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Food Uses as Kitchen Medicine: Patterns, Practices and Gender Differences in Thoubal District, Manipur

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Abstract

This study explores the intersection of gender dynamics, culinary traditions, and medicinal knowledge within the Manipuri cultural context, with a focus on the disparities in culinary knowledge and kitchen medicine between men and women. In the traditional Manipuri household, culinary skills are predominantly passed down from mother to daughter, while men are culturally restricted from engaging in domestic cooking, often under the belief that such involvement threatens their virility. However, during large ceremonial feasts, men assume the role of both chefs and culinary artists, challenging this gendered boundary in specific ceremonial contexts. The study investigates how these gendered roles shape the understanding and use of kitchen medicine, particularly the preparation of medicinal herbs and other ingredients with therapeutic properties. By utilizing a mixed-method approach, including qualitative tools such as participant interviews, semi-structured surveys, and expert discussions, the research highlights the differing levels of expertise in food production and its medicinal applications among men and women in both urban and rural settings. The study employs multi-stage sampling to ensure a diverse representation of respondents, with a focus on the Thoubal district of Manipur, and adapts various analytical frameworks to assess the factors influencing gendered culinary practices and medical knowledge. The findings aim to contribute to a deeper understanding of how gender roles in food preparation and the use of medicinal plants inform the health practices and cultural traditions of Manipuri families. The study's insights into the conservation of traditional knowledge and its relevance in modern society provide valuable perspectives on the role of gender in the transmission of culinary and medicinal expertise.

Keywords: Culinary, tradition, kitchen medicine, ceremonial feast, medicinal knowledge

Introduction

In the Manipuri tradition, mothers pass along their culinary knowledge to their daughters through word of mouth. In addition, many men in traditional patriarchal hierarchical families are counseled to stay out of the kitchen or risk losing their virility in the eyes of other men in their household and in society at large (Taillie, 2018) [54]. But according to Manipuri tradition, only men are allowed to take on the major role of artist and cook during large feast ceremonies for the large number of elderly, young, and female guests. Women are not allowed to prepare the feast for major ceremonial occasions under these conditions and in this particular ceremonial context. Men and women may have different understanding about food production and its medicinal applications in connection to this position. Given these foundational issues and gaps in the field, the current study set out to address them by examining the factors that influence gender disparities in knowledge and how those differences relate to kitchen medicine (Cerrato *et al*. 2018; Joseph and Voeks, 2021) [11, 27]. There is probably a long history of gender inequality in underdeveloped nations when it comes to the knowledge of medicinal plants, with men and women having different levels of expertise in urban and rural kitchens. In light of that perspective, gendered roles in family cooking may have contributed to the family's medical knowledge as a variety of medicinal herbs and other living and nonliving entities are also used in food preparation. Therefore, it is imperative to ascertain how gender differences exist in Manipur between the usage and knowledge of kitchen medicine among men and women.

Material and Methods

Participant remarks, semi-dependent interviews, and surveys were among the qualitative and quantitative tools used in the investigations. Data assessment techniques were adapted from earlier research on gender dynamics, traditional knowledge systems, and culinary customs. A thorough examination of the complex interactions between gender, medical knowledge, and culinary customs within Manipuri families was made possible by this analytical approach, which also made it possible to obtain a nuanced understanding of the conservation of traditional knowledge and the roles that

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gender plays in culinary traditions. Using the methodologies of da Costa *et al*. 2021 [12]; Ribeiro *et al*. 2017; Taillie (2018) [54]; Lyon *et al*. 2011 [34]; Cerrato *et al*. 2018 [11]; and Mutie *et al*. 2023 [45], the findings data were evaluated. Protocol of Martin (2010) [40] was used as ranking score for the 97 selected foods used as frequently by the respondent among the cited items of 481 for the treatment of various types of 481 common diseases.

Sampling

In order to guarantee that the sample population was well represented and diverse, this study used a strict multi-stage sampling approach. In order to close the gaps left by the first survey phase, the Thoubal district of Manipur first underwent a comprehensive process of stratification that takes into account both geographic areas and socio-demographic features in the years 2020 and 2021. These findings were then further refined. Only the years 2022–2023 were allowed this survey to end. Subsequently, engaging in expert discussions and refining the reports encountered challenges and setbacks due to a variety of factors, including inconvenient topography, non-supportive responses from respondents that resulted in incomplete data acquisition, and interstate conflicts that again seriously interrupt the data surveying process. But ultimately, in the years 2023–2024, this study was able to complete and began the process of compiling results. This provides assurance that the sample chosen fairly reflects the district's diverse population. To select villages within each stratum, cluster sampling approaches were used, accounting for factors like convenience, accessibility, and demographic diversity. This methodology guaranteed the collection of a wide variety of viewpoints. Following that, houses were chosen from among the villages that had been chosen using a combination of convenience and judgmental sampling techniques. As a result, the test's results were more diverse and thorough because this technique ensures that a wide range of socioeconomic backgrounds and gender compositions are included. To further improve the breadth and depth of the data collected, snowball sampling was used to find key informants who possess in-depth knowledge of conventional culinary and medical practices. By using a strict selection strategy, this study sought to capture the richness and minute intricacies of traditional knowledge within Manipuri families. Through a thorough examination of gender dynamics and culinary traditions, the study hoped to get important insights into the socio-economic dynamics and cultural history of the study region. The results of this study can provide a profound knowledge of traditional food used as kitchen medicine and their importance in modern society. Likert chart and five point scale were used according to Martin (2010) [40].

HO: There is no significant difference in the knowledge of using kitchen food as medicine between males and females.

H4: There is a significant difference in the knowledge of using kitchen food as medicine between males and females.

Table 1: One-sample statistics

Gender		N	Mean	Std. Deviation	Std. Error Mean
.	Gender	0a,b	.	.	.
	Number of food used as kitchen medicine	0a,b	.	.	.
Male	Gender	88	1.00	.000[c]	.000
	Number of food used as kitchen medicine	88	10.08	7.416	.791
Female	Gender	128	2.00	.000[c]	.000
	Number of food used as kitchen medicine	128	9.79	6.250	.552
a) t cannot be computed because the sum of case weights is less than or equal 1.					
b) t cannot be computed. There are no valid cases for this analysis because all case weights are not positive.					
c) t cannot be computed because the standard deviation is 0.					

Results and Discussion

Descriptive data are shown in the table 1 for two variables, "Gender" and "Number of Food Used as Kitchen Medicine," broken down by gender (male and female). In the table, the number of participants (N) in each gender group is indicated by the numerical coding of the variable "Gender" (1 for Male, 2 for Female). The standard deviation is 7.416 and the standard error of the mean (SEM) is 0.791 for the male participants (N = 88), who had an average of 10.08 kitchen foods classified as medicine. With a standard deviation of 6.250 and a SEM of 0.552, the mean number of kitchen foods classified as medicine among the female participants (N = 128) is 9.79. The table's annotations provide clarification on whether particular circumstances-such as a zero standard deviation or inadequate case weights-made it impossible to do certain statistical calculations, such as t-tests. These figures provide light on how male and female participants were distributed and how their expertise of utilizing food from the kitchen as medication varied.

Table 2: One-Sample Test

Gender		Test Value = 0					
		t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
						Lower	Upper
Male	Number of food used as kitchen medicine	12.750	87	.000	10.080	8.51	11.65
Female	Number of food used as kitchen medicine	17.719	127	.000	9.789	8.70	10.88
a. No statistics are computed for one or more split files							

The findings of independent samples t-tests, which were carried out independently for male and female participants to compare their knowledge of utilizing common kitchen items as medication, are shown in the table 2. There are considerable gender-based disparities in this knowledge, according to the highly significant results ($p < .001$). With mean differences of 10.080 for men and 9.789 for women, male participants specifically show a considerably higher level of familiarity with kitchen meals as medication as compared to female participants. The statistical significance is corroborated by the 95% confidence intervals around these disparities, which demonstrate a significant gender gap in knowledge among the population under study. These findings highlight the need of taking gender into account when comprehending and disseminating information on kitchen-based as medicine practices.

HO: There is no significant difference in the number of kitchen items identified for food as medicine between males and females across different age groups.

H5: There is a significant difference in the number of kitchen items identified for food as medicine between males and females across different age groups.

Fig 1(a): Number of food used as kitchen medicine

The number of food classified as "kitchen medicine" by gender is seen in this graph (Fig 1 a & b). Although people of every gender recognize foods with therapeutic qualities, men tend to link s somewhat more items (10.15) to this category than women (9.79).

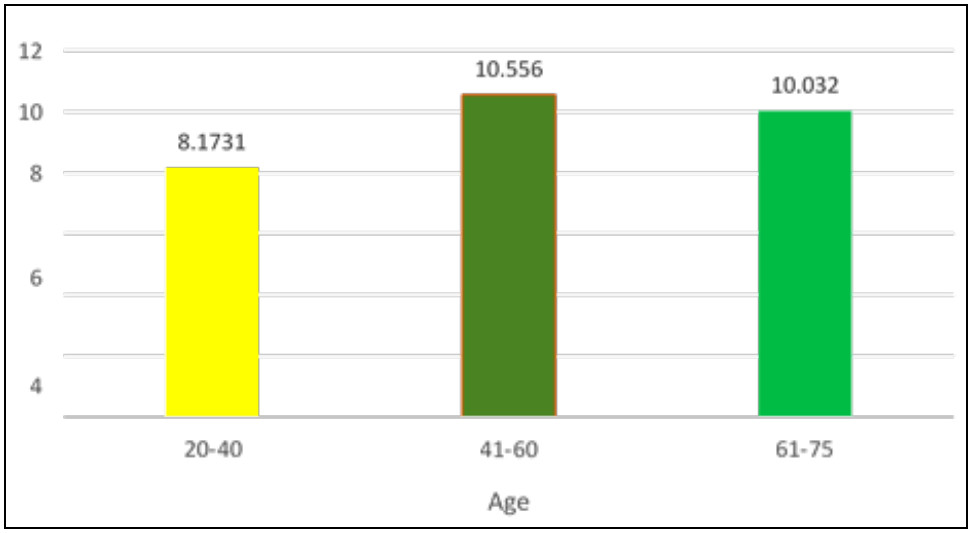

Fig 1(b): Number of food used as kitchen medicine

The bar graph supplied in this study seems to display the average age of a population divided into three age groups, most likely in the United States and other researchers. The age groups are shown on the x-axis, while the average age is shown on the y-axis. There are three age groups: 20–40, 41–60, and 61–75. According to the statistics, the average age rises as the age groups become older. For example, the average age of people in the 20–40 age group is lower than that of those in the 41–60 age group.

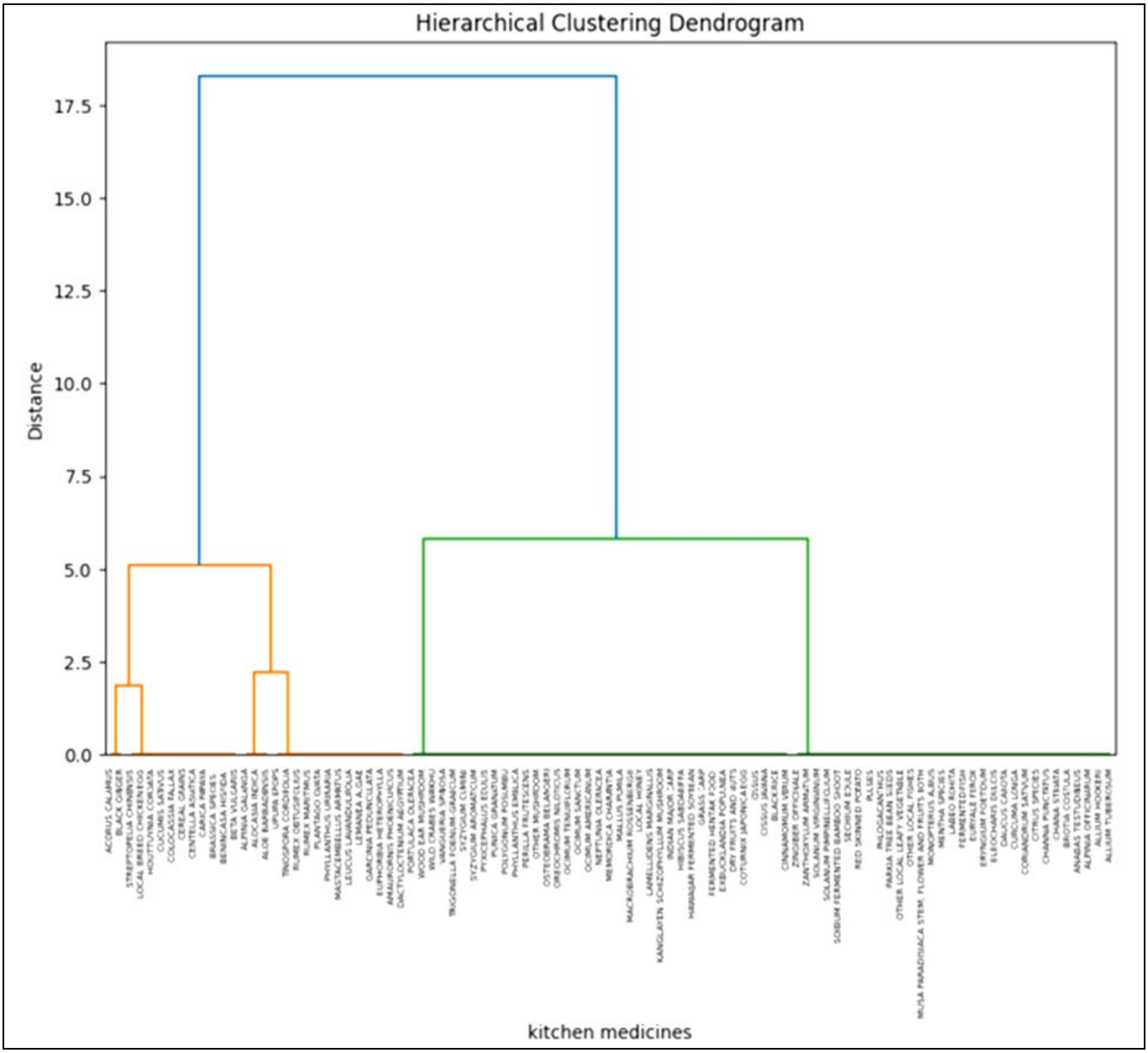

Fig 2: Hierarchical clustering dendrogram

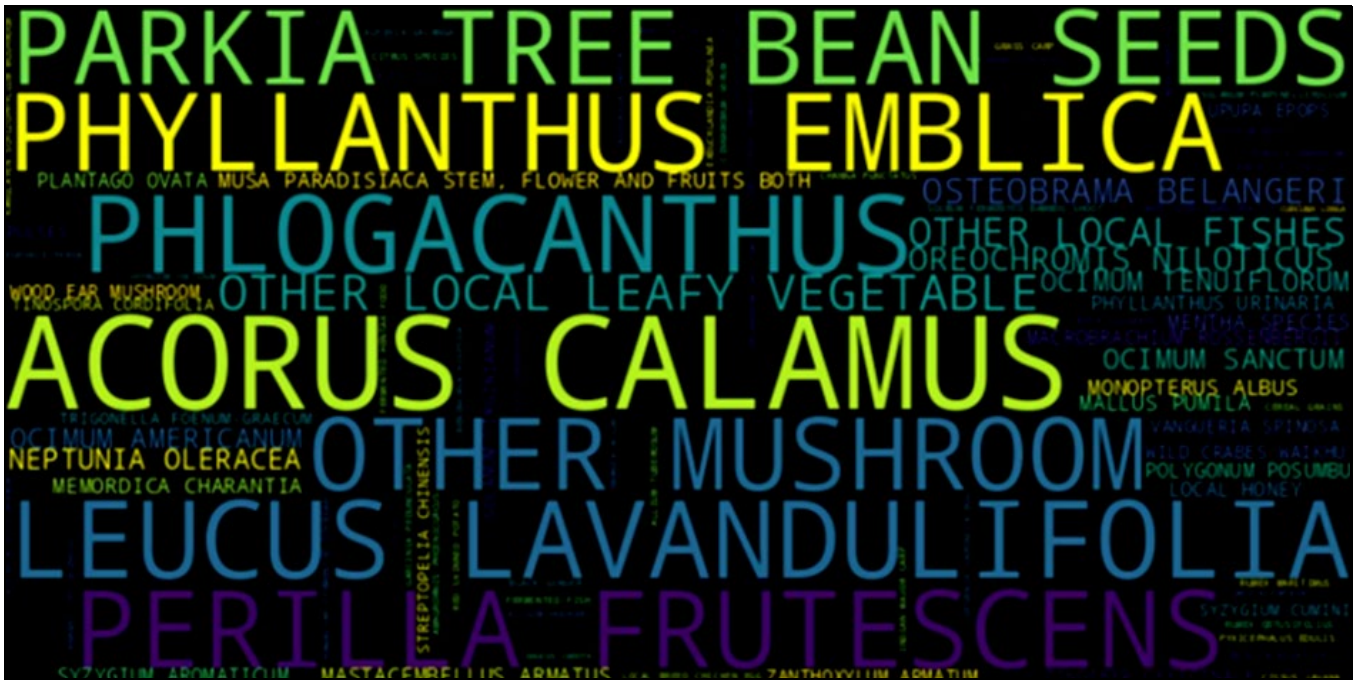

Fig 3: Word cloud of Kitchen Medicine

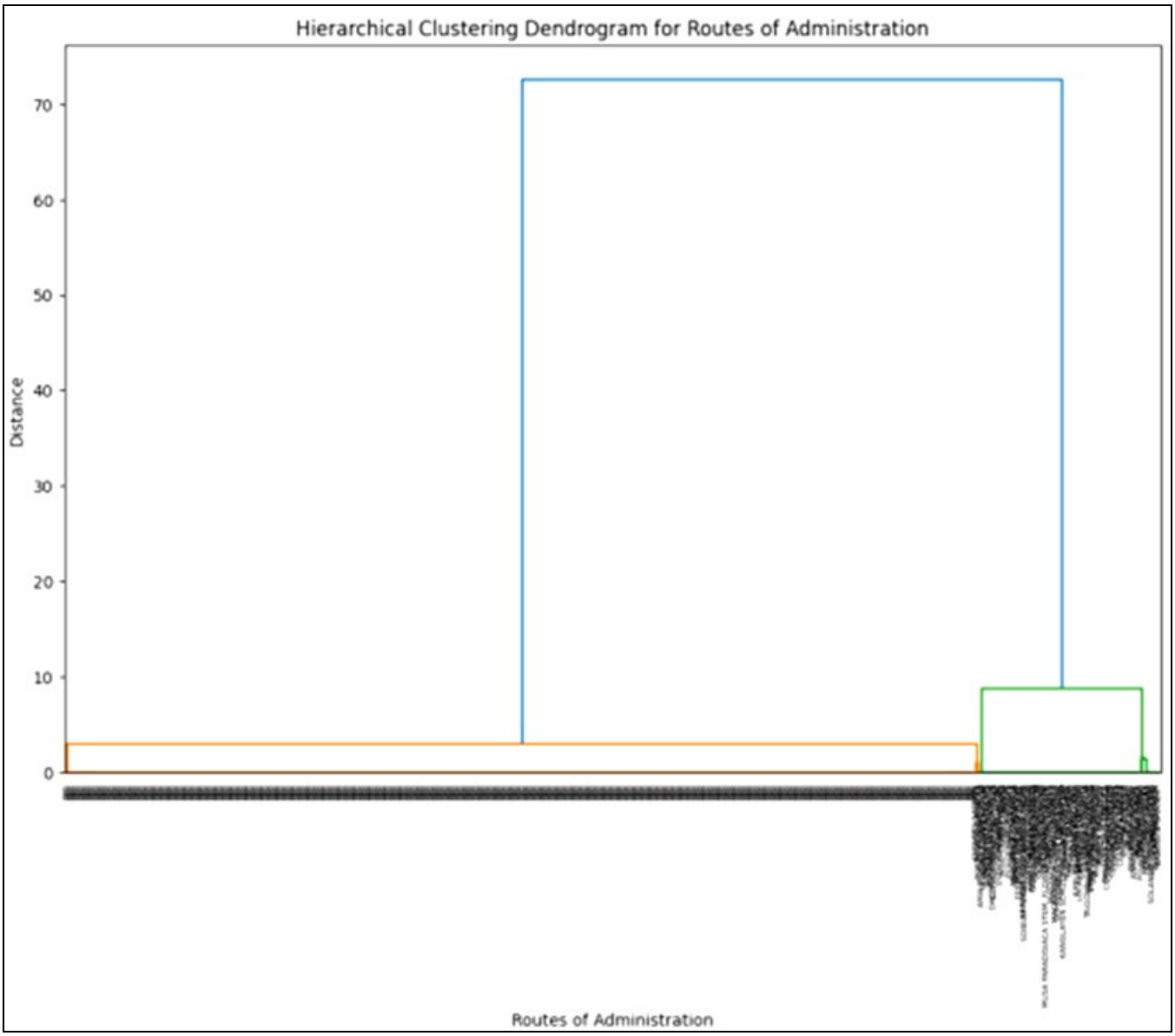

Fig 4: Hierarchical clustering dendrogram for routs of administration

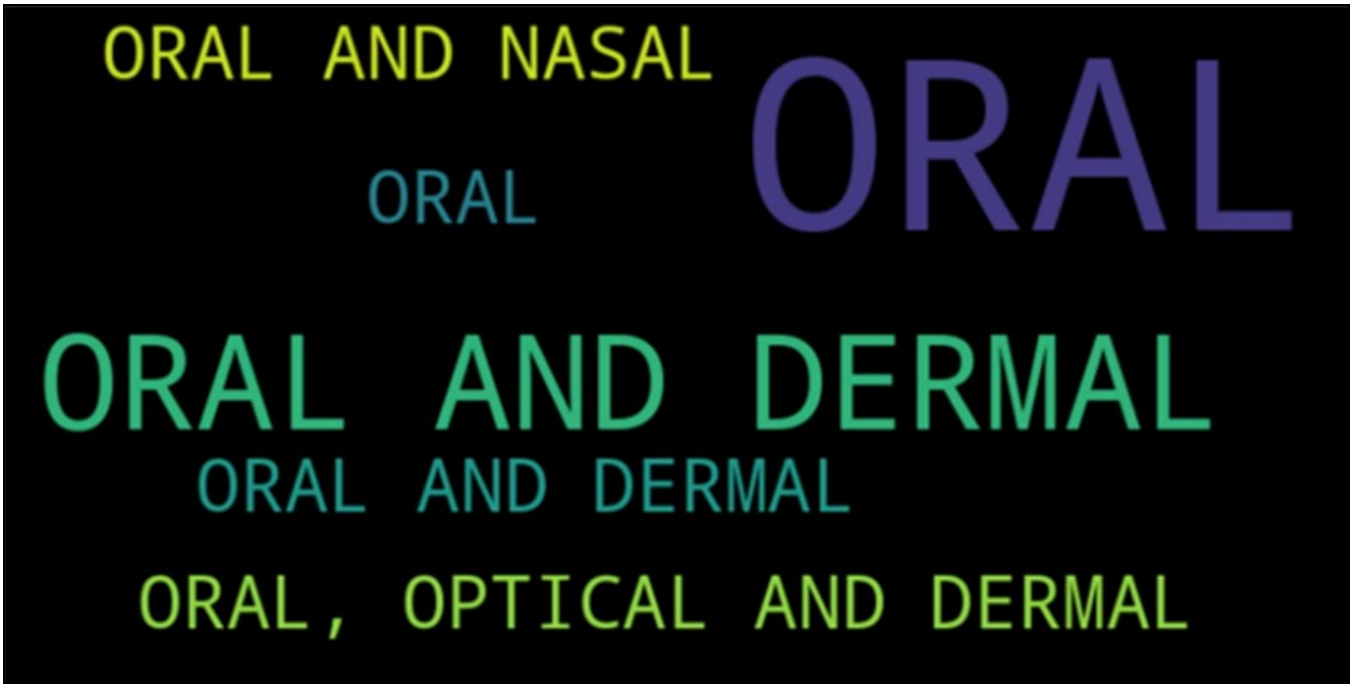

Fig 5: Word cloud of routs of administration

The hierarchical clustering of kitchen medication frequencies and their word clouds corresponding to the route of administration is represented by the dendrogram (Figs. 2, 3, 4, and 5). The branches show how these medications are grouped together according to their frequency, and each leaf node represents a distinct kitchen remedy. The distance between clusters is represented by the height of each node in the dendrogram. The frequency of different kitchen medicines is represented by the word cloud. Each word's magnitude in the cloud corresponds to how frequently it occurs in the dataset.

We have documented 188 distinct types of ailments that the participants in our study experienced on a daily basis. We also noted that a total of 97 foods were utilized as remedies in the kitchen by the respondents for various illnesses. Once more, we used a 5-point rating system to categorize the food list cited as "Frequency of Uses in Month." After classifying these foods once more under "Routes of Administration," it was discovered that oral application (fig. 9) was the most popular mode of administration. Additional food classifications are provided in the "Mode of Preparation and Uses" section of Figure 6, where 27 different forms of preparation are discovered. The most common methods for preparing food were decoction, cooked, boiled, raw, and salad.

Based on the Application of Ailments (figs. 7 & 8) and the Likert 4-Point Scale of Martin (2010) [40], the following categories were used: highly utilized, moderately utilized, low moderately utilized, and little. Based on this chart, we discovered that 38.65% of highly utilized was on the treatment of aliments. Our thorough analysis of five sheets' worth of kitchen medication data produced some noteworthy conclusions.

Initially, we determined common kitchen treatments and how often they were used, giving us an understanding of the most widely used remedies in the studied area. Second, a review of administration routes revealed a range of methods for application and ingestion, indicating the adaptability of over-the-counter medications in the management of various ailments. Third, the examination of disease types and nutritional attributes brought to light the various therapeutic outcomes of these conventional remedies. Additionally, the many therapeutic uses of kitchen medicines, ranging from immunological support to digestive health, were revealed by insights from illness applications.

Finally, our hierarchical clustering dendrograms gave useful representations of probable groupings and patterns in the data, providing insights into the relationships between distinct variables. Overall, our findings add to a better knowledge of kitchen medicine practices, providing useful insights for future research and potential uses in traditional medicine and natural cures.

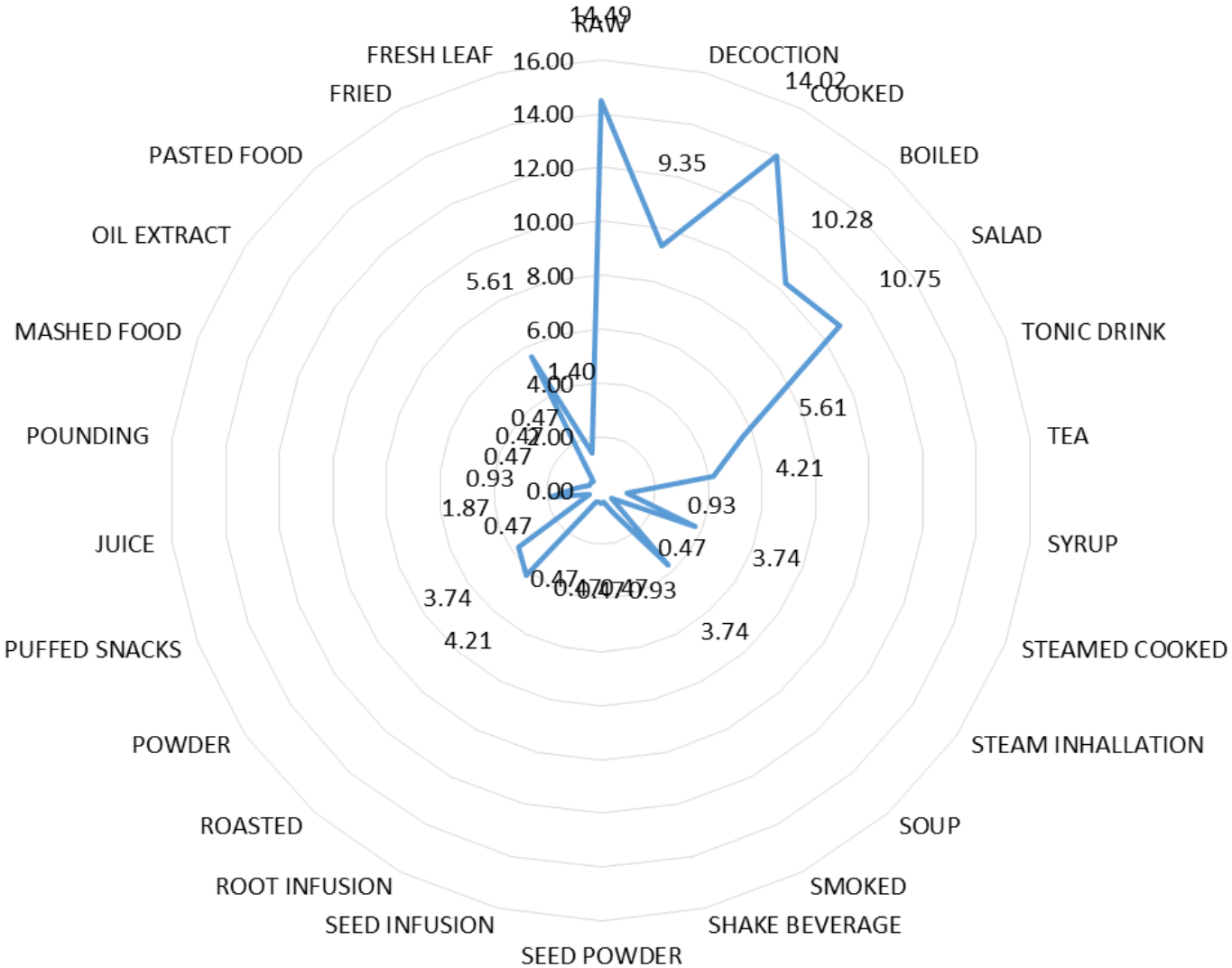

Fig 6 (a & b): Mode of Preparation and Uses

Table 3: Mode of food preparation

	Frequency	Relative Frequency	Percent
Raw	31	0.14486	14.49
Decoction	20	0.093458	9.35
Cooked	30	0.140187	14.02
Boiled	22	0.102804	10.28
Salad	23	0.107477	10.75
Tonic drink	12	0.056075	5.61
Tea	9	0.042056	4.21
Syrup	2	0.009346	0.93
Steamed cooked	8	0.037383	3.74
Steam inhalation	1	0.004673	0.47
Soup	8	0.037383	3.74
Smoked	2	0.009346	0.93
Shake beverage	1	0.004673	0.47
Seed powder	1	0.004673	0.47
Seed infusion	1	0.004673	0.47
Root infusion	1	0.004673	0.47
Roasted	9	0.042056	4.21
Powder	8	0.037383	3.74
Puffed snacks	1	0.004673	0.47
Juice	4	0.018692	1.87
Pounding	2	0.009346	0.93
Mashed food	1	0.004673	0.47
Oil extract	1	0.004673	0.47
Pasted food	1	0.004673	0.47
Fried	12	0.056075	5.61
Fresh leaf	2	0.009346	0.93
Fresh leaf stalk	1	0.004673	0.47
Total	214	1	100.00

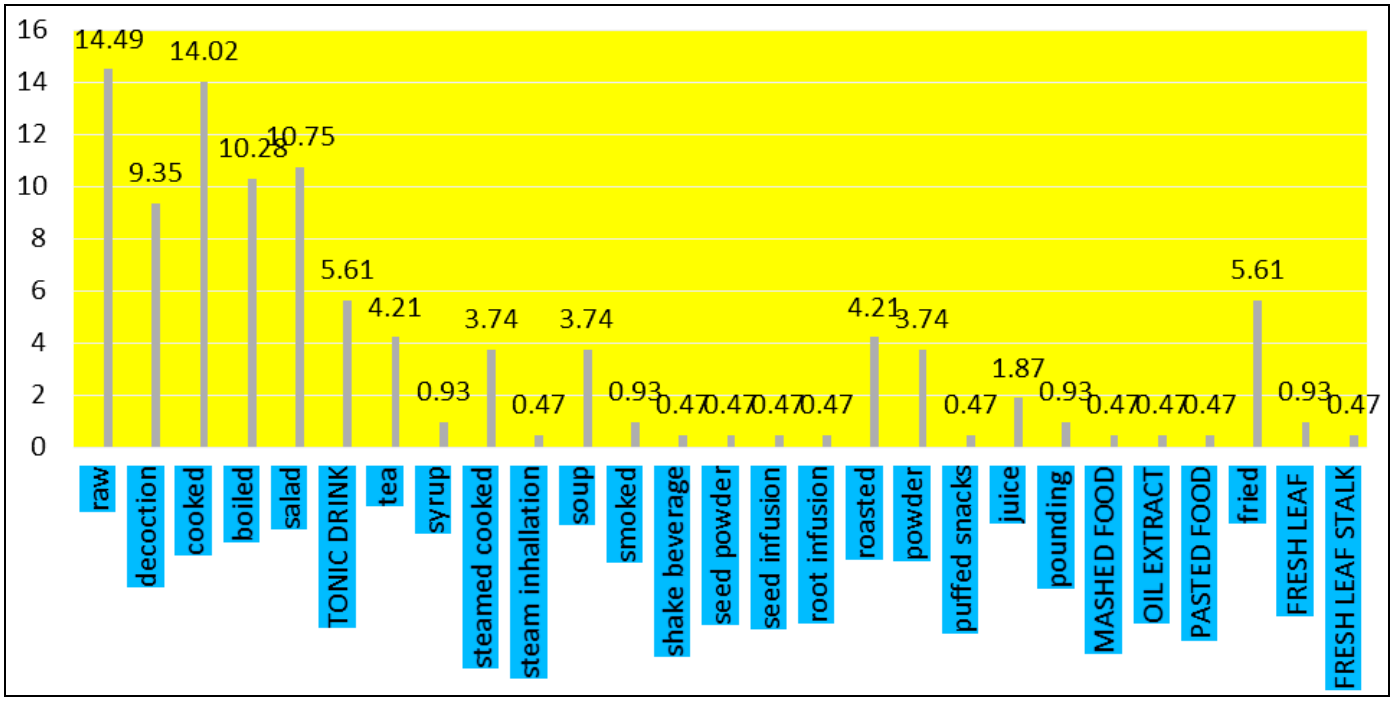

Fig 6c: Mode of preparation foods

Table 4: Mode of Food Preparation

Mode of Food Preparation	Frequency	Relative Frequency	Percentage
Raw	31	0.145	14.49
Decoction	20	0.093	9.35
Cooked	30	0.140	14.02
Boiled	22	0.103	10.28
Salad	23	0.107	10.75
Tonic drink	12	0.056	5.61
Tea	9	0.042	4.21
Syrup	2	0.009	0.93
Steamed cooked	8	0.037	3.74
Steam inhalation	1	0.005	0.47
Soup	8	0.037	3.74
Smoked	2	0.009	0.93
Shake beverage	1	0.005	0.47
Seed powder	1	0.005	0.47
Seed infusion	1	0.005	0.47
Root infusion	1	0.005	0.47
Roasted	9	0.042	4.21
Powder	8	0.037	3.74
Puffed snacks	1	0.005	0.47
Juice	4	0.019	1.87
Pounding	2	0.009	0.93
Mashed food	1	0.005	0.47
Oil extract	1	0.005	0.47
Pasted food	1	0.005	0.47
Fried	12	0.056	5.61
Fresh leaf	3	0.014	1.40
Total	214	1.000	100.00

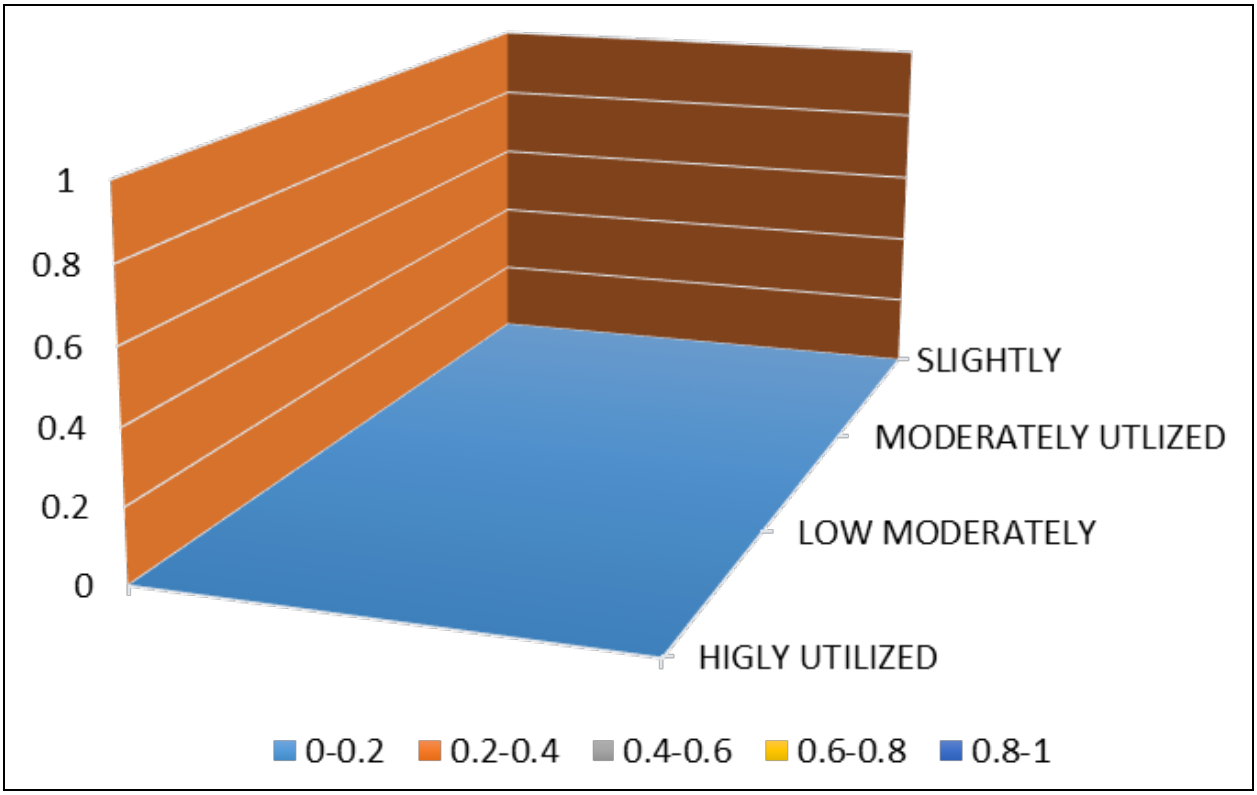

Fig 7: Likert 4 Points Scale Based on Application of Ailments

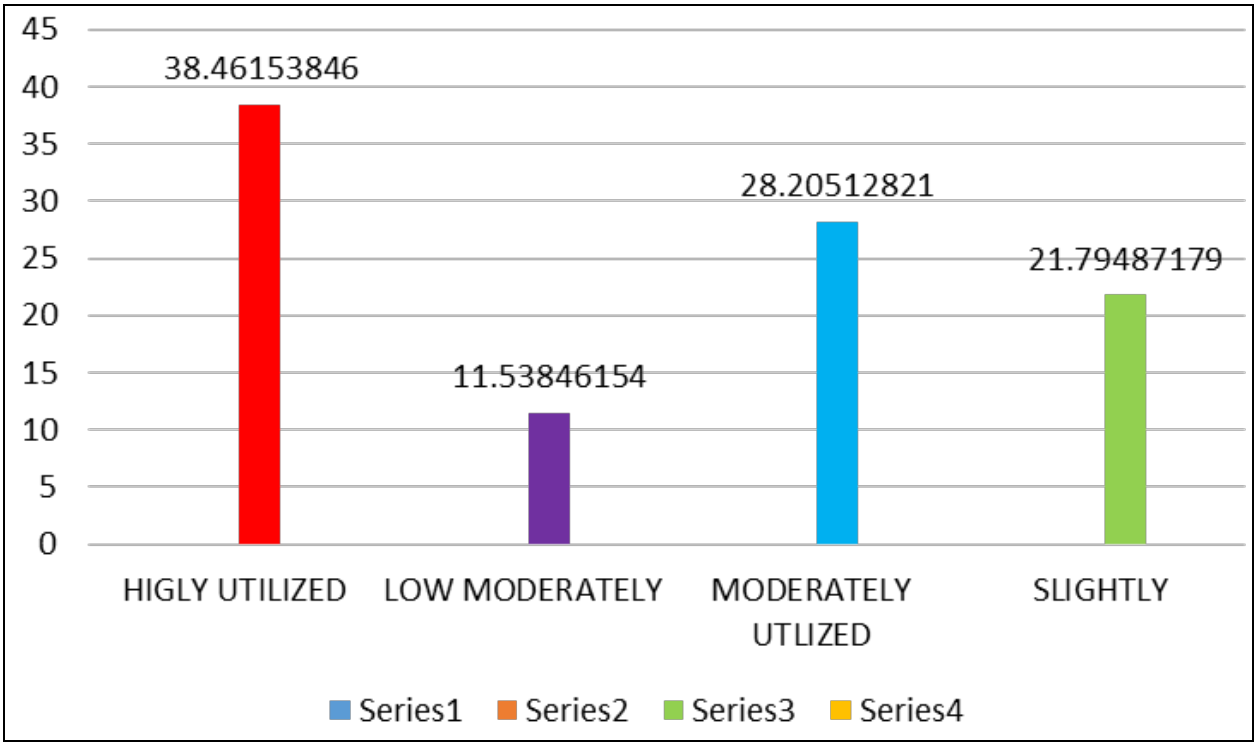

Fig 8: Likert 4 Points Scale Based on Application of Ailments

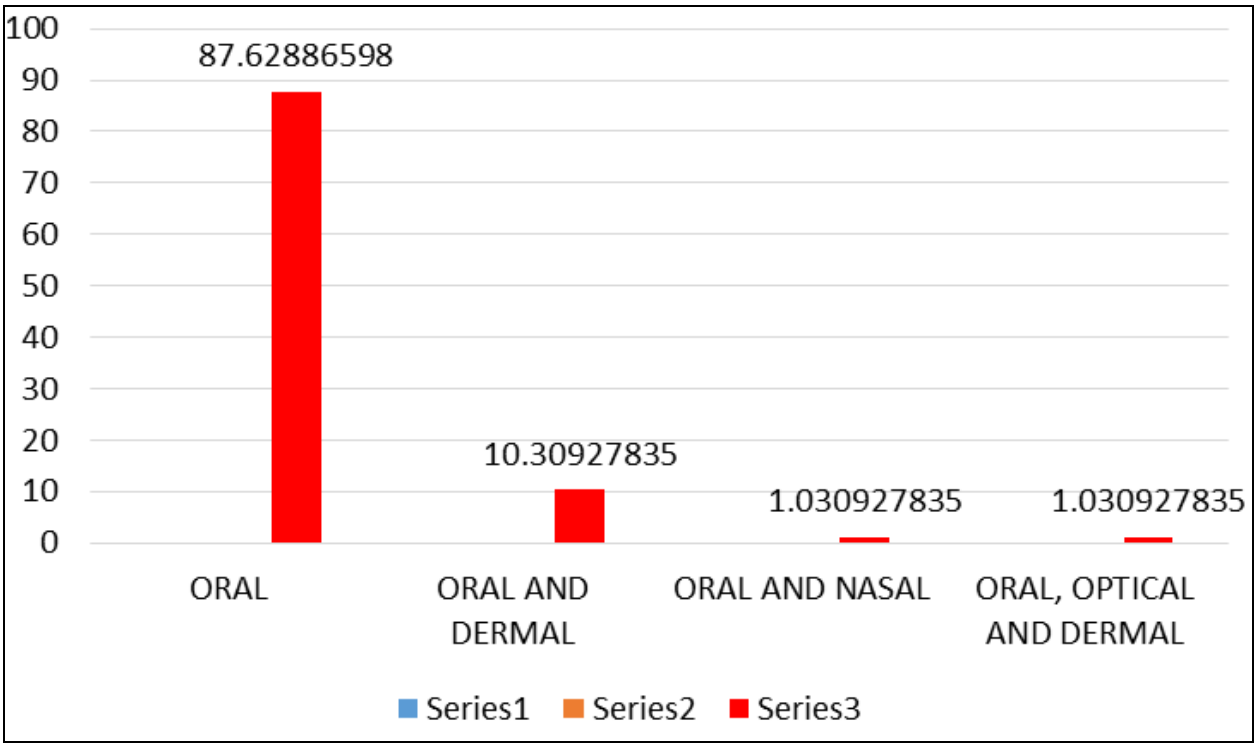

Fig 9: Routes of Administration

Conclusion

The study underscores the significance of traditional culinary medicines in the daily lives of the villagers in Thoubal District, Manipur. The use of common food items as immediate remedies for various ailments reflects a deep understanding of the medicinal properties of natural ingredients. Preserving and promoting this indigenous knowledge can contribute to broader health practices and offer sustainable alternatives to conventional medicine.

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