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FACTORS INFLUENCING THE RISE IN HERBAL MEDICINE USE AND KNOWLEDGE ON ITS EFFECTS ON MATERNAL AND NEONATAL HEALTH AMONG NURSING MOTHERS IN LIKOMBA TIKO, SOUTH WEST REGION CAMEROON

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ABSTRACT

Background

The use of herbal medicine remains widespread among nursing mothers, particularly in rural communities. This is usually due to deep-rooted cultural beliefs, accessibility, and economic constraints. This study explored the factors influencing the rise of herbal medicine use and assessed knowledge on its effects on maternal and neonatal health among nursing mothers in the Likomba community, Tiko Subdivision, South West Region of Cameroon.

Methods

This community based cross-sectional descriptive study was conducted over an eight-month period from December 2024 through June 2025. The study population comprised the convenient selection of 186 nursing mothers residing in Likomba. Data were collected using pretested structured questionnaire. Data analysis was performed using the Statistical Package for Social Sciences version 20.0. The Chi square statistical test was used to assess association between variables and a P value <0.05 was considered statistically significant.

Results

This study revealed that 72% of the nursing mothers had adequate knowledge on the effects of herbal medicine use on maternal health. Also 68.8% had adequate knowledge on the effects of herbal medicine on neonatal health and 74.2% of the participants preferred herbal medicine because they have little/no documented adverse side effects.

Conclusion

The current study highlights that herbal medicine usage among nursing mothers is strongly influenced by cultural and socioeconomic factors, and that knowledge on its potential risks and benefits varies significantly with educational level.

Key words: Factors, Herbal medicine, Effects, Maternal health, Neonatal health, Likomba community Cameroon

HIGHLIGHTS

What is known on the subject

In Cameroon, the use of herbal medicine during pregnancy is widespread, particularly in rural areas. However, there is limited data on the factors driving the increased use of herbal remedies and their effects on maternal and neonatal health.

Aim of the study

The main aim of the study was to investigate the factors influencing the rise of herbal medicine usage and assess its impacts on maternal and neonatal health outcomes among nursing mothers in Likomba.

Key findings

Most (71.8%) of the study participants used herbal medicine during pregnancy, mainly influenced by cultural beliefs (77.9%) and affordability (66.1%).

Implications for future practices policies and research

A community-based longitudinal study incorporating detailed assessment of cultural practices and maternal outcomes would provide comprehensive insight into the long-term impact of these practices on obstetric outcomes, and inform culturally sensitive policies and health education strategies

INTRODUCTION

Herbal medicine is the use of plant-derived substances for therapeutic purposes. It involves preparing and using various parts of plants, such as leaves, roots, stems, flowers, and seeds to prevent, alleviate or treat illnesses and maintain overall health [1]. The World Health Organization (WHO) estimated that 80% of the population in developing countries relies on traditional medicine, including herbal remedies, for primary healthcare. Herbal medicine is particularly common in Africa, Asia, and Latin America, where traditional healing practices are deeply rooted in culture [2].

Several studies have proven that in other countries in Asia, systems such as Traditional Chinese Medicine (TCM) and Ayurveda have been used for thousands of years and remain integral to healthcare today [3]. In Africa, several communities depend on herbal medicine due to limited access to modern healthcare with the African traditional medicine day highlighting its importance [4]. Herbal medicine plays a significant role in Cameroon's healthcare system, with a substantial portion of the population relying on traditional remedies for various health conditions [5]. A 2022 cross-

sectional survey revealed that over 89% of Cameroonian adults had consumed herbal teas in the preceding two years, primarily for preventing or treating ailments such as COVID-19, malaria, and typhoid fever [6]. Driving factors such as treatment effectiveness, with 52.7% of participants citing it as their reason for use was reported by the same study [6]. Herbal medicine remains widely used across different cultures and regions and its usage has both positive and negative impacts on maternal health.

METHODS

Study design

This study was a community based cross sectional descriptive study which was conducted from November 2024 through June 2025.

Study area

This study was carried out in the Likomba community, a locality in Tiko Sub Division, Fako Division of the South West Region of Cameroon.

Eligibility criteria

This study involved 186 nursing mothers living in Likomba. The study included participants who accepted to participate in the study by signing the informed consent form. Nursing mothers suffering from

puerperal psychosis were excluded from the study.

Data collection

Data collection was done using a pretested and structured questionnaire. The questionnaire was structured into 4 sections; Section A captured data on socio-demographic characteristics, Section B were questions related to the factors influencing the rise of herbal medicine, section C were questions concerning the effects of herbal medicine on maternal health and section D were questions on the effect of herbal medicine on neonatal health

Data analysis

Data were keyed into Microsoft Excel 2016, exported and analyzed using SPSS version 20.0. Results were presented on frequency distribution tables and charts.

Ethical considerations

Administrative clearance for this study was obtained from the Regional Delegation of Public Health for the South West Region of Cameroon (NoP42/MPH/SWR/RDPH/CB.PT/711/8 12). Authorization to collect data within the community was granted by the Divisional Officer for Tiko (Authorization number: 57/L/G.37/02/D14/1/401.10).

RESULTS

Socio-Demographic Characteristics of Respondents

The ages of respondents ranged from 18 to 42 years. The largest proportion of respondents 96 (51.6%) were aged between 21 and 30 years. Regarding educational level, 101 (54.3%) had attained a level secondary education.

Further analysis revealed that majority of nursing mothers were married 123 (66.1%). In terms of religion, Christianity was the predominant faith among respondents, with 169 (90.9%) identifying as Christians and 17 (9.1%) as Muslims. Occupationally, most participants were self-employed (74; 39.8%) (Table 1).

Table 1: Socio-Demographic Characteristics of Respondents

VARIABLE	CATEGORY	FREQUENCY (n)	PERCENTAGE (%)
Age (years)	≤20	16	8.6
	21–30	96	51.6
	31–40	70	37.6
	≥41	4	2.2
	Total	186	100.0
Education	No formal education	5	2.7
	Primary	31	16.7
	Secondary	101	54.3
	University	49	26.3
	Total	186	100.0
Marital status	Single	51	27.4
	Married	123	66.1
	Divorced	4	2.2
	Widow	8	4.3
	Total	186	100.0
Religion	Christianity	169	90.9
	Islam	17	9.1
	Total	186	100.0
Occupation	Self-employed	74	39.8
	Employed	56	30.1
	Unemployed	31	16.7
	Student	25	13.4
	Total	186	100.0

Factors Influencing the Rise of Herbal Medicine Use Amongst Nursing mothers

The study among 186 nursing mothers revealed that affordability and cultural beliefs are the primary factors influencing herbal medicine use, with 66.1% and 77.9% agreement respectively. Most respondents (74.2%) preferred herbal remedies because they are natural and believed to have fewer adverse side effects. Over half of the respondents (54.8%) indicated that distrust in modern medicine drives reliance on herbal treatments. Easy access and social networks also play significant roles, with 61.8% and 71.0% agreement respectively. Social media’s influence was less clear, with only 39.8% agreeing. These factors collectively highlight the cultural, economic, and health-related motivations behind herbal medicine use in this community (Table 2).

Table 2: Factors Influencing the Rise of Herbal Medicine amongst Nursing Mothers

Statement	Agree, n (%)	Neutral, n (%)	Disagree, n (%)	Total, n (%)
Herbal medicine is more affordable than conventional medicine.	123 (66.1)	31 (16.7)	32 (17.2)	186 (100)
Cultural beliefs strongly influence the decision to use herbal medicine.	145 (77.9)	21 (11.3)	20 (10.8)	186 (100)
Herbal remedies are preferred because they are natural and have fewer side effects.	138 (74.2)	28 (15.1)	20 (10.7)	186 (100)
Lack of trust in modern medicine increases reliance on herbal treatments.	102 (54.8)	32 (17.2)	52 (28.0)	186 (100)
Easy access to herbal medicine promotes its usage among women.	115 (61.8)	31 (16.7)	40 (21.5)	186 (100)
Family and community influence play a major role in the choice of herbal medicine.	132 (71.0)	18 (9.7)	36 (19.3)	186 (100)
Social media provides information that encourages the use of herbal medicine.	74 (39.8)	64 (34.4)	48 (25.8)	186 (100)
Pregnancy-related discomforts lead to the use of herbal remedies.	141 (75.8)	15 (8.1)	30 (16.1)	186 (100)

Participant knowledge on the effects of herbal medicine on maternal health

To assess overall knowledge level, 8 knowledge-related statements were evaluated. Nursing mothers who agreed with at least 6 out of the 8 items ($\geq 75\%$ correct or informed responses) were classified as having good knowledge, while those who agreed with fewer than 6 were categorized as having poor knowledge. Based on this criterion, 134 respondents (72%) demonstrated good knowledge about the effects of herbal medicine on maternal health, while 52 (28%) exhibited poor knowledge (Figure 1).

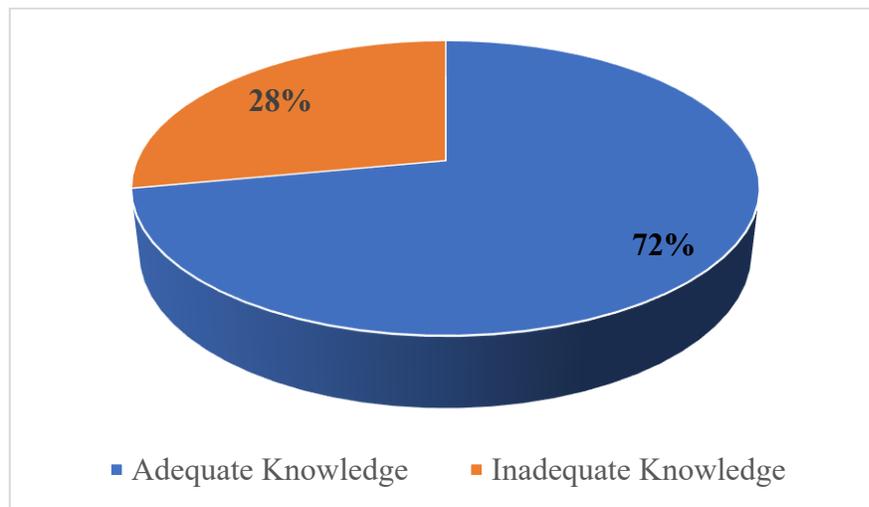


Figure 1: Participant knowledge level on the effects of herbal medicine on maternal health

Participants knowledge on the effects of herbal medicine on neonatal health

Data analysis revealed that 128 (68.8%) respondents demonstrated good knowledge about the effects of herbal medicine on neonatal health, while 58 (31.2%) exhibited poor knowledge (Figure 2).

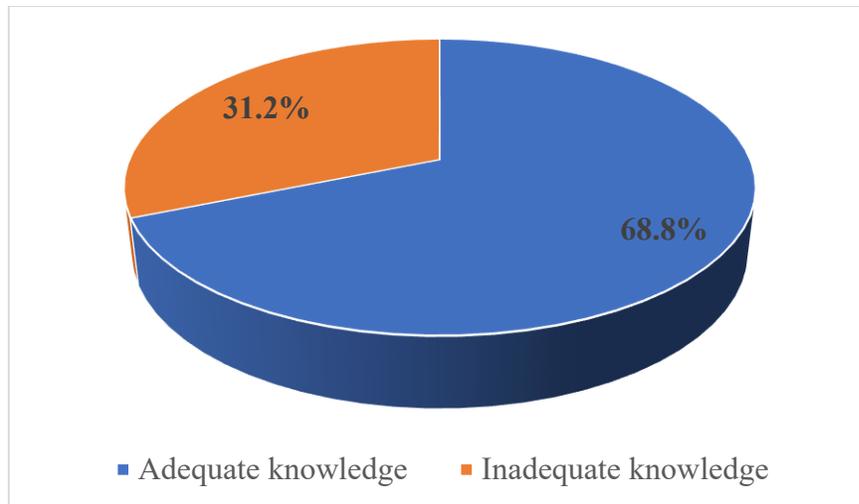


Figure 2: Participant knowledge level on the adverse effects of herbal medicine on neonatal health

Factors influencing participant knowledge on the effects of herbal medicine on maternal health

The analysis revealed a statistically significant association between respondents’ level of education and their knowledge of the effects of herbal medicine on maternal health ($p = 0.015$). Nursing mothers with secondary and tertiary education demonstrated a higher level of knowledge compared to those with no formal education or only primary education. Similarly, a statistically significant association was found with occupation ($p = 0.009$), with respondents who were self-employed or employed exhibiting greater knowledge compared to those who were unemployed or students (Table 3).

Factors influencing participant Knowledge of the effects of herbal medicine on neonatal health

The analysis revealed a statistically significant association between respondents’ level of education and their knowledge of the effects of herbal medicine on neonatal health ($p = 0.020$). Nursing mothers with secondary and tertiary education demonstrated higher levels of knowledge compared to those with lower or no formal education. Other socio-demographic variables did not show statistically significant associations ($p > 0.05$) with knowledge levels on the effects of herbal medicine on neonatal health (Table 4).

Table 3: Factors influencing participants’ knowledge on the effects of herbal medicine on maternal health

Variable	Category	Good Knowledge n (%)	Poor Knowledge n (%)	Total (n)	χ^2 Value	p-Value
Age	18–20	11 (68.8)	5 (31.2)	16	0.44	0.931
	21–30	69 (71.9)	27 (28.1)	96		
	31–40	51 (72.9)	19 (27.1)	70		
	41 and above	3 (75.0)	1 (25.0)	4		
	Total	134	52	186		
Education	No formal education	2 (40.0)	3 (60.0)	5	10.49	0.015
	Primary	18 (58.1)	13 (41.9)	31		
	Secondary	76 (75.2)	25 (24.8)	101		
	University	38 (77.6)	11 (22.4)	49		
	Total	134	52	186		
Marital Status	Single	36 (70.6)	15 (29.4)	51	0.41	0.938
	Married	90 (73.2)	33 (26.8)	123		
	Divorced	3 (75.0)	1 (25.0)	4		
	Widow	5 (62.5)	3 (37.5)	8		
	Total	134	52	186		
Religion	Christianity	122 (72.2)	47 (27.8)	169	0.04	0.842
	Islam	12 (70.6)	5 (29.4)	17		
	Total	134	52	186		
Occupation	Self-employed	60 (81.1)	14 (18.9)	74	11.56	0.009
	Employed	45 (80.4)	11 (19.6)	56		
	Unemployed	18 (58.1)	13 (41.9)	31		
	Student	11 (44.0)	14 (56.0)	25		
	Total	134	52	186		

P values < 0.05 are statistically significant

Table 4: Factors influencing knowledge on the effects of herbal medicine on neonatal health

Variable	Category	Good Knowledge n (%)	Poor Knowledge n (%)	Total (n)	χ^2 Value	p-Value
Age	18–20	11 (68.8)	5 (31.2)	16	0.29	0.962
	21–30	67 (69.8)	29 (30.2)	96		
	31–40	47 (67.1)	23 (32.9)	70		
	41 and above	3 (75.0)	1 (25.0)	4		
	Total	128	58	186		
Education	No formal education	2 (40.0)	3 (60.0)	5	9.86	0.020
	Primary	17 (54.8)	14 (45.2)	31		
	Secondary	75 (74.3)	26 (25.7)	101		
	University	34 (69.4)	15 (30.6)	49		
	Total	128	58	186		
Marital Status	Single	35 (68.6)	16 (31.4)	51	0.08	0.994
	Married	85 (69.1)	38 (30.9)	123		
	Divorced	3 (75.0)	1 (25.0)	4		
	Widow	5 (62.5)	3 (37.5)	8		
	Total	128	58	186		
Religion	Christianity	117 (69.2)	52 (30.8)	169	0.14	0.708
	Islam	11 (64.7)	6 (35.3)	17		
	Total	128	58	186		
Occupation	Self-employed	51 (68.9)	23 (31.1)	74	0.18	0.981
	Employed	38 (67.9)	18 (32.1)	56		
	Unemployed	21 (67.7)	10 (32.3)	31		
	Student	18 (72.0)	7 (28.0)	25		
	Total	128	58	186		

P values<0.05 are statistically significant

DISCUSSION

The present study identified several key factors driving the use of herbal medicine among nursing mothers, with cultural beliefs (77.9%), pregnancy-related

discomforts (75.8%), and preference for natural remedies (74.2%) emerging as the most influential. These findings echo those of Okafor *et al.* [10], who found that traditional values and cultural practices significantly shape maternal healthcare

choices in sub-Saharan Africa. In many communities, herbal medicine is viewed as a continuation of ancestral wisdom, trusted and normalized through generations.

Affordability (66.1%) and ease of access (61.8%) were also strong motivators, consistent with the findings of Ezealah *et al.* [11], who reported that women in low-resource settings often resort to herbal remedies due to the high cost and limited accessibility of formal healthcare services. The growing distrust in modern medicine (54.8%) aligns with Ameh *et al.* [12], who found that perceived side effects of pharmaceuticals and poor communication with health professionals contribute to a shift toward traditional alternatives.

Interestingly, social influence (71.0%) played a major role particularly family and community networks which confirms earlier research by Balogun and Adekeye [13]. They observed that decisions regarding herbal use are often communal, with elder women and traditional birth attendants guiding choices. However, social media influence (39.8%) was relatively low, possibly reflecting limited digital engagement among the study population or skepticism toward online health advice.

These findings collectively demonstrate that the use of herbal medicine is shaped by a blend of cultural norms, economic constraints, social structures, and health beliefs, reinforcing the need for culturally sensitive interventions.

The majority of respondents (72%) demonstrated good knowledge regarding the effects of herbal medicine on maternal health. Specifically, 75.3% believed that certain herbs can boost immunity, and 92.5% agreed that healthcare providers should guide their use. This suggests a high level of awareness about both benefits and potential risks, which aligns with the findings of Manya *et al.* [14], who reported growing recognition of herbal side effects among Nigerian mothers.

Moreover, 56.5% acknowledged that herbal medicine could increase the risk of complications during pregnancy, demonstrating a balanced understanding. This finding contrasts with Olagunju *et al* [15], where most women believed herbal remedies were entirely harmless during pregnancy. The improvement in awareness may be attributed to expanded maternal health education efforts, as well as anecdotal experiences of side effects (reported by 59.1% in this study).

The belief that herbal remedies are a safer alternative to pharmaceuticals (48.4%), despite known risks, reflects ongoing ambivalence. This duality viewing herbs as both beneficial and potentially harmful may stem from inconsistent or incomplete health messaging, as noted by Ademiluyi and Aluko [16].

Healthcare providers, while valued, may not consistently address herbal medicine use unless prompted. The analysis revealed statistically significant associations between education ($p = 0.015$) and occupation ($p = 0.009$) and the level of knowledge on the effects of herbal medicine on maternal health among nursing mothers. This aligns with findings by Ibrahim *et al* [17] and Oyetunde *et al* [18], who emphasized that individuals with higher educational attainment are more likely to understand the potential benefits and risks associated with both traditional and modern medical practices. Education enhances access to information, critical evaluation of health claims, and the ability to seek clarifications from healthcare providers.

Knowledge regarding neonatal health impacts was also high, with 68.8% of respondents showing good knowledge. A large proportion (62.9%) recognized that

herbal use during pregnancy can affect the baby's birth weight, and over half (56.5%) acknowledged the potential for complications in the newborn. These findings are supported by Igbinovia *et al* [19], who also found increased awareness of neonatal risks associated with maternal herbal intake.

However, only 47.8% perceived herbal medicine as beneficial for neonatal health, suggesting more skepticism toward its use in relation to infant outcomes than for maternal effects. Moreover, just 37.6% claimed no health issues were observed in newborns after maternal herbal use, indicating that many may have observed or heard of adverse neonatal effects, thereby shaping their perception.

Interestingly, 90.3% of respondents believed that healthcare professionals should provide education on this topic, which supports the findings of Bello *et al* [20], who emphasized the importance of integrating traditional medicine discussions into antenatal care. The study also showed a significant association between education ($p = 0.020$) and knowledge of herbal medicine's effects on neonatal health. This supports the work of Igbinovia *et al* [21], who found that mothers with higher education levels were

more likely to know that some herbs could cause low birth weight, developmental delays, or neonatal complications.

Conclusion

The study revealed that most nursing mothers demonstrated good knowledge on the effects of herbal medicine on both maternal (72%) and neonatal (68.8%) health. Key influencing factors for herbal medicine use included affordability, cultural beliefs, and pregnancy-related discomforts. The level of education attained was significantly associated with knowledge in both maternal and neonatal contexts. Mothers with higher educational attainment showed greater awareness of risks, supporting the role of health literacy.

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Competing interest

The authors declare no competing interest

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