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ASSESSMENT OF FACTORS INFLUENCING THE USE OF HERBAL MEDICINE DURING PREGNANCY AMONG RURAL WOMEN IN PLATEAU STATE

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Abstract

The utilization of herbal medicine during pregnancy remains widespread among rural women, influenced by a variety of socio-cultural factors. The objective of this research was to evaluate the determinants that influence the use of herbal medicine during pregnancy among rural women in Plateau State, Nigeria. A cross-sectional survey was conducted, supplemented by interviews with key informants. A total of 388 valid questionnaires were analyzed, revealing a significant dependence on herbal medicine. The reasons for this reliance included cultural beliefs, perceived benefits such as facilitating labour, and the perception that herbal medicine complements conventional medicine. The findings also shed light on the existence of myths and misconceptions surrounding the use of herbal medicine. The study emphasizes the necessity for interventions that are culturally sensitive in order to rectify these misconceptions while respecting the norms of the community. The study recommends training healthcare providers, implementing community-based educational programs, and conducting further research on the safety and effectiveness of herbal remedies. By implementing these recommendations, safe practices regarding herbal medicine can be promoted, thereby enhancing the health outcomes of both mothers and fetuses in rural communities.

Keywords: Herbal Medicine, Rural, Women, Pregnancy

1. Introduction

Pregnancy represents a significant period in a woman's life marked by unique physiological changes and heightened healthcare needs, particularly in rural areas where access to modern medical facilities may be limited. In such contexts, the use of herbal medicine during pregnancy persists as a prevalent practice, driven by a complex interplay of socio-cultural, economic, and traditional factors.

The utilisation of herbal medicine, defined as the use of plant-derived materials or preparations for therapeutic purposes, has been a longstanding practice globally, particularly prevalent in developing countries. Despite the limited scientific evidence validating their safety and efficacy, herbal medicines remain widely utilised, representing a substantial portion of healthcare services in various regions. The World Health Organization reports that traditional medicines constitute up to 40% of healthcare services in China, while in Africa, approximately 80% of the population relies on traditional medicine for their healthcare needs. This trend extends to more developed nations, where herbal medicines are embraced under the umbrella term of complementary alternative medicine (CAM) (WHO, 2019; Nissen, 2010).

The unregulated use of herbal medicines during pregnancy poses significant risks to both maternal health and fetal development. Despite the lack of scientific backing, there has been a concerning rise in the

prevalence of herbal medicine use among pregnant women globally. Studies have indicated varying rates of usage, with research suggesting that 34% of pregnant Malaysian women and 6–9% of pregnant women in the USA resort to herbal medicines during pregnancy, with an alarming surge reported in Russia (Kim & Lean, 2013; Kennendy et al., 2016). The unmonitored consumption of herbal medicines during pregnancy raises serious concerns regarding maternal and fetal safety, warranting further investigation into the factors driving this trend (Holden et al., 2015; Ekor, 2014).

Contextualizing this issue, Plateau State, Nigeria, serves as a pertinent location for examining the factors influencing herbal medicine use during pregnancy. In the Nigerian context, cultural beliefs and practices often intersect with healthcare decisions, influencing the uptake of traditional remedies, including herbal medicine (Dafam et al., 2021). Additionally, socio-economic factors and access to conventional healthcare services may play significant roles in shaping maternal health-seeking behaviours, including the use of herbal medicines during pregnancy (El-Hajj & Holst, 2020). Understanding the determinants of herbal medicine use among pregnant women in Plateau State can provide valuable insights into the broader landscape of maternal healthcare practices in Nigeria and inform targeted interventions aimed at promoting safe and evidence-based care for expectant mothers (Ozumba, 2013; Onyeneho et al., 2013).

In rural areas of Plateau State, Nigeria, the prevalent use of herbal medicine during pregnancy presents significant concerns regarding safety and efficacy for expectant mothers and their unborn children, despite the availability of modern healthcare facilities in urban settings. This reliance on herbal remedies is rooted in entrenched cultural beliefs, limited access to healthcare services, and adherence to traditional practices. However, the specific drivers behind this reliance remain poorly understood, necessitating deeper exploration within the unique context of Plateau State's rural communities. The safety and efficacy of herbal medicine during pregnancy are subject to ongoing debate due to the lack of standardized regulation and comprehensive information on their composition and potential side effects, posing risks to maternal and fetal health. To address these issues, a study aims to thoroughly investigate the socio-cultural, economic, and traditional factors influencing herbal medicine use during pregnancy among rural women in Plateau State, with the goal of informing targeted interventions and educational initiatives to improve maternal and fetal health outcomes in underserved rural communities. Thus, the main objective of this study is to ascertain the socio-cultural factors influencing the use of herbal medicine during pregnancy in Plateau State, Nigeria.

2. Literature Review

2.1 Conceptual Issues

Concept of Herbal Medicine: Herbal medicines according to Sam (2019) are naturally occurring, plant-derived substances that are used to treat illnesses within local or regional healing practices. These products are complex mixtures of organic chemicals that may come from any raw or processed part of a plant. Herbal medicine refers to the use of plants or plant extracts for therapeutic purposes to prevent, alleviate, or treat various health conditions (Abdel-Aziz et al., 2016). It encompasses a broad range of practices and remedies derived from plant parts such as leaves, roots, seeds, bark, or flowers, which contain active compounds with medicinal properties. Herbal medicine is often based on traditional knowle4dge passed down through generations and is utilized in diverse cultures worldwide. It can be administered in various forms, including teas, tinctures, capsules, powders, or topical applications. The efficacy and safety of herbal medicine may vary depending on factors such as the plant species, preparation methods, dosage, and individual health conditions. Herbal medicine is commonly used as an alternative or complementary approach to conventional medical treatments, offering a holistic and natural approach to health and wellness.

2.2 Empirical Review

The utilization of herbal medicine during pregnancy among rural women is underpinned by a myriad of socio-cultural determinants. Extensive research underscores the pivotal role of cultural beliefs and practices in shaping women's perceptions and behaviors towards herbal medicine during gestation (Makombe et al., 2023; Tsele-Tebakang et al., 2023). Findings from studies conducted in Nigeria and Ghana reaffirm the deeply ingrained nature of herbal medicine usage during pregnancy, often stemming from cultural and personal experiences (Makombe et al., 2023). Moreover, socio-demographic factors including age, education, economic status, and marital status have been identified as influential determinants in the prevalence of herbal medicine usage among pregnant women (Tamuno et al., 2011; Mekuria et al., 2017). Notably, rural-urban disparities further exacerbate this phenomenon, with rural residents exhibiting a higher propensity for herbal medicine usage during pregnancy compared to their urban counterparts (Labata et al., 2020).

The safety and efficacy of herbal medicine during pregnancy are intricately entwined with cultural beliefs and traditional medical systems (Firenzuoli&Gori, 2007). While the enduring utilization of herbal medicine within traditional medical frameworks may suggest safety, concerns linger regarding its efficacy, particularly due to incomplete information regarding herbal remedies' composition (Firenzuoli&Gori, 2007). Furthermore, studies highlight the limited knowledge and awareness of potential side effects of herbal medicine among rural women during pregnancy, underscoring the necessity for targeted education and interventions (Peprah et al., 2019).

Cultural and societal contexts, alongside individual attitudes and experiences, emerge as pivotal contributors to the heightened incidence of herbal medicine usage among pregnant rural women (Ahmed et al., 2022). Additionally, the empowerment and social network status of rural women significantly shape their health-seeking behaviors and decision-making processes, including the utilization of herbal medicine (Ukwuaba& Igbo, 2013; Cáceres et al., 2023). These findings underscore the imperative for interventions tailored to promoting the appropriate use of herbal medicine among rural women, necessitating a comprehensive consideration of socio-cultural factors and empowerment initiatives.

2.3 Theoretical Framework

Theory of Planned Behaviour (TPB) is an influential psychological theory that predicts an individual's intention to engage in specific behaviours based on their attitudes, subjective norms, and perceived behavioural control. Originally an expansion of the Theory of Reasoned Action, TPB considers the influence of factors beyond an individual's control on their behaviour. It posits that intention is influenced by attitudes towards the behaviour, subjective norms regarding its social acceptability, and perceived behavioural control over it. TPB has been applied to various health behaviours, including maternal healthcare-seeking practices, where attitudes towards healthcare, social norms and perceived control over accessing services play pivotal roles. Understanding these factors can inform interventions aimed at promoting the uptake of maternal healthcare services and improving maternal and child health outcomes.

Adopting the TPB in the investigation on the utilization of herbal medicine among pregnant women in rural areas, particularly in Plateau State, Nigeria, emphasizes the influence of attitudes, subjective norms, and perceived behavioural control on individuals' behavioural intentions. The cultural beliefs, perceptions of safety, and social norms significantly influence women's attitudes towards herbal medicine use during pregnancy. Moreover, factors such as distance to healthcare facilities and financial constraints impact perceived behavioural control.

3. Methodology

3.1 Research Design

The study employed a cross-sectional descriptive survey design. The study was conducted in six selected rural communities across Plateau State, Nigeria.

3.2 Population and Sampling

The study focuses on women aged 15 to 49 years in Plateau State, capable of reproduction, with a specific emphasis on rural areas. The target population comprises approximately 778,845 women of reproductive age, with 47.25% residing in rural areas. The study further narrows its focus to three specific local government areas: Bassa, Bokkos, and Shendam, where the estimated population of women aged 15 to 49 are 137,624. These areas were chosen based on their representation of diverse rural communities within Plateau State. The sample size of 400 women who have ever given birth was determined using the Taro Yamane formula, ensuring a representative sample of the target population.

The sample was proportionately distributed across six villages selected from the three chosen local government areas. Sampling techniques included random selection of local government areas, electoral districts, and rural villages to ensure inclusivity and representativeness.

3.3 Method of Data Collection

Data collection methods included the administration of structured questionnaires to eligible respondents and Key Informant Interviews (KIIs) with healthcare personnel and Traditional Birth Attendants (TBAs). Questionnaires comprised both open and closed-ended questions, covering socio-demographic characteristics and maternal health-seeking behavior determinants. KIIs focused on gathering professional insights from TBA's.

3.4 Method of Data Analysis

Quantitative data analysis involved univariate analysis, utilizing SPSS software for statistical analysis. Descriptive statistics such as frequencies and percentages were computed to summarize questionnaire responses. Qualitative data from KIIs were transcribed and thematically analyzed to identify key themes and patterns relevant to maternal healthcare practices.

3.5 Ethical Consideration

Ethical principles are strictly adhered to, including voluntary participation, informed consent, confidentiality, beneficence, and non-maleficence.

4. Results and Discussion

4.1 Questionnaire Results

Out of 400 questionnaires administered, 388 valid responses were analyzed after invalid entries were excluded, while qualitative data from interviews were transcribed verbatim and discussed alongside relevant literature and theories to contextualize the findings.

Table 1: Response Showing Whether Respondent Has Ever Taken Herbal Medicine During Pregnancy

Response	Frequency	Percentage
Yes	255	65.7
No	133	34.3
Total	**388**	**100.0**

Source: Field Survey, 2023

Table 1 displays the usage of herbal medicine by pregnant respondents. Among 388 participants, 65.7% used herbal medicine during pregnancy, while 34.3% did not. This suggests that around 7 out of 10 women in rural Plateau State incorporate herbal medicine into their pregnancy routine. This data provides important

insights into the prevalence of herbal medicine use during pregnancy in this population, aiding in understanding healthcare practices in this context.

This was further buttressed by traditional birth attendants from the KII who said that different herbs are very helpful to pregnant and cause no harm to women or the foetal in their womb. They reported that they suggest some herbs for pregnant women and in some cases, other elderly women also help younger women get herbs that will help them during the pregnancy and delivery. In the words of one of the participants

I have used herbal remedies during my pregnancy and have also recommended women to some herbs over time. It is a common practice for women to rely on some herbs during pregnancy as that will help them through the journey of pregnancy and at delivery.

(47-year-old Female TBA, Gangil, Bokkos)

It is a common practice for women to consume herbal remedies during pregnancy as most of these herbs are home grown and in some cases are obtained from nearby bushes. It is a common practice that we have inherited from our parents who have long been using them. I have personally consumed some herbs when I was pregnant and they are quite helpful.

(40-year-old Female TBA, Pape, Shendam).

The utilization of herbal medicine by pregnant women in rural communities in Plateau State indicates that herbal medicine continues to play a significant role in healthcare practices within these communities. This suggests that the use of traditional herbs is deeply ingrained in the cultural and traditional beliefs of these communities. The reliance on herbal remedies during pregnancy may be influenced by cultural preferences, as these communities may have a long history of using herbs for medicinal purposes.

Table 2: Distribution showing the types of herbs utilized by rural women during pregnancy in Plateau State

Udele	Frequency	Percentage
Yes	128	33.0
No	260	67.0
Total	**388**	**100.0**
Ginger (chetta)		
Yes	189	48.7
No	199	51.3
Total	**388**	**100.0**
Raspberry leaf (resberi)		
Yes	29	7.5
No	359	92.5
Total	**388**	**100.0**
Peppermint		
Yes	41	10.6
No	347	89.4
Total	**388**	**100.0**
Garlic (tafarnuwa)		
Yes	109	28.1
No	279	71.9
Total	388	100.0

Pineapple Leaf		
Yes	32	8.2
No	356	91.8
Total	388	100.0
A mixture of different plants		
Yes	222	57.2
No	166	42.8
Total	388	100.0
Neem (dogonyaro)		
Yes	43	11.1
No	345	88.9
Total	388	100.0
Scent leaves		
Yes	71	18.3
No	317	81.7
Total	**388**	**100.0**
Pawpaw (gwanda)		
Yes	122	31.4
No	266	68.6
Total	**388**	**100.0**
Placenta Previa		
Yes	49	12.6
No	339	87.4
Total	**388**	**100.0**
Yakuwa/Red Sorrell		
Yes	216	55.7
No	172	44.3
Total	**388**	**100.0**
Moringa (zogale)		
Yes	99	25.5
No	289	74.5
Total	**388**	**100.0**

Source: Field Survey, 2023

Table 2 provides a comprehensive breakdown of the prevalent use of herbal medicine among rural women in Plateau State during pregnancy, with a notable preference for certain herbs such as a mixture of plants, Red Surrey (yakowa), and ginger (Chetta). Conversely, herbs like raspberry, pineapple leaf, and pepper mint are less commonly utilized.

The insights from the Key Informant Interviews with traditional birth attendants further confirm the trend of recommending herbal remedies to pregnant women. However, the interviews also highlight the diversity of herbal treatments suggested by different TBAs, indicating variations in traditional healthcare practices within the community.

Most times, I recommend some herbs to women who visit me for help during pregnancy. I sometimes gather different leaves from the nearest forest here grind them and mix them before giving them to the women.

(55-years, female TBA, Amban, Bokkos)

One of the commonly used herbs during pregnancy in our community is "sere" which a plant that often grows in the forest is. Also, it is a common practice among pregnant women to soak yakuwa leaf especially when they are close to delivery. This is an aged-long practice and almost every woman in this community must have used one of these herbs.

(45-Years-Old, Female TBA, Gurum, Bassa).

There are different herbs that women can use during pregnancy. Most women just get them on their own as they are plants that grow around us. Women often use 'Udele" a yellowish plant that grows in this community. I also make a mixture of different plants for women and give them when they are almost due for delivery as it will help them have quick labour.
(40-Year –old Female TBA, Pape, Shendam)

Based on the aforementioned findings, it can be deduced that the utilization of herbs is a prevalent customary custom embraced by women residing in rural communities within Plateau State.

Table 3: Distribution showing the reason for the consumption of herbs among pregnant women in rural communities in Plateau State

It is more effective than conventional drugs	**Frequency**	**Percentage**
Yes	33	8.5
No	355	91.5
Total	**388**	**100.0**
To ease labour/child's delivery		
Yes	206	53.1
No	182	46.9
Total	**388**	**100.0**
It is not harmful during pregnancy		
Yes	175	45.1
No	213	54.9
Total	**388**	**100.0**
Because conventional medicine has failed me		
Yes	31	8.0
No	357	92.0
Total	**388**	**100.0**
It is a cultural practice to use herbs during pregnancy		
Yes	143	36.9
No	245	63.1
Total	**388**	**100.0**
I have easier access to herbs than conventional medicine		
Yes	52	13.4

No	336	86.6
Total	388	100.0
I cannot afford conventional medicine		
Yes	43	11.1
No	345	88.9
Total	**388**	**100.0**
The herbs complement conventional medicine		
Yes	170	43.8
No	218	56.2
Total	**388**	**100.0**
To wash the baby		
Yes	217	55.9
No	171	44.1
Total	**388**	**100.0**

Source: Field Survey, 2023

The table presents a frequency distribution of justifications for herbal medicine use among pregnant women in rural Plateau State communities, revealing that a significant majority use herbs to ensure a clean baby, ease labour and delivery (52.1% of respondents), consider them non-harmful to their baby (45.1% of respondents), and view herbal medicine as a complement to conventional healthcare (43.8% of respondents), shedding light on the diverse reasons behind herbal medicine consumption during pregnancy in these communities.

Concurring with the findings from the quantitative data collected, participants from the KII further accentuated that there are different reasons behind the consumption of herbs among pregnant women in rural communities. The outcome of the KII shows a consensus among the participants of the KII who all agreed that herbs are useful for easing childbirth and also cleaning the child in the womb. In the words of one of the TBAs;

I have herbal remedies that I give to women in the later stages of pregnancy as they can effectively prepare their body for labour, it helps ripen the cervix and stimulate contractions. These remedies can potentially aid in the progression of labour and contribute to a smoother birthing experience.
(53 –Years old Female TBA, Kuka, Shendam).

One of the most common challenges faced by pregnant women is morning sickness. To combat this, I have often suggested the use of ginger, which has been used for centuries to alleviate nausea and vomiting. Its soothing properties have provided relief to many expectant mothers, allowing them to navigate through the early stages of pregnancy with greater ease.
(49-Year-Old Female TBA, HwotBuji, Bassa)

The use of herbal remedies among pregnant women is influenced by various factors, including the belief that washing the unborn child in the womb is beneficial. Additionally, rural women believe that specific herbs can ease labor pain and lead to a smoother delivery.

4.1 Discussion of Findings

Findings from the study showed that the use of herbal medicine during pregnancy is common practice among rural women in Plateau State. This further agreed in previous studies conducted by Hall et al. (2011); Mekuria et al. (2017) and Jambo et al. (2018) who reported the prevalence of the use of herbal medicine

and among pregnant women in developing countries. More so, the study showed that there are multiple factors contributing to the consumption of herbal remedies by a significant number of women during pregnancy. One such factor is the belief that it is beneficial for the unborn child to be washed in the womb. Additionally, the study highlights a cultural belief that certain herbs can alleviate the pain of labour during childbirth, leading to a perception among rural women that consuming these herbs can result in a smoother delivery.

Furthermore, the study indicates different myths associated with the use of herbal medicine such as the desire to ease labour, the belief that herbs are complementary to orthodox medicine, the belief that herbs are not harmful and to clean the baby in the womb. This is similar to the report of El-Kashif et al. (2018) and Girmaw et al. (2023) who reported that there is an array of reasons for the use of herbs among pregnant women among which are; availability of herbs and the perception that herbs are not harmful to the unborn child and the mother. From the standpoint of the theory of planned behaviour model and Andersen and Newman's behavioural model, the utilization of maternal health behaviour shows that maternal health-seeking practice is dependent on the individual's behaviour intention is in turn informed by the personal evaluation of the pros and cons of the behaviour, the beliefs and behaviour of significant others and the personal capabilities of healthcare providers (Reni et al., 2016). It is therefore evident from the study results that most women in rural areas hold on to some myths and misconceptions about pregnancy and maternal health practices which needs to be corrected while respecting the culture of the community. This is an indication that most women depend on themselves as against the needed professional medical supervision during pregnancy. This shows that there is a significant need for informed healthcare choices in safeguarding the maternal health of women and the foetus. Thus, the finding highlights the need for promoting safe medication practices during pregnancy among rural women.

More so, it is important to note that while the use of herbal medicine during pregnancy is common in this population, it may not always be safe or effective. Some herbal medicines may have adverse effects on the mother or foetus, and their efficacy has not been scientifically proven. Therefore, healthcare providers should be aware of their patients' use of herbal medicine and provide appropriate guidance and education on their potential risks and benefits.

5. Conclusion and Recommendations

In conclusion, our study sheds light on the prevalent use of herbal medicine among pregnant women in rural communities in Plateau State, Nigeria. The findings underscore the influence of various socio-cultural factors, including beliefs about the benefits of herbal remedies for the unborn child and labor pain alleviation, on the decision-making process regarding herbal medicine use during pregnancy. Additionally, the study highlights the existence of myths and misconceptions surrounding herbal medicine, which contribute to its widespread acceptance among rural women

Based on the findings of our study, we propose the following recommendations.

i. Healthcare providers should receive training on herbal medicine use during pregnancy to enhance their ability to provide appropriate guidance and education to pregnant women regarding the potential risks and benefits of herbal remedies.
ii. Community-based educational programs should be implemented to raise awareness about safe medication practices during pregnancy and dispel myths and misconceptions surrounding herbal medicine use.
iii. Collaborative efforts between healthcare providers, traditional birth attendants, and community leaders should be fostered to promote culturally sensitive maternal healthcare practices and facilitate access to evidence-based healthcare services.
iv. Policy makers should consider integrating traditional medicine into mainstream

healthcare systems and developing guidelines for the safe use of herbal medicine during pregnancy, ensuring the protection of maternal and fetal health rights.

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