

IMPLICATIONS OF USE OF HERBAL MEDICINE AMONG WOMEN OF REPRODUCTIVE AGE DURING PREGNANCY, LABOUR AND POST-PARTUM PERIOD IN BENDE LGA OF ABIA STATE.

Prof. Emeka Ibeagha¹

Department of Health Science Education Faculty of Education
Nnandi Azikiwe University Awka Anambra State

&

Uche Ekwutosi Doris²

Department of Science Education, Faculty of Education
Nnandi Azikiwe University Awka Anambra State.

ed.uche@unizik.edu.ng

ABSTRACT

The main purpose of this study was to explore the implications of use of herbal medicine among women of reproductive age during pregnancy, labour and post-partum period in an urban setting in Bende LGA. The study adopted cross-sectional survey of the pattern of use of herbal medicine during pregnancy, labour and post-partum period. Each respondent provided cross-sectional/comprehensive information about use during all three stages. According to Moser et al (2017) cross-sectional survey is research which makes observations at only one period in time. The population of the study was 1,120 women per month seeking at least some antenatal, post natal and maternal child care services. This was used as a guide to determine the number of respondents to be targeted within the study period. Mothers in labor and those undergoing surgery were excluded on ethical grounds. A proportionate sampling was ten done according to the classes identified. A total of 165 women were picked as sample size. Methods of data collection used in the study included; interviews, observation and review of medical records and questionnaire. The instrument was validated. The pre-test was done by administered the tool to mothers with similar characteristics but not part of the target population to be studied. Chi-square test was used to compare differences between categorical variables at 0.5 significance level. The finding revealed that the prevalence of herbal medicines use during pregnancy, labour and post-partum period among women attending antenatal clinic at Bende provincial General hospital was 70%. This findings is higher to that is South Africa where 55% of women used herbal medicines during pregnancy. From the findings the study revealed that Health care personnel should educate themselves sufficiently to guide their patients in the safe use of herbs. Discussing the use of herbs in an open and nonjudgmental way will go a long way toward helping the patient and provider to communicate effectively about the use of herbs.

Keywords: Herbs, Traditional, Medicine ,Pregnant and Mothers

Introduction

Herbal medicines are defined as plant-derived material or preparations perceived

to have therapeutic benefits; they often contain raw or processed ingredients from one or more plants (WHO, 2016). Herbal

medicines include herbs, herbal materials, herbal preparations and finished herbal products that contain parts of plants or other plant materials as active ingredients (WHO, 2015).

Traditional Medicine

Traditional medicine is defined as the health practices, approaches, knowing and beliefs incorporating plant, animals and minerals based medicines, spiritual therapies, manual techniques and exercises, applied singularly or in combination to treat, diagnose and prevent illnesses or maintain well-being.

Herbal medicines includes herbs, herbal materials, herbal preparations, and finished herbal products that contain parts of plants or other plant materials as active ingredients (WHO, 2018). In this study, mothers were considered as herbal medicines users if they take the herbal medicines through oral, intra-vaginal or topical routes. Other preparations that are consumed as nutriment and within routine meal preparation such as food additives were excluded.

Reasons reported for ceasing herbal medicine during pregnancy include concerns for the health of the fetus/baby, the 'condition' improving, the herbal medicine not helping and advice from a health care provider (Hepner, et al., 2017).

It is estimated that 80% of the African population use traditional medicine in some way for their primary health care needs (WHO, 2018). Studies by WHO (2018) suggested heavier reliance of people in rural areas on traditional medicine for primary health care. However, similar figures can be observed in some urban

contexts: Njoroge and Kibunga (2017) reported that a majority of their respondents relied on traditional herbal preparations for the treatment of diarrhea in an urban area.

The use of traditional, complementary and alternative medicine (T/CAM) is growing in both developed and developing countries (Brodeker & Kronenberg, 2014). T/CAM is a blanket term for healing other than conventional medicine (Yekta, et. Al, 2015; Silenzion, 2017). Herbal medicine is a significant component of many T/CAM forms. In some regions, the herbal medicine industry generates billions of dollars in revenue annually (Hayes, 2018; WHO, 2016). The prevalence of use of T/CAMs is highest in the African and Asian region, where up to 80% of the population relies on traditional medicine of their primary health care needs (WHO, 2018). In some developed regions, general prevalence of use may be as high as 50% for complementary and alternative medicine (Silenzio, 2019).

Herbal medicine, as a form of T/CAM is used to treat chronic and infectious illnesses but data on patterns of use and related health concerns is still lacking (WHO, 2016; Brodeker & Kronenberg, 2015). Although research into T/CAM such as herbal medicine is growing, much still focuses on "clinical, regulatory, and supply oriented issues to the general neglect of wider public health dimensions" (p1582, Brodeker & Kronenberg, 2015). The World Health Organization proposes four areas of actions to maximize the role of T/CAM in public health: national policy and regulation; safety, efficacy and quality; access; and rational use (Brodeker & Kronenberg, 2015). The health outcomes of use of some herbal medicines have been

documented in studies and case reports (Weneker, et al, 2015; Tiran, 2016). Potential risks from concomitant use of biomedical and herbal treatments have also been documented (Giriglian and Sun, 2015; Tiran, 2017; Weneker et al, 2018). However, for many herbal medications, health outcomes as well as potential drug-herb interactions in concomitant use are still unknown. Often, people consider herbal products "safe" (WHO, 2019). There is a need for patient-health practitioner communication about herbal medicine use in order to discuss risks and benefits and best treatment to follow (Brodeker and Kronener, 2016; Grigliano, 2018; Tiran, 2017; Weneker et al., 2015; Langloid-Klassen et al., 2016; Anderson and Johnson, 2015).

This study will explore the use of herbal medicine among women of reproductive age during pregnancy, labour and post-partum period in an urban setting in Bende LGA. A report by Family Care International (2015) revealed heavy reliance on herbal medicine during antenatal, labour and post partum periods in the rural areas of Bende LGA of Abia State. Besides issues of access, affordability and poor health service, women also preferred traditional forms of care for illnesses perceived to be outside the scope of western medicine. Herbalists and traditional birth attendant's herbal medicines were also trusted for general well-being in various stages of pregnancy and for easy delivery during labour. A few studies show significant use in other regions as well, such as the rural US (40%) (Glover, et al., 2015), Taiwan (20%) (Hsiao-Yun Yeh, et al, 2016), and urban Ghana (50%) (Addo 2017). These studies show a high prevalence of herbal medicine use despite access to biomedicine.

Additionally, gynaecologists and obstetricians were often unaware of use of herbal medicine among their patients (Glover, et al., 2017).

Research Questions

The study was guided by the following research questions:

1. What are the socio-demographic and other characteristics of women who used herbal medicine during pregnancy, labour and post-partum period?
2. What health-seeking behaviors can be associated with herbal medicine use during pregnancy, labour and post-partum period?

Research Method

Research Design

The study adopted cross-sectional survey of the pattern of use of herbal medicine during pregnancy, labour and post-partum period. Each respondent provided cross-sectional/comprehensive information about use during all three stages. According to Moser et al (2017) cross-sectional survey is research which makes observations at only one period in time. It is analogous to taking one still picture of the population or group being investigated.

This study was conducted at Bende Division General Hospital (BDGH). It is situated in Bende town and it is the Division General hospital. The hospital is a 30 minutes' drive from Bende town situated along Ohafia/Igbere Road. It provides out as well as in-patients services which includes; reproductive services, X-Ray, ENT, Laboratory, Pharmacy and Dental services among others.

Bende General hospital provides antenatal as well as other maternal child services to approximately 13,400 women per year according to available records at the

hospital. This translates to 1,120 women per month seeking at least some antenatal, post natal and maternal child care services. This was used as a guide to determine the number of respondents to be targeted within the study period.

Mothers in labor and those undergoing surgery were excluded on ethical grounds. A proportionate sampling was then done according to the classes identified.

A total of 165 women were picked.

The methods of data collection used in the study included; interviews, observation and review of medical records.

The questionnaire was divided into five parts.

The instrument was validated. The pre-test was done by administering the tool to mothers with similar characteristics but not part of the target population to be studied.

Chi-square test was used to compare differences between categorical variables at 0.5 significance level.

The study sample comprised of 165 respondents, 6 key informants and 1 Focus Group Discussion of 8 participants. The broad objective of the study was to assess the utilization of herbal medicine during pregnancy, labour and post-partum period among women in Bende District.

Distribution of herbal medicine use by women's age

Age of the respondents in the use of herbal medicine was an important component of this study. Majority of those in the age-group 18-28 years reported to have used herbs during pregnancy, labor or post-partum period 66 (78.6%). This was followed by those in the age-group 51-60 years 6 (66.7%). The age-group 29-39 years had the least percentage 20 (57.1%) reporting having used herbs. In general age was not statistically significantly associated with use of herbal medicine ($X^2=8.924, p=0.026$).

Table 2: Distribution of herbal medicine use by women's age

Factor	Herbal use			
	No		Yes	
Age-group	Frequency	Percentage	Frequency	Percentage
18-28	18	21.4	66	78.6
29-39	15	42.9	20	57.1
40-50 and above	14	36.8	24	63.1

Source: Field data 2023

Generally all the age brackets reported 50% in herbal use.

Herbal medicine use by number of children

The herbal medicine used by women who use herbal medicine by the number of children they had. All the respondent 8 (100%) with more than 10 children reported to have used herbal medicine while majority of those with 8-10 children 31 (83.8%) reported to have used herbal

medicine. More than half 46 (62.6%) of those with 1-3 children reported to have used herbal medicine. The percentage use of herbal medicine increased with an increase in the number of children and this was statistically significant ($X^2=8.924, p=0.026$).

Table 3: Distribution of herbal use by number of children the respondent had

Factor	Herbal use			
	No		Yes	
No. of children	Frequency	Percentage	Frequency	Percentage
1-3	28	37.8	46	62.2
4-7	10	30.3	23	69.7
8-10	6	16.2	31	83.8
>10	0	0	8	100

Source: Field data 2023

Distribution of herbal use by level of education of the respondents

Education level is important in the study because it reflects the intellectual growth of a respondent. None of the respondents 0 (%) with masters level of education reported to have used herbal medicine while only 3 (21.4%) with bachelors level of education reported use of herbal medicine. Majority of those with primary education 59 (83.1%) reported to have used herbal medicine. This implies that the higher the level of education the lower the

percentage of used of herbal medicine ($X^2=25.988$, $p<0.001\%$).

Level of education played a role in determining the use and non-use of herbal medicine as supported by some participants in the FGD.

The reaction of the medicine use herbs (herbal medicine) don't think twice for themselves. Just because others even use then they use. It is about going to school...and it helps to go to school. Just a little. (A Woman in FGD).

Table 4: Distribution of herbal use by level of education of the respondents

Factor	Herbal use			
	No		Yes	
Education level	Frequency	Percentage	Frequency	Percentage
Primary	12	16.9	59	83.1
Secondary	15	30.6	34	69.4
Middle college	5	26.3	14	73.7
Bachelor's degree and above	14	78.6	3	21.4

Source: Field data 2023

Distribution of herbal use by marriage status of Respondents

Knowing the marital status of the respondents can provide an insight into the influences of marriage partner in herbal medicine use. With regards to marital status and use of herbal medicine, majority of those married 72 (76.6%) reported to use herbal medicine compared to 32 (58.2%) of the singles and 3 (60%) others (Divorced/separated and widows). It is

therefore possible that the spouse of the married women influences herbal medicine use of respondents. The difference was significant ($X^2=5.767$, $p=0.039$).

Asked what influences use of herbal medicine during pregnancy, labour post-partum period, and spouse seems to influences the use.

"...I never hide using traditional herbal during my pregnancy from my husband..."

since he pays for me whenever I want ... i go to hospital and it takes long to heals

backache and he encouraged me to use this medicine (herbs)..." (Women in FGD).

Table 5: Distribution of herbal use by marital status of the respondents

Factor	Herbal use			
	No		Yes	
Marital status	Frequency	Percentage	Frequency	Percentage
Single	24	42.1	33	58.9
Married	22	22.9	74	77.1

Source: Field data 2023

There was no so much significance in the use of herbal medicine in the single and other categories according to the study.

Distribution of herbal use by employment status of the respondents

Employment status was also found to be significant in the use of herbal medicine. Respondents who were self-employed reported the highest rates of herbal use with a frequency of 26 (86.7%). Unemployed and self-employed respondents also had 84.1% use compared to 15.8% non-use. However the employed category had the highest non-use at 28 (62.2%). This could be attributed to incomes of the respondents. *"...the use of herbal medicine can be attributed to perceived high cost of conventional medicine...for me it impacts on the options the women take...but other*

medicines in hospitals are free and they still use herbs. It could be because of influence from peers..." (Doctor).

"...as I attend to them (pregnant women) especially at homes, I find most of them with both herbs and modern medicines. Women at home acknowledge that herbs help them since they don't go to hospitals frequently and are not covered since they aren't employed formally..." (Midwife)

The statement seems to support the findings on high herbal medicine use by the unemployed.

Table 6: Distribution of herbal use by employment status of the respondents

Factor	Herbal use			
	No		Yes	
Employment	Frequency	Percentage	Frequency	Percentage
Employed	28	62.2	17	37.8
Unemployed and self-employed	17	15.8	90	84.1

Source: Field data 2023

Distribution of herbal use by size of household of Respondents

Majority 11 (64.7%) of those with a household size of more than 11 reported to

use herbal medicine as compared to only 20 (52.6%) of those with a household size of 1-3.

Table 7: Distribution of herbal use by employment status of the respondents

Factor	Herbal use			
	No		Yes	
	Frequency	Percentage	Frequency	Percentage
Household				
1-3	18	47.4	20	52.6
4-7	16	28.1	41	71.9
8-10	6	17.1	29	82.9
11>	6	35.2	11	64.7

Source: Field data 2023

The percentage use of herbal medicine increased with an increase in the household size and this was statistically significant ($X^2=10.528$, $p=0.027$).

Distribution of herbal use by religious affiliation of the Respondents

Though the majority of the respondents in this study were Christians at 122 (78.7%).

All the African traditionalists and Hindus 21 (100) reported to use herbal medicine and 86 (70.5%) of the Christians.

Table 8: Distribution of herbal use by religious affiliation of the respondents

Factor	Herbal use			
	No		Yes	
	Frequency	Percentage	Frequency	Percentage
Religion				
Christian	36	29.5	86	70.5
Muslim	11	91.7	1	8.3
African tradition and Hindu	0	0	21	100

Source: Field data 2023

These proportions were significantly higher compared to only 1 (8.3%) of the Muslims ($X^2=29.879$, $p<0.001$). this could be attributed to the small number of the Hindu and Muslim population and respondents in the study.

Health-Seeking behaviours associated with herbal medicine use during Pregnancy, Labour and Post-partum period

This study sought to assess the health seeking behaviours associated in herbal medicine use during pregnancy, labour and post-partum period. Herbal medicine use can be associated with a number of health seeking behaviours that is worth understanding. As such, respondents were

asked questions ranging from the prescription of medicine to boost their immunity, sources of herbal medicine, distance from the nearest facility, place of delivery and reasons for using herbal medicine were important.

Distance from the nearest health facility (Kms)

The distance from the nearest health facility was found to be significantly associated to use of herbal medicine. Use of herbal

medicine seems to have increased with the increase in the distance to the health facility. Almost one third of the respondents 41 (64.1%) who travelled less than 5 kilometers to a health facility reported using herbal medicine during pregnancy of those who travelled between 5-10 kilometers which is carried out and compared to 14 (22.6%) who did not use. Also significant in this study are those who

covered over 10 kilometers to the health facility which showed use of 21 (67.7%) and 10 (32.3%) non-use.

...I used the Traditional medicine because I had some bleeding in the 4th month [of the pregnancy]. I was afraid I might miscarry before reaching the hospital which is quite a far... (Another woman in Focus Group).

Table 9: Distribution of herbal use by distance from the nearest health facility.

Factor	Herbal use			
	No		Yes	
Distance from nearest facility (km)	Frequency	Percentage	Frequency	Percentage
<5	23	35.9	41	64.1
5-10	14	22.6	48	77.4
>10	10	32.3	21	67.7

Source: Field data 2023

Herbal medicine use in relation to respondent's ANC attendance

To determine the relationship between herbal medicine and ANC attendance, respondents were asked to state the number of times they attended ante-natal clinic during their last pregnancy. The findings

revealed that herbal medicine use increased with the decrease in ANC attendance. Nearly half of the respondents 22 (48.9%) reported attended ANC more than 3 times. 38 respondents (82.6%) of those who never attended ANC reported using herbal medicine.

Table 10: Distribution of herbal use in relation to respondent's ANC attendance

Factor	Herbal use			
	No		Yes	
ANC Attendance	Frequency	Percentage	Frequency	Percentage
Never	8	17.4	38	82.6
≤2	17	26.6	47	73.4
≥3	22	48.9	23	51.1

Source: Field data 2023

Source of herbal medicine to boost/maintain respondent's health

The source of herbal to boost their health, respondents were asked to state the source of the herbal medicine used to boost/maintain your health. Majority of

those that used herbal medicine (82.4%) obtained it from herbal clinic or shop. Both regular supermarket and market accounted for 8.8 percent of the total source of herbal medicine.

Prescribed medicine to boost/maintain health

Figure 4 show that Family, friends and relatives played a key role in prescribing herbal medicine to the respondents in the study. Majority of the herbal medicine used to boost/maintain health were prescribed by an herbalist. 90% of the respondents indicated that the herbal medicine was prescribed by an herbalist. Their family, friends and relative prescribed to only 10% of the respondents. This was also attested to by comments from a woman in an FGD. Traditional medicines are usually prescribed by a traditional herbalist or brought in herbal shops.

Apart from the use of traditional medicine to protect from evil and harm, other important reasons were to stimulate prolonged labour and to induce labour when overdue.

Doctors advice regarding use of herbal medicine

The research also sought to establish whether respondents received any doctor's advice regarding herbal medicine use during pregnancy. Only 26(25%) of those who used herbal medicine during pregnancy discussed with the doctor.

This finding corresponds to the view of a clinical officer's comments in key informants interviews.

"...Pregnant women use herbal remedies during pregnancy and most (75%) don't inform their doctor or midwife. Most women believe herbal medicine gives them greater choice, control and participation in their child bearing experience.

For those who didn't discuss with the doctor reported that the doctor didn't ask. Significant majority 100 (100%) were advised by their doctors to discontinue the

use of herbal medicine. This response was also supported by the doctor's view on the use of herbal medicine.

...Herbal medicine use among adults and specifically with pregnant women with or without chronic illnesses is quite high in Bende. Many of the pregnant women think herbal medicines are always safe, effective, a beneficial...which is not true... - (Doctor).

The doctor believes that despite the belief of many of the respondents those herbal medicines rarely produce adverse effects, a few experienced them mildly and moderately.

"Considering the magnitude of popularity of herbal medicines among the respondents and their levels of ignorance of the potential toxicities, it is necessary to evaluate the safety, efficacy and quality of these preparations and products which may involve clinical trial studies"- (Doctor)

He suggested that Public enlightenment programme, in the form of health education about safe use of herbal medicines, may be useful means of minimizing the potential adverse effects. Also half of the respondents' belief that use of herbal medicine is harmful (50%).

"...At times it feels uncomfortable when you take them.... I prefer adding sugar of milk diarrhea if common with the use of them..." (A woman in FGD).

Place of Delivery of respondents

Concerning the place of delivery of the respondents, more than half of the respondents delivered in the hospital 91(65.5%) as in Figure 6. Those who delivered in the hospital got the opportunity to be assisted by the skilled personnel.

A good number 94 (66.7%) were assisted to delivery by skilled nurse/midwife. Only 80 (56.7%) used at least a traditional medicine

of which 39 (49.4%) were provided by a traditional birth attendant.

More than half 99 (63.1%) had ever used herbal medicine for other purpose other than for pregnancy with 42 (26.8%) reporting that western/convectional medicine was not working as in Figure 4.6

"...unlike in my previous pregnancy when I used herbal medicine to treat excessive bleeding...sometimes I use it (herbs) to cure pain in the swollen legs...this also applied to my sister who was not pregnant and she got healed" (A woman in the FGD)

Reasons given by respondents for using herbal medicine

Respondents were also asked to outline the reasons why they use herbal medicine. Slightly more than a quarter (26.8%) of the respondents indicated that Western or conventional medicine was not working. Whereas 25.5% reported that they could not attend the medication and care facility, 24.2% preferred herbal medicine to

pregnant women 49.6% indicated that they could not afford to go to the doctor.

Midwives and other health professional emphasized on evidence-based approach towards use of herbal medicine and CAM in order to provide the best care to childbearing women.

"More than two-third of the women who come to me use herbal medicine. Infact the herbs they use so crude.....but I encourage them to use what they can cheaply obtain within reach. Some even prepare for themselves.....! But I advise those who self-prepare to be cautious since it can harm the foetus" - (Midwife)

"Personally, I don't see anything wrong with them using herbal medicine so long as they have been advised by professional herbalists.....they believe that use of herbal medicines during pregnancy is safe. They say herbs are natural and safer than conventional medicines. They can also find them easily and cures many illnesses" - (Midwife)

Table 11: Herbal Medicines used by women

Factor	Pregnancy		Labour		Post-partum	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Herbal medicines						
Ginger	42	26.7	47	29.9	46	29.2
Raspberry leaf	18	11.4	17	10.8	24	15.2
Castor oil	7	4.4	6	3.8	11	7.0
Folic acid	23	14.6	16	10.1	15	9.5
Garlic	40	24.4	39	24.8	34	21.6
Cranberry juice	20	12.7	23	14.6	17	10.8
Others	7	4.4	9	5.7	10	6.3
N-157		100		100		100

Source: Field data 2023

The common herbal medicines that are used across the three stages in significant amounts are; during pregnancy Ginger

42(26.7%) and Garlic 40(24.4%), during labour Ginger 47(29.9%). And Garlic 39(24.8%) and during post-partum are

Ginger 46 (29.2%), Garlic 34(21.6%). Castor oil and Raspberry leaf were reported as the lowest used herbal medicine as 7(4.4%), 18(11.4%) during pregnancy respectively.

Perception of Safety and efficacy of herbal Medicine during pregnancy, labour and post-partum period in comparison to Western Medicine in the study population.

The research also sought to establish the perception of safety and efficacy of herbal medicine compared to Western Medicine. In Table 10, majority of the respondents

100(70.4%) agreed that most herbal medicine is natural. There are illnesses or conditions for which western medicine is more effective than herbal medicine 88 of women are involved or conditions for which herbal medicine is more effective then herbal, 106 (74.6%). Close to half of the respondents 66(46.5%) disagreed that herbal medicine may be beneficial in general during pregnancy, labor and post-partum if recommended by family member/relative and that most western/prescription medicine is not safe for me during pregnancy 67(47.2%)

Statement	Agree	Disagree	Not sure
Most western/prescription medicine is not safe for me during pregnancy	60(42.2)	67(47.2)	15(10.6)
Most western/prescription medicine is not safe for my baby during pregnancy	65(41.4)	49(34.5)	28(19.7)
Herbal medicine is not safe for me during pregnancy	60(42.3)	55(38.7)	27(19)
Most herbal medicine is not safe for my baby during pregnancy	61(43)	61(43)	20(14)
Most herbal medicine is natural	100(70.4)	26(18.3)	16(11.3)
Most herbal medicine of safe	65(45.8)	51(35.9)	26(18.3)
Herbal medicine may be beneficial in general during pregnancy, labor and post-partum period if recommended by doctor	69(49.3)	44(31.4)	27(19.3)
Herbal medicine may be beneficial in general during pregnancy, labor and post-partum if recommended by herbalist	62(43.7)	43(30.3)	37(26.1)
Herbal medicine may be beneficial in general during pregnancy, labor and post-partum if recommended by family members/relative	49(34.5)	66(46.5)	27(19)
There are illnesses condition for which western medicine is uncreative than western medicine	106(74.6)	18(12.7)	18(12.7)
There are illnesses condition for which western medicine is more effective than western medicine	88(62)	13(9.2)	41(28.9)

According to respondents, weakness in Traditional Medicine includes unclear measurements and preparations, which could cause overdosing and enhance harmful effects.

"I think that they [Traditional Medicine] can be dangerous because they don't have measurements. Maybe when you cook you don't know how much water to use, maybe it is

strong you don't know, and again how much to take in a day" (Woman in Focus Group Discussion).

Women were greatly appreciative of the technical possibilities offered by western medicine. However, western medicine was critiqued due to lack of massage, the impossibility of having a companion during labour and the judgmental attitude of the staff towards Traditional Medicine. This lack of communication about use, dose and ingredients of Traditional Medicine hamper evaluation of effects.

The qualitative information recorded and reported was collected from FGDs with pregnant women. While the majority of the participants seemed to be knowledgeable about traditional medicine, a few participants were not well-informed about how traditional medicine work and were not aware of its consequences. Perceptions about traditional medicine were not uniform among the participants. Some described traditional medicines as having significant side-effects, while others perceived traditional medicine to be very helpful medicines which ensure a quick and less painful delivery. Apart from the use of Traditional medicine to protect from evil and harm, other important reasons were to stimulate prolonged labour and to induce labour when overdue.

...A times it takes long before you deliverand you can't just wait! Wait for whom? We already have herbs in the case of any eventuality (woman in focus group)

"I went to the midwife because my mother also used her service. It is also cheaper" (woman in focus group)

Only some women emphasized a quick, less painful delivery as their principal motive for using Traditional Medicine.

Remarkably, several young pregnant women took Traditional influential factors and persons:

"They say it is our tradition, so I just drink". (woman in focus group)

"I used the traditional medicine because I had some bleeding in the 4th month [of the pregnancy]. I was afraid I might miscarry ". (Another woman in focus group)

Summary of the findings

The study set out to establish the utilization of herbal medicine during pregnancy, labour and post-partum period among women in Bende District.

The prevalence of herbal medicines use during pregnancy, labour and post-partum period among women attending antenatal clinic at Bende provincial General hospital was 70%. This findings is higher to that is South Africa where 55% of women used herbal medicines during pregnancy (Jewkes, et al 1998). Similarly, it is higher than the findings in which prevalence in urban and rural areas were 43.3% and 40.2% respectively. In their study pregnant women at different gestation age were asked about the use of herbal medicine in the index pregnancy and during labor in their previous pregnancy using a structured Swahili questionnaire. This difference can be explained by differences between the Nigerian herbal drugs market and the situation in other countries, and differences in characteristics of the study population. Apart from other factors, this increment may be attributed to the rapid increase in promotion of traditional medicine in the society and the media. It is very common to

see posters advertising traditional medicines and herbalists.

In this study more than half of the woman who used herbal medicines during their immediate past pregnancy, delivered in health facilities. This is similar to other studies where it was found that in the African context, herbal medicine in pregnancy and labour continues to play, as it did in the past, an important role in health systems. Western oriented medicine and health systems, introduced during the colonial era, did not completely eliminate well established systems of traditional medicine practice and many Africans learnt to use both health systems in parallel depending on the availability of medicine and/or the nature of the illness. Induction of labour was the most common purpose for the use of herbal medicines were used for certain indications such as to facilitate labour, relieve muscle and body ache, space pregnancies, promote baby's physical health and intelligence, enhance sexual pleasure, prevent retained placenta and abortion purposes.

Socio-Economic and other Characteristics of women using herbal medicine during Pregnancy Labour and Post-partum Period.

In the current study, age, distance to the nearest health facility, employment status and number of children were found to be significantly associated with use of herbal medicine. However, education level was not a significant predictor of herbal use. The findings are contrary to the report that in developed countries CAM use has been associated with high education and income, or being a cultural minority (Bodeker and Kronenberg, 2002). In a study conducted among obstetrics patients use was higher among those with only primary or no

education than among secondary and tertiary education. Additionally, use was significantly highest among those in unskilled occupations and lower socioeconomic status (Addo, 2017). Marital status was not significantly associated with herbal use and similar findings were the herbal use among marital status and religion.

However, the findings were lower than the estimate that 80% of the African population use traditional medicine in some way for their primary health care needs (WHO, 2018). Studies by WHO (2016) suggested heavier reliance of people in rural areas on traditional medicine for primary health care. However, similar figures can be observed in some urban contexts.

In addition, it was reported that western/conventional medicine "was not working". Similar findings were reported by Langlois-Klassen et al (2017)'s AIDS study, that most common reason of use was abundance of traditional medicines as well as its perceived efficacy. "Lack of response" to conventional medicine was one of the main reasons of use of CAM in urban area (Yekta, et al., 2018). Werneke (2016), who studied cancer patients, states that patients often combine CAMs with conventional treatment to improve quality of life, alleviate side effects, take control of their care and accommodate their worldwide into the healing process.

Perception of Safety and efficacy of herbal medicine during pregnancy, labour and post-partum period

In comparison to Western medicine, it was reported that most Western/prescription medicine is not safe during pregnancy for the baby and mother during pregnancy. Similar findings were reported by Addo

(2017) and Langloid-Klassen (2016), that there is a potential for drug-herb interactions which may affect course and outcome of patient's condition. Most potential drug-herb interactions have been reported from case reports, scarcely from large scale studies (Werneke, et al., 2014). These case reports include Fugh-Beghman's study on anticoagulant effects of garlic and cod liver oil and Izzo and Ernst's report of the interaction of St. John's Wort. In Werneke et al., (2018)'s study among cancer patients it was found that 12% were at potential risk of CAM interference with current treatment.

Conclusion

The use of herbal medicines during pregnancy among women attending antenatal clinic at Bende district general hospital (BDH) was associated with, low education level of pregnant women, age and employment status.

The use of herbal supplements is pregnancy is likely to be relatively high in pregnant Nigerian women and it is important to ascertain which supplements (if any) women are expected to as providers should be aware of the common herbal medicine used and care of the evidence regarding potential benefits or harm. It is important that care providers do not prescribe any treatments, medications or herbal supplements where they are unaware of the evidence supporting their use. There is therefore a need for planning and streamlining strategies to maximize benefits and minimize dangers of use traditional medicine in pregnancy.

The use of herbal medicines by pregnant women in Bende was seen to be quite high. Many patients have confidence in the efficacy of herbal remedies and found them helpful as a cost effective and accessible alternative treatment. Health care providers,

especially those that are involved in ante-natal, pre-natal and post-partum care should therefore be aware of evidence regarding potential benefits or harm of herbal medicinal agents when used by pregnant women, since many of these herbal remedies are self-prescribed based on the women's own information or belief.

Recommendations

Based on the findings of this study, it recommended that:

- ❖ Health care personnel should educate themselves sufficiently to guide their patients in the safe use of herbs. Discussing the use of herbs in an open and nonjudgmental way will go a long way toward helping the patient and provider to communicate effectively about this topic.
- ❖ It is essential that health care personnel teach their patients about possible interaction between herbs and prescription or over-the-counter medications.
- ❖ The health care personnel should also familiarize themselves with how specific herbs are used, because the same key concepts underlying the administration of medications apply to herbal medicines as well, i.e. right medication, right route, right dose and right time.
- ❖ It is difficult to discard use of traditional medicine, particularly herbal medicines, because they have been using herbs and recommending use of herbs for many years, however there are several alternative messages that can be given to

them, such as consulting a doctor, before using any herbal medicines during pregnancy.

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