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FACTORS THAT HAVE LED TO CONTINUED USE OF HERBAL MEDICINES AMONG PREGNANT WOMEN ATTENDING ANTENATAL CLINIC AT RUGAZI HEALTH CENTRE IV, RUBIRIZI DISTRICT.A CROSS-SECTIONAL STUDY.

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Abstract.

Background:

The purpose of the study was to find out the factors that have led to the continued use of herbal medicine among pregnant women attending antenatal clinic at Rugazi Health Centre IV, Rubirizi district.

Methodology:

A descriptive cross-sectional study was employed on 50 pregnant women aged between15-45 years using a simple random sampling technique and questionnaires to collect data. The data were analyzed using Microsoft Excel to generate tables, pie charts, and bar graphs for easy presentation of findings.

Results:

All the respondents 50(100%) had ever heard about herbal medicine and used them in their current pregnancy. 58% obtained information from family, (44%) wanted to treat nausea and vomiting. (32%) used ginger and garlic concoctions and (78%) thought herbs had no side effects.

Most respondents (78%) did not receive sensitization and counseling about herbal medicine use, (98%) never informed midwives about the herbs they were using, the reason for nondisclosure they were not asked about it (89%) and fear for midwives' reactions (20%) Some experienced side effects from conventional medicine and allergies (60%) was the common side effect.

Some respondents (57%) used herbs because they are socially and culturally acceptable and (99%) said herbs are cheap and readily available.

Conclusion:

Based on the findings of the study, the overall factors for continued use of herbal medicines during pregnancy were, the belief that herbs were safe, dissatisfaction with the health system, and herbs being free. However, these herbs were not completely harmless.

Recommendation:

The Ministry of Health should carry out sensitization sessions to educate pregnant women about the possible side effects of herbal medicine use in pregnancy to reduce or eliminate the possible side effects since their practice and attitude would cause negative impacts.

Keywords: Herbal medicine, Pregnant woman, Antenatal care, Antenatal clinic, Submitted: 2023-07-07 Accepted: 2023-08-20

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1. BACKGROUND OF THE STUDY.

Pregnant women ought to seek antenatal care at every stage of their pregnancy to enable them to have a healthy pregnancy and a healthy baby, however, they have resorted to herbal medicine. Herbal medicine refers to the use of plant–derived materials or preparations to treat, diagnose, and prevent illness and maintain well-being. According to WHO estimates, the frequency of herbal medicine usage among pregnant women ranges between 7% and 96% globally (Agyemang- Duah, 2019). The world health organization claims that medicinal plants might be good for health and support the immune system, a reason why most pregnant women claim to use them. Pregnancy is usually characterized by physiological changes such as nausea, vomiting, heartburn, and constipation. These changes often cause pregnant women to resort to self-medication including the use of herbal medicines though conventional medicine is what is recommended as per the UCG for management of pregnancy-related complications (John L.J., 2015). These women commonly use ginger, garlic, raspberry, green tea, cranberry, valerian, chamomile, peppermint, and fenugreek during their pregnancy because they believe these herbal remedies are natural they are safe with fewer side effects compared to conventional drugs (Peprah, 2019).WHO estimates that 80% of the population in Africa mostly those in rural areas use herbal medicine to meet their primary health care needs because they are traditionally and culturally acknowledged thus the high prevalence. In sub-Saharan Africa, there is a wide spread of herbal medicine use however pregnant women out to be conscious about herbal medicine use during pregnancy because their safety and efficacy are not known and some of them may affect the mother, fetus, and pregnancy outcomes. The prevalence of herbal medicine use in sub-Saharan Africa is 80% for the treatment of health-related complications and 90% of pregnant women in Sub- Saharan Africa use herbs for antenatal care, despite the little literature on safety and efficacy (James, P.B., Wardle, J., and Steel, A., 2018). In East Africa, people have been consuming herbal medicines for decades now (Walusansa, 2021) with about 12% being pregnant women. In Uganda in particular, there is a tendency for the majority of women to use traditional therapies at every stage of pregnancy and only resort to antenatal services(W.Kyegombe et al..2016) when it's necessary. Estimates show that over 60% of the population including pregnant women use herbal medicine for day-to-day health needs, a pattern that cuts across all social classes and educational levels (Nyeko R., Tumwesigye N.M., Halage A.A, 2016). In Uganda the prevalence of herbal medicine use during pregnancy and delivery is reported to be more than 80% in western Uganda (Kamatenesi-Mugisha M, Oryem- Origa H, 2007), this raises a major public concern since this medicine is not completely harmless. Some effort has been made by health workers to discourage the indiscriminate and unregulated use of herbal medicine however with minimal success.

1.1. General objective.

To determine the factors that have led to the continued use of herbal medicines among pregnant women attending the antenatal clinic at Rugazi Health IV, Rubirizi district.

1.2. Specific objectives.

- To determine the maternal factors that have led to the continued use of herbal medicine among pregnant women attending the antenatal clinic at Rugazi Health IV, Rubirizi district.
- To determine how the health care system has contributed to the continued use of herbal medicine among pregnant women attending antenatal clinic at Rugazi Health IV, Rubirizi district.
- To find out social-economic factors that have led to the continued use of herbal medicines among pregnant women attending the antenatal clinic at Rugazi Health IV, Rubirizi district.

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2. METHODOLOGY.

2.1. Study design.

The study design used was a descriptive cross-sectional study. This design is preferred because it was more accurate and it gathers information in the shortest time possible.

2.2. Study area.

This study was conducted in Rugazi Health Centre IV. It is located Rubirizi district approximately 15km from Ishaka Town. It was a public and major health facility offering healthcare services to the residents of the Rubirizi district. The facility offered services including inpatient and out-patient services, antenatal services, HIV/AIDS, circumcision, and tuberculosis, among others. The study was conducted from December 13th to 22nd December 2022.

2.3. Study population.

This study comprised of pregnant women aged 15-49 years seeking antenatal services in Rugazi Health Centre IV, Rubirizi district.

2.4. Sample size determination.

The sample size was determined using the formula below; Burton's formula (1952)

S=2(QR) O: where S=required sample size

Q=number of days the researcher spent while collecting data R=maximum number of people per day

O= maximum time the interviewer spent on each participant. 5×10 ×1hr

=50

Therefore, the researcher used 50 respondents.

2.5. Study variables.

2.5.1. Dependent variable.

Continued use of herbal medicine was the dependent variable.

2.5.2. Independent variable.

Maternal factors, health system factors, and social-economic factors were the independent variables.

2.6. Inclusion criteria.

All consenting pregnant women aged from 15 years to 49 were included in the study.

2.7. Sampling technique.

A simple random sampling technique was used to select the sample of all eligible and consenting participants attending antenatal care in Rugazi Health Centre IV in Rubirizi District, the above technique was preferred because it eliminated bias and data collection took a short period.

2.8. Sampling procedure.

A simple random sampling was used where the pregnant women were numbered. The pregnant women were assigned numbers and picked randomly. The method was cheap, avoided bias, and was very easy to conduct.

2.9. Data collection method.

Data was collected through interviews and using a questionnaire. Data collected through interviews was recorded electronically so that it is not altered during transcribing it.

2.10. Data collection procedure.

An introductory letter was obtained from the principal, of the Kampala School of health sciences and was forwarded to the in-charge Rugazi Health Centre IV, Rubirizi district where after being granted permission proceeded to data collection.

2.11. Data collection tools.

2.11.1. Questionnaires.

A semi-structured questionnaire with both open and closed questions written in English language and later translated into the local language (Runyaruguru) was used to collect data, because large amounts of information was collected from a large number of people in a short period and at a relatively low cost.

2.12. Quality control.

Before data collection a pretest of the questionnaire was done on 15 women at Katerera Health Centre II and the information gathered will be used to evaluate the validity and reliability of the tools. The results from the pre-tested questionnaires were not considered. The inclusion criteria were only pregnant women attending Rugazi Health IV, and who only consented to participate freely in the study.

2.13. Data management.

During data collection, there was close monitoring and questionnaires were inspected to check for errors. Data was stored in a double-locked cupboard and the key was only accessed by the researcher.

2.14. Data analysis and interpretation.

Descriptive analysis was done on the data that was collected. Information was obtained from the questionnaires checked and verified manually. Data analysis was done manually using tally sheets, pens, and paper, Descriptive data were presented as frequencies and percentages and illustrated using frequency tables, pie charts, and bar graphs the analyzed data was entered into an Excel computer program.

2.15. Ethical considerations.

A recommendation letter was obtained from the Kampala School of Health Science to seek permission from Rugazi Health Centre IV to be able to carry on the research. During data collection, consent was sought from the respondents and there was confidentiality because the respondent's names were not taken.

3. STUDY FINDINGS.

3.1. Bio data.

This is the bio data of 50 pregnant women aged 15-49 years.

From the study findings, 60 % of the respondents were aged 26-30 years and the least (16%) were aged 16-25 years. Based on the study findings relating to marital status majority (70%) were married and the least were (4%) widowed. In regards to religion, the majority (72%) of the respondents were Christians whereas the least (4%) were others apart from Muslims. The study further revealed that the majority of the respondents (56%) had more than three successful pregnancies while the least (4%) had none.(Table 1a)

From the study findings, the majority of the respondents (56%) were unemployed while the minority (18%) were self-employed. Based on the study findings, most (48%) of the respondents were Banyaruguru whereas the least (6%) were others apart from bakyiga and Banyakole. From the study findings, most of the respondents (54%) had attained primary school level education whereas the least (8%) had never attained any level of education. (Table 1b)

3.2. Maternal factors that have led to continued use of herbal medicine among pregnant women.

The findings obtained from 50 respondents revealed that all of the respondents had ever heard about herbal medicine use and had used them in their current pregnancy.

From figure 1, majority of the respondents (58%) obtained information from friends whereas the minority (4%) obtained information from media.

From figure 2 , the majority (44%) used herbal medicine for nausea and vomiting whereas the least (6%) used herbal medicine to prevent skin diseases and disorders and urinary tract infections.

From table 2, the majority of the respondents (32%) used ginger and garlic as the herbal medicine whereas the least (10%) used pumpkin leaves and seeds.

Table 3: Shows the distribution of the respondents according to whether they think herbal medicines work

From table 3, majority of the respondents (72%) said that herbal medicines work during pregnancy whereas the minority (28%) said they don't work during pregnancy.

From table 4, more than half of the respondents (68%) obtained herbal medicine from the bush

Variable	Frequency (f)	Percentage (%)
Age		
15-25	8	16
26-30	30	60
31-49	12	24
Marital status		
Married	35	70
Single mothers	8	16
Divorced	5	10
Widowed	2	4
Religion		
Christians	36	72
Moslem	12	24
Others	2	4
Successful pregnancies		
None	2	4
One	5	10
Two	15	30
Three and more	28	56

Table 1a): Shows the distribution of respondents according to their bio data.

Occupation		
Self employed	9	18
Employed	13	26
Unemployed	28	56
Level of education		
Never went to school	4	8
Primary level	27	54
Secondary level	11	22
Tertiary /University level	8	16
Tribe		
Runyankole	14	28
Munyaruguru	24	48
Mukyiga	9	18
Others	3	6
Total	**50**	**100**

Table 1b):**Shows the distribution of respondents according to their bio data.**

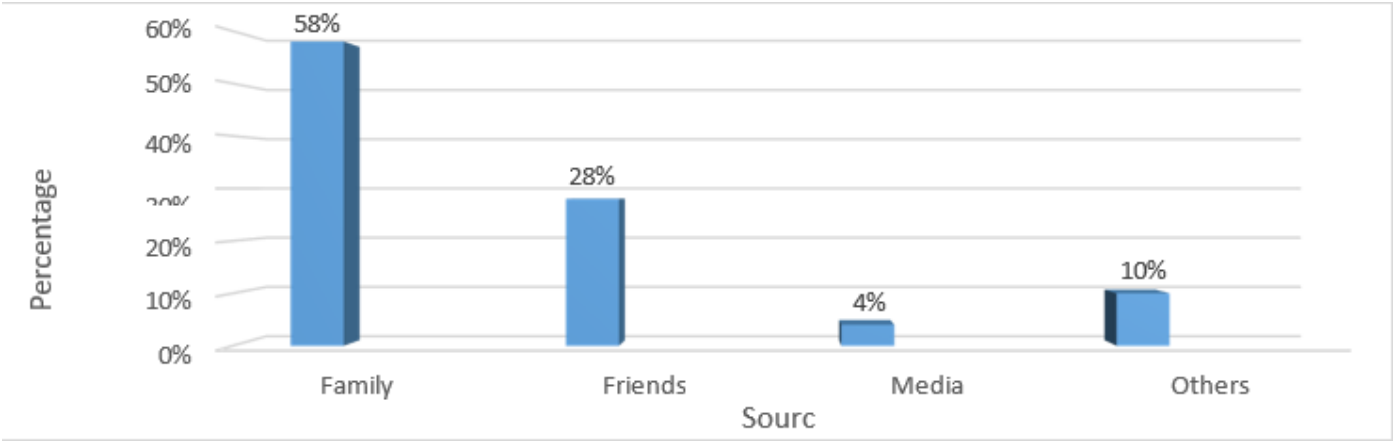

Figure 1: **Shows the distribution of the respondents according to the source of information on herbal medicine use.**

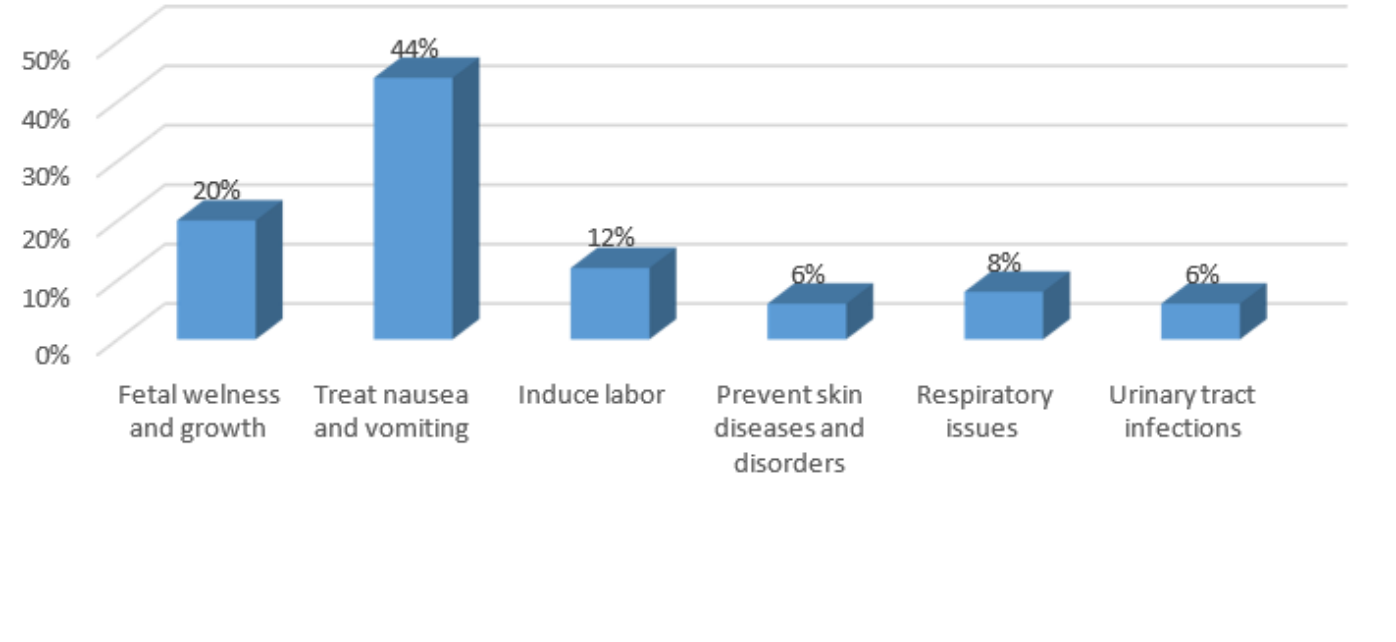

Figure 2: **Shows the distribution of the respondents according to the pharmacological uses of herbal medicine during pregnancy.**

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Responses	Frequency (f)	Percentages (%)
Garlic and ginger	16	32
Castor oil	8	16
Aloe Vera	7	14
Pumpkin leaves and seeds	5	10
Raspberry	8	16
Cranberry juice	6	12
Total	**50**	**100**

Table 2: Shows the distribution of respondents according to categories/types of herbal medicine they used during pregnancy.

Response	Frequency (f)	Percentage (%)
Yes	36	72
No	14	28
Total	**50**	**100**

Table 3: Shows the distribution of the respondents according to whether they think herbal medicines work

Source	Frequency (f)	Percentage (%)
Bush	34	68
Traditional healers	12	24
Herbalists	4	8
TOTAL	**50**	**100**

Table 4: shows the distribution of respondents according to where they obtained herbal medicine.

whereas the least (8%) obtained herbal medicine from herbalists.

From figure 3, more than half of the respondents (52%) didn't know any side effect of herbal medicine whereas the least (4%) knew death as the side effect of herbal medicine use.

From table 5, most of the respondents (56%) took the herbal medicine orally by drinking it whereas the least (10%) spread it on their bodies.

From table 6, 68% of the respondents said herbal medicines are safe, 32% of the respondents said herbal medicines are not safe, 22% said herbal medicines have side effects and 78% said the herbs have no side effects.

From figure 4, the majority of the respondents (88%) said that they would not share with fellow pregnant women whereas the minority (12%) claimed they would advise fellow pregnant women.

3.3. Health system factors that have led to continued use of herbal medicine use among pregnant women.

All the respondents 50(100%) said they did not pay for the antenatal services.

From figure 5, majority of the respondents (78%) said that they did not receive counseling or sensitization concerning herbal medicine use at the health facility whereas minority of the respondents (22%) said they received counseling or sensitization.

From figure 6, majority of the respondents (98%) said that they would inform the midwives whereas the minority (2%) informed the midwives on any herbal medicine use.

From figure 7, the majority (70%) did not inform midwives about herbal medicines they were using because they were not asked this query whereas the minority 8% was because they did not want.

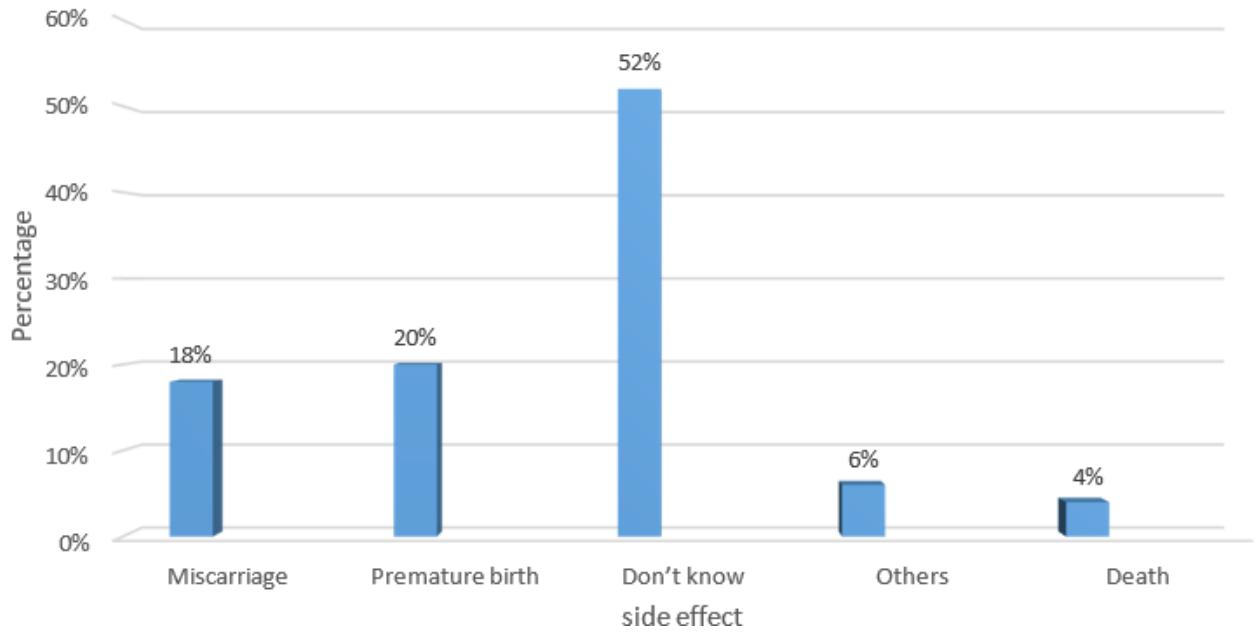

Figure 3: **Shows the distribution of the respondents according to whether they think that herbal medicine use is safe.**

Responses	Frequency (f)	Percentage (%)
Bathing	6	12
Drinking	28	56
Spreading it on the body	5	10
Others	11	22
Total	**50**	**100**

Table 5: Shows the distribution of respondents according to how they use the herbal medicines.

Response	Frequency(f)	Percentage (%)
Safe	34	68
Not safe	16	32
Have side effects	11	22
Have no side effects	39	78
TOTAL	**100**	**100**

Table 6. Shows the distribution of respondents according to the knowledge about the safety and side effects of herbal medicines.

Time taken	Frequency (f)	Percentage (%)
Long	18	36
Short	32	64
Total	**50**	**100**

Table 7: Shows the distribution of respondents according to how long they wait before they are attended to.

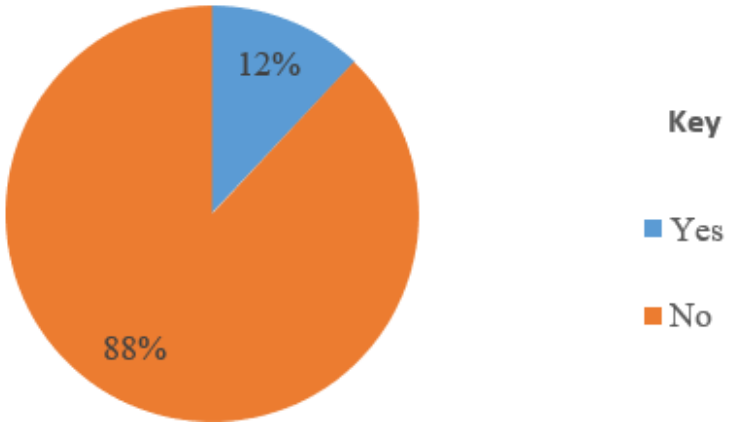

Figure 4: **Shows the distribution of respondents according to whether they would advise their fellow pregnant women to use herbs during pregnancy.**

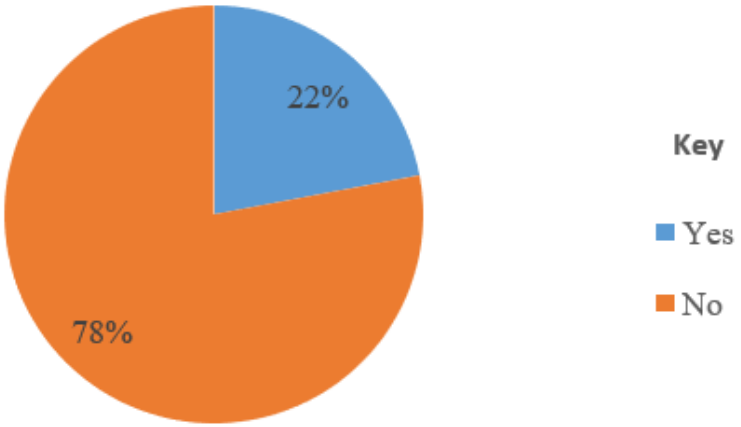

Figure 5: **Shows the distribution of respondents according to whether they receive counseling or sensitization concerning herbal medicine use at the health facility.**

From table 7, more than half of the respondents (64%) were attended to in a short period of time whereas the minority (36%) were attended in a long period of time.

From table 8, the majority of the respondents (84%) said midwives are rude whereas the minority (16%) said midwives would not listen to them.

From table 9, more than half of the respondents (56%) lived far whereas the minority (14%) lived very far.

From figure 8, more than half of the respondents (56%) said they experience side effects of conventional medicine whereas the minority (44%) said they don't experience any side effect from conventional medicine.

From table 10, most of the respondents (60%) reported allergies whereas the least (16%) reported others apart from stomach ache.

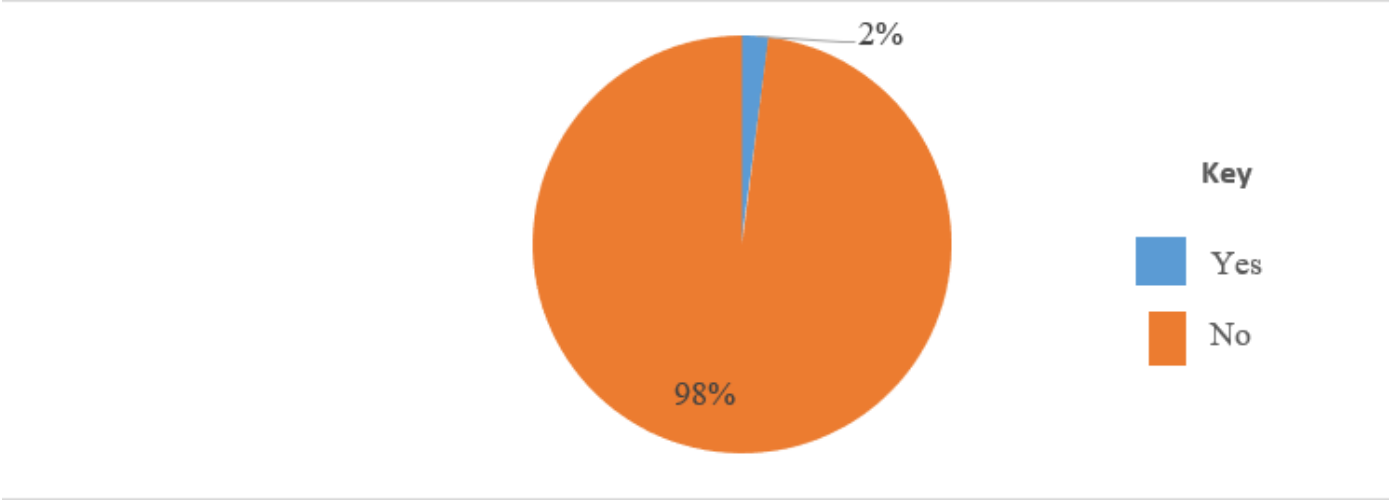

Figure 6: **Shows the distribution of respondents according to whether they would inform the midwives on any herbal medicines they use.**

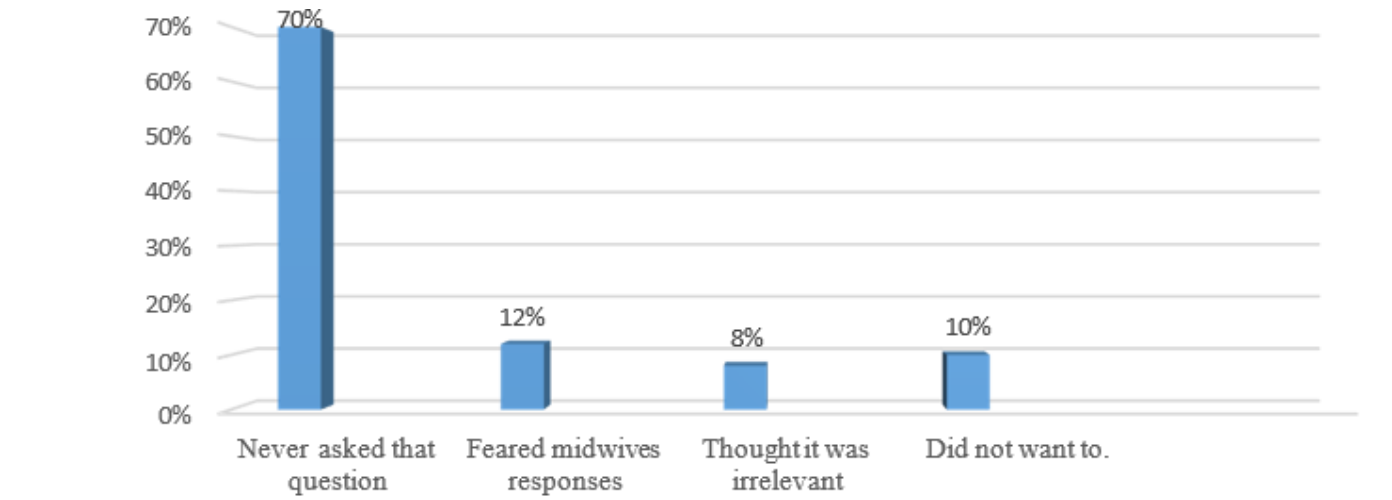

Figure 7: **Shows the distribution of respondents according to why respondents never informed midwives about herbal medicines they were using.**

Response	Frequency (f)	Percentage (%)
Midwives are rude	42	84
Midwives dot listen to me	8	16
Total	**50**	**100**

Table 8: shows the distribution of respondents according to why they don't communicate all their ailments to the midwife.

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Response	Frequency (f)	Percentage (%)
Near	15	30
Far	28	56
Very far	7	14
Total	**50**	**100**

Table 9: Shows the distribution of respondents according to how far the facility is from the area of residence.

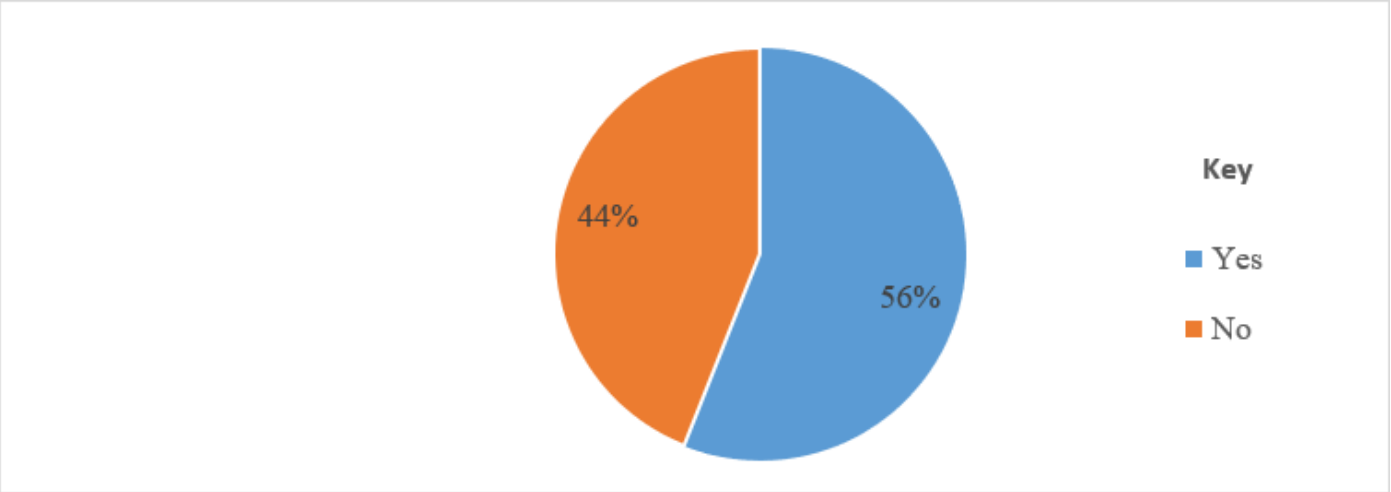

Figure 8: **Shows the distribution of respondents according to whether they experienced any side effects from conventional medicine.**

Responses	Frequency (f)	Percentage (%)
Allergies	30	60
Stomach upset	12	24
Others	8	16
Total	**50**	**100**

Table 10: Shows the distribution of respondents according to why they use the herbal medicine

3.4. Social-economic factors that have led to continued use of herbal medicine among pregnant women.

From figure 9, the majority of the respondents (68%) claimed the community recommended herbal medicines to them whereas the minority (4%) claimed the community did not recommend them herbal medicines.

From Figure 10, the majority of the respondents use herbal medicines because they are socially and culturally accepted (57%) whereas the minority (6%) used herbal medicines because they are readily available.

4. DISCUSSION.

4.1. Maternal factors that have led to continued use of herbal medicine among pregnant women.

The study findings revealed that all the respondents ever heard of herbal medicines and had used them in their current pregnancy and most of them (58%) got this information from family members who are always a trusted source. This could be responsible for the continued use of herbs by pregnant women and agrees with a study done by Ahamed M. Eid and Nidal Jaradat, (2020) where (77.1%) used herbal medicine and was prescribed for by 50.3% of the family members.

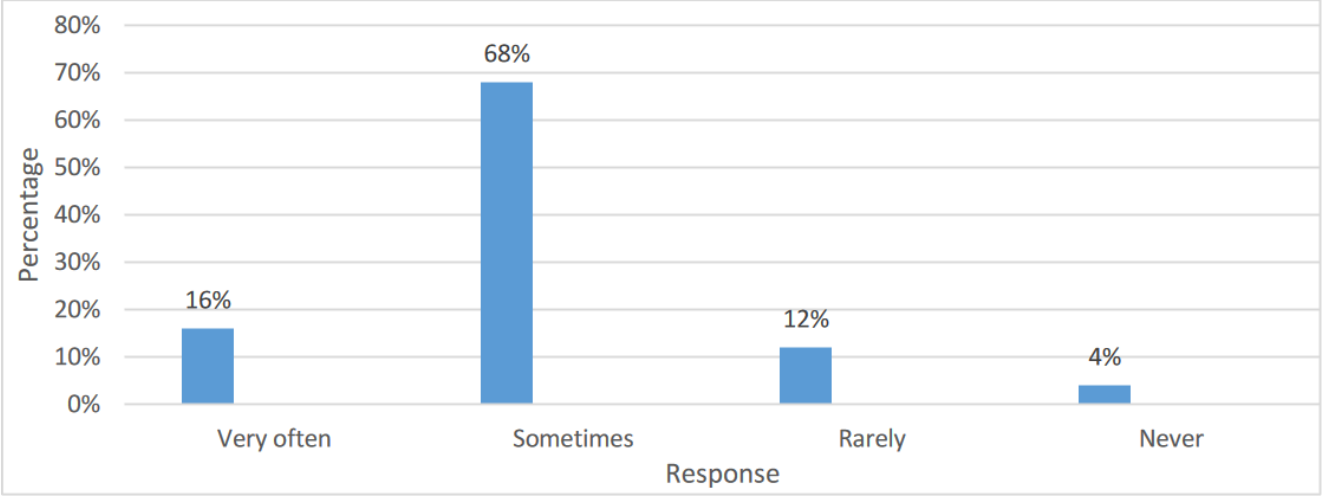

Figure 9: **Shows the distribution of the respondents according to how often people in their community recommend herbal medicines to them.**

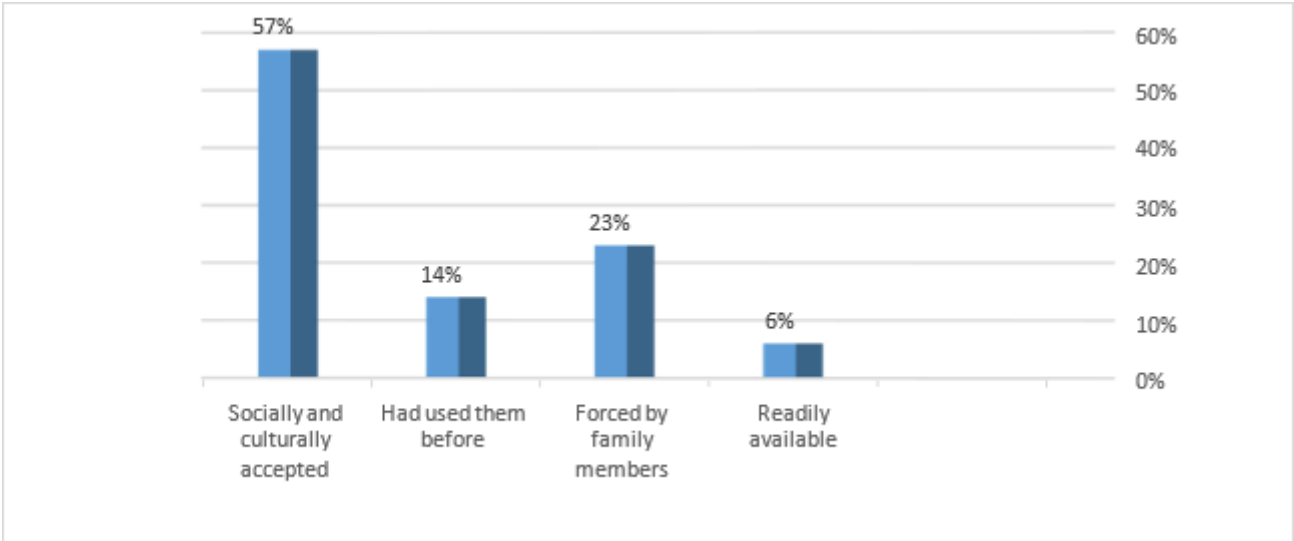

Figure 10: **Showing the distribution of respondents according to the reasons for use in the current pregnancy.**

Furthermore, most of these women (68%) thought these herbs are safe as evidenced by the (78%) who reported that herbal medicine had no side effects. This is in with a study done by Aldelmola OA, (2021) where 23.2% believed that herbal medicines had no side effects.

Results showed that most pregnant women (32%) used ginger and garlic to treat nausea and vomiting this is because these herbs were effective as proved by (72%) who claimed they worked for them. This is in line with a study done by Adane F.S., (2020) where respondents used ginger (41.11%) and garlic (32.98%) used garlic.

The results revealed that some pregnant women were aware of some negative outcomes of herbal medicine use including, (20%) premature birth and (18%) miscarriages. Thus they could not easily advise their fellow pregnant women to use herbal medicine due to fear of outcomes. This concurs with a study done by Shantakumari et al., (2015) where herbal medicine use was associated with preterm labor 24(13.4%), abortion 55(30.77%), and heavy bleeding after birth 35(19.6%).

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4.2. Health system factors that have led to continued use of herbal medicine among pregnant women.

Most of the respondents (78%) did not receive sensitization about avoiding herbal medicines during pregnancy, so they thought they were safe. And (98%) said they never informed the midwives about the herbs they were using during pregnancy this is because they were not asked this query. This is in line

In a study done by Addis GT et al., (2021) 94.7% did not disclose the use of herbal medicines to the health care providers because 52.2% of the doctors/ midwives did not ask this query.

Results revealed that the majority of the respondents would not communicate all their ailments to the midwives because most of them were rude (84%). This could have tempted most of the pregnant women to resort to self-medication of herbal medicines and it concurs with a study by Nyeko, R et al.,(2016) where 90% were not satisfied with the health system, and 74.4% did not communicate all their problems for the fear of being judged.

Most of the respondents (56%) lived far from the health facility and even when they bothered to arrive at the facility, they waited for long to be attended to. This is reason enough for them to resort to herbal medicine. This is in agreement with a study done by Laban Mutebwa et al., (2021) where 149(38.77%) stayed more than 10km away from the health facility and 107(29.7%) were not satisfied with the services received at the health facility.

Social-economic factors that have led to the continued use of herbal medicine among pregnant women.

The fact that these medicines are obtained from bushes (68%) proves that they are cheap as said by most mothers. This would push them to use herbals as compared to conventional medicines which have to be bought and most of these people rely on substantial agriculture. These results are in agreement with a study done by Kalungi VC and Kitara M, (2022) where (54%) obtained herbal medicines from the gardens and 100% used them because they are readily available and accessible.

Socially and culturally, herbal medicines are accepted to use during pregnancy (57%), additionally, there was a lot of pressure from family and relatives to use herbs (23%), which could have contributed to the continued use of herbs during pregnancy, this concurs with a study done by Josephine N and Najjemba N, (2021) were 68% used herbals because it was culturally accepted.

The level of education for most of the pregnant women was primary (54%) most probably they were not aware of conventional medicines. The results are in disagreement with a study done by Annie Logiel et al., (2021) where a high level of education in secondary school or higher (74%) was associated with increased use of herbal medicines.

4.3. CONCLUSION.

Based on the results of the study the researcher conducted, the overall results on the maternal factors were most pregnant women (100%) had ever heard about the herbs and had used them before and the majority of the respondents (68%) reported that herbal medicines were safe during pregnancy.

Moreover, 78% of the respondents didn't know the side effects of herbal medicines though they still used them. Respondents mostly used ginger and garlic (32%) mainly to treat nausea and vomiting.

Regarding the overall health system factors, the study revealed that 78% of the respondents did not receive counseling and sensitization about herbal medicine use, and some pregnant women (85%) were dissatisfied with the services provided by the health facility. Some respondents (56%) reported that they experienced side effects like allergies from conventional medicine.

The general social-economic factors, the majority (99%) of the respondents obtained herbal medicines so cheaply or completely free from bushes as compared to conventional medicine. Most of the respondents (68%) were greatly influenced by the community.

5. LIMITATIONS OF THE STUDY.

Some respondents refused to fill in the questionnaire and other respondents were illiterate and therefore were not able to read or write.

Some respondents refused to disclose the information needed from them.

The researcher faced financial problems due to a lack of money for necessities like transport.

6. RECOMMENDATIONS.

The Ministry of Health of Uganda should perform further studies on the adverse effects of herbal medicines used by pregnant women. Indiscriminate use of herbal medicines among pregnant women should be avoided.

Ministry of Health should make further studies on clinical trials of herbal medicines and strict restrictions should be imposed on herbal medicine usage.

Midwives or other health care providers working in the antenatal clinic of Rugazi health center IV should conduct sensitization sessions to educate pregnant women about the side effects of herbal medicine to prevent the possible side effects to the mother and the growing fetus.

Further studies and clinical trials should be made on the various herbal medicines to ensure their efficacy and safety. Rugazi Health Centre IV facility should encourage the traditional practitioners to work together with modern practitioners so they provide herbal medicines which are safe and effective.

7. ACKNOWLEDGMENT.

I thank the almighty God for the favor and grace he has rendered to me during my time in school especially the entire course of a diploma in pharmacy.

Thanks go to my supervisor **Kasujja Hassan Moses** who directed me during my study from the beginning up to the end and corrected all the mistakes to ensure perfection.

8. LIST OF ABBREVIATIONS AND ACRONMYS.

MOH : Ministry Of Health
HMIS : Health Management Information Systems.
HM : Herbal Medicine
UAHEB : Uganda Allied Health Examination Board.
UCG : Uganda Clinical Guidelines
ANC : Antenatal Care

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