)	Drinking, Eating	As needed	10 fruits	0.011		Alam <i>et al.</i> (2019); Przybylska & Tokarczyk (2022)
			Wounds	3	Boiling, Juicing, Raw, Mashed	Drinking, Direct application to the affected part	2-3x a day/ as needed	5-10 fruits/ depends on the size	0.076		None

Legend: Parts 1-Leaves; 2- Flower; 3- Fruits; 4- Roots; 5-Stem; 6-Seeds; 7- Whole Plant; 8- Bark. Conservation Status: LC- Least Concern, EN- Endangered, DD- Data Deficient, NE- Not Evaluated

Appendix 2. Ranking of top 10 plants used for health problems based on fidelity level and use value.

HP1-Accident and Trauma			HP2-Allergy		
	% FL	UV		% FL	UV
1 Aloe vera	16.667	0.043	1 Aloe vera	26.667	0.130
2 Chives	12.500	0.033	2 Lemon grass	11.111	0.054
3 Rosemary	8.333	0.022	3 Onion bulb	8.889	0.044
4 Oregano	8.333	0.022	4 Onion leeks	6.667	0.033
5 Spinach	4.167	0.011	5 Tomato	6.667	0.033
6 Strawberry	4.167	0.011	6 Oregano	4.444	0.022
7 Tea	4.167	0.011	7 Sayote	4.444	0.022
8 Onion bulb	4.167	0.011	8 Common Spinach	4.444	0.022
9 Onion leeks	4.167	0.011	9 Tea	4.444	0.022
10 Tomato	4.167	0.011	10 Avocado	2.222	0.011

HP3-Alzheimer's Disease			HP4-Acute Respiratory Infection		
	% FL	UV		% FL	UV
1 Aloe vera	10	0.011	1 Oregano	21.277	0.109
2 Calamansi	10	0.011	2 Mint	12.766	0.065
3 Camote	10	0.011	3 Lemon grass	10.638	0.054
4 Lemon	10	0.011	4 Calamansi	6.383	0.033
5 Lemon grass	10	0.011	5 Lemon	6.383	0.033
6 Mint	10	0.011	6 Onion leeks	6.383	0.033
7 Rosemary	10	0.011	7 Strawberry	6.383	0.033
8 Common Spinach	10	0.011	8 Aloe vera	4.255	0.022
9 Strawberry	10	0.011	9 Garlic	4.255	0.022
10 Tea	10	0.011	10 Sayote	4.255	0.022

HP5-Cancer			HP6-Coronavirus disease (COVID 19)		
	% FL	UV		% FL	UV
1 Tomato	13.514	0.054	1 Lemon	16.981	0.098
2 Camote	13.514	0.054	2 Cabbage	13.208	0.076
3 Lemon grass	10.811	0.044	3 Mint	13.208	0.076
4 Sayote	8.108	0.033	4 Lemon Grass	9.434	0.054
5 Lemon	5.405	0.022	5 Oregano	7.547	0.043
6 Onion leeks	5.405	0.022	6 Calamansi	5.660	0.033
7 Oregano	5.405	0.022	7 Onion Leeks	5.660	0.033
8 Strawberry	5.405	0.022	8 Tomato	5.660	0.033
9 Bitter melon	2.703	0.011	9 Papaya	3.774	0.022
10 Calamansi	2.703	0.011	10 Sayote	3.774	0.022

HP7-Diabetes Mellitus			HP8-Heart Disease		
	% FL	UV		% FL	UV
1 Bitter Melon	19.672	0.130	1 Lemon grass	14.815	0.087
2 Insulin	9.836	0.065	2 Tomato	12.963	0.076
3 Lemon Grass	9.836	0.065	3 Onion leeks	9.259	0.054
4 Camote	8.197	0.054	4 Common Spinach	9.259	0.054
5 Sayote	8.197	0.054	5 Camote	5.556	0.033
6 Mint	4.918	0.033	6 Mint	5.556	0.033
7 Tomato	4.918	0.033	7 Sayote	5.556	0.033

HP1-Accident and Trauma			HP2-Allergy		
	% FL	UV		% FL	UV
8 Calamansi	3.279	0.022	8 Oregano	3.704	0.022
9 Onion bulb	3.279	0.022	9 Parsley	3.704	0.022
10 Oregano	3.279	0.022	10 Sili	3.704	0.022

HP9-Hypertension			HP10-Kidney Disease		
	% FL	UV		% FL	UV
1 Lemon grass	19.167	0.250	1 Lemon grass	35.556	0.174
2 Sayote	11.667	0.152	2 Onion leeks	6.667	0.033
3 Camote	9.167	0.120	3 Parsley	6.667	0.033
4 Onion leeks	7.500	0.098	4 Rosemary	6.667	0.033
5 Mint	5.833	0.076	5 Sayote	6.667	0.033
6 Calamansi	4.167	0.054	6 Mint	4.444	0.022
7 Onion bulb	4.167	0.054	7 Common Spinach	4.444	0.022
8 Bitter melon	3.333	0.043	8 Tea	4.444	0.022
9 Cabbage	3.333	0.043	9 Avocado	2.222	0.011
10 Lemon	3.333	0.043	10 Bitter melon	2.222	0.011

HP11-Pneumonia			HP12-Post-COVID		
	% FL	UV		% FL	UV
1 Oregano	13.953	0.065	1 Lemon	19.512	0.087
2 Lemon	11.628	0.054	2 Calamansi	12.195	0.054
3 Calamansi	9.302	0.043	3 Oregano	12.195	0.054
4 Lemon grass	9.302	0.043	4 Lemon grass	9.756	0.043
5 Mint	9.302	0.043	5 Cabbage	7.317	0.033
6 Cabbage	6.977	0.033	6 Mint	7.317	0.033
7 Sayote	6.977	0.033	7 Onion leeks	7.317	0.033
8 Common Spinach	6.977	0.033	8 Strawberry	4.878	0.022
9 Strawberry	4.651	0.022	9 Chives	2.439	0.011
10 Tomato	4.651	0.022	10 Garlic	2.439	0.011

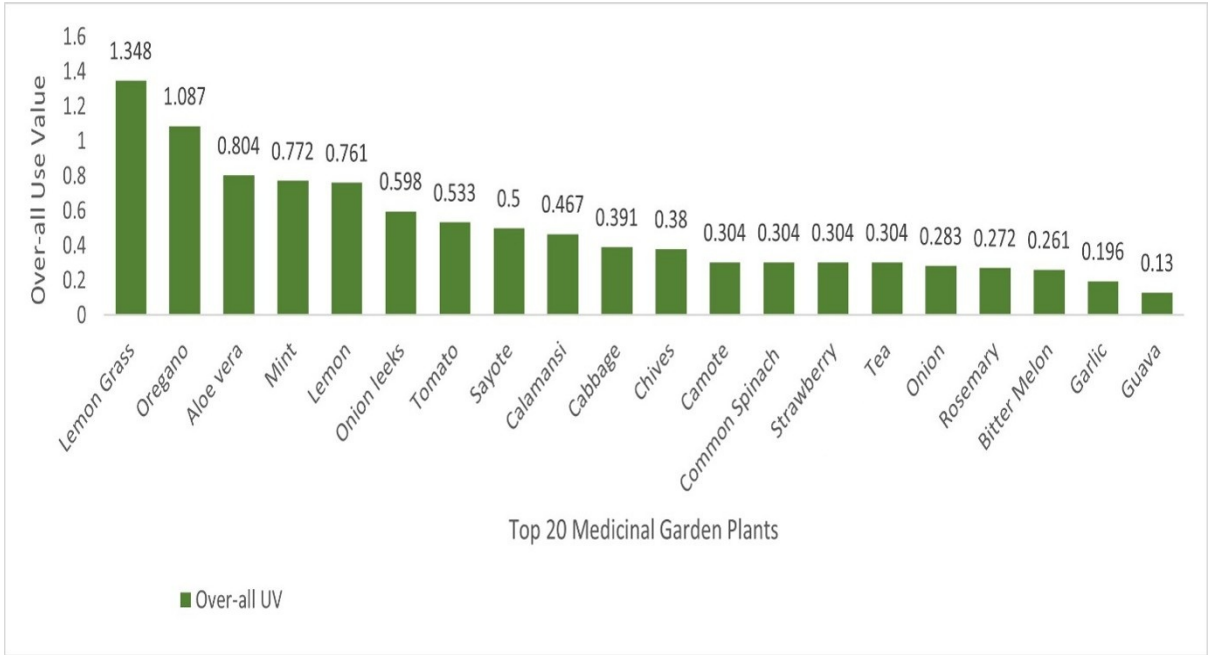
HP13-Sepsis			HP14-Skin Disease		
	% FL	UV		% FL	UV
1 Lemon grass	20	0.022	1 Aloe vera	39.706	0.293
2 Rosemary	20	0.022	2 Oregano	5.882	0.043
3 Camote	10	0.011	3 Tomato	5.882	0.043
4 Lemon	10	0.011	4 Chives	4.412	0.033
5 Mint	10	0.011	5 Lemon	4.412	0.033
6 Common Spinach	10	0.011	6 Lemon grass	4.412	0.033
7 Strawberry	10	0.011	7 Onion bulb	4.412	0.033
8 Tea	10	0.011	8 Onion leeks	4.412	0.033
			9 Bitter melon	2.941	0.022
			10 Cabbage	2.941	0.022

HP15-Upper Respiratory Tract Infection			HP16-Urinary Tract Infection		
	% FL	UV		% FL	UV
1 Oregano	27.404	0.620	1 Lemon grass	40.541	0.163
2 Lemon	12.019	0.272	2 Lemon	5.405	0.022
3 Mint	10.577	0.239	3 Mint	5.405	0.022
4 Lemon grass	9.615	0.217	4 Sayote	5.405	0.022

HP1-Accident and Trauma			HP2-Allergy		
	% FL	UV		% FL	UV
5 Cabbage	6.731	0.152	5 Tea	5.405	0.022
6 Calamansi	6.731	0.152	6 Avocado	2.703	0.011
7 Onion leeks	3.365	0.076	7 Balbas pusa	2.703	0.011
8 Aloe vera	2.885	0.065	8 Cabbage	2.703	0.011
9 Lagundi	2.404	0.054	9 Coffee	2.703	0.011
10 Chives	1.923	0.043	10 Garlic	2.703	0.011

HP17-Vascular Disease			HP18-Wounds		
	% FL	UV		% FL	UV
1 Onion leeks	21.429	0.033	1 Chives	22.353	0.207
2 Mint	14.286	0.022	2 Aloe vera	21.176	0.196
3 Chives	7.143	0.011	3 Guava	10.588	0.098
4 Garlic	7.143	0.011	4 Onion leeks	9.412	0.087
5 Lemon	7.143	0.011	5 Tomato	8.235	0.076
6 Lemon grass	7.143	0.011	6 Mint	4.706	0.043
7 Onion bulb	7.143	0.011	7 Sayote	3.529	0.033
8 Rosemary	7.143	0.011	8 Oregano	2.353	0.022
9 Common Spinach	7.143	0.011	9 Tea	2.353	0.022
10 Strawberry	7.143	0.011	10 Bitter melon	1.176	0.011

Appendix 3. Ranking of medicinal plants based on use value.



Appendix 4. Ranking of health problems addressed using barangay medicinal plants based on Informant Consensus Factor.

Health Problem	Nur (No. of Use Reports)	Nt (No. of Plant Species)	ICF	Rank
HP15-Upper Respiratory Tract Infection	208	25	0.884	1
HP9-Hypertension	120	29	0.765	2
HP18-Wounds	85	22	0.750	3
HP6-Coronavirus disease (COVID 19)	53	16	0.712	4
HP14-Skin Disease	68	22	0.687	5
HP4-Acute Respiratory Infection	47	17	0.652	6
HP12-Post-COVID	41	16	0.625	7
HP11-Pneumonia	43	17	0.619	8
HP7-Diabetes Mellitus	61	24	0.617	9
HP2-Allergy	45	19	0.591	10
HP10-Kidney Disease	45	19	0.591	11
HP8-Heart Disease	54	24	0.566	12
HP16-Urinary Tract Infection	37	19	0.500	13
HP5-Cancer	37	20	0.472	14
HP1-Accident and Trauma	24	17	0.304	15
HP13-Sepsis	10	8	0.222	16
HP17-Vascular Disease	14	12	0.154	17
HP3-Alzheimer's Disease	10	10	0.000	18

Appendix 5. Survey questions.

1. What is/are the medicinal plant/s in your barangay?
2. Which part/s is/are used?
 - ☐ A-Leaves
 - ☐ B-Flowers
 - ☐ C-Fruits
 - ☐ D-Roots
 - ☐ E-Stem
 - ☐ F-Seeds
 - ☐ G-Whole Plant
3. What is/are the health problem/s treated using the plant/s? Specify.
4. How is the method of preparation?
 - ☐ Boiling
 - ☐ Crushing
 - ☐ Extraction of Sap
 - ☐ Juicing
 - ☐ Oil infusion
 - ☐ Paste
 - ☐ Powder
 - ☐ Raw
 - ☐ Roasting/heating
 - ☐ Others
5. How is it applied or used? (Mode of Administration/Application)
 - ☐ Drinking
 - ☐ Poultice
 - ☐ Inhalation
 - ☐ Chewing
 - ☐ Swallowing
 - ☐ Bathing
 - ☐ Direct application to the affected part
 - ☐ Others
6. How many times per day? How long? (Frequency and duration of use)
 - Times per day:
 - Number of days:
 - Others:
7. How much will be used? (Dosage)
 - Number/Amount of part/s used: