Factors leading to increased use of Herbal Medicines by Mothers during Labour in Kakanju HC III Kakanju-Parish, Bushenyi District

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ABSTRACT

In Uganda, mothers use Herbal Medicines in pregnancy and labor at increasing rates, consequently, this results to premature labor, fetal distress, precipitate labor, risk of abortion and many others. This study aimed at identifying factors leading to increased use of herbal medicines by mothers during labor in Kakanju HC III Kakanju -Parish, Bushenyi District. A descriptive cross-sectional study was carried out among 40 mothers who were selected by simple random sampling. Contributing factors were assessed by vicariate analysis where HM use dependent analyzed against individual, social economic and facility factors. Odds ratio and p-values were established. Results found 28(70%) of mothers who attended ANC less than 4 times, 34(85.0%) had used them before OR-1.190 p-0.257, 35(87.5%) believed that HM were without side effects OR-1.446, p-0.008 and 28(70%) believed that HM contributed to better pregnancy outcomes with OR 5.571, p-0.00. 22(55.0%) earned less monthly with OR-1.143, p-0.687, and 35(87.5%) culture supported HM 1.238, p-0.124. Majority 34(85.0%) were not warned by health workers on dangers for HM use during labor, their OR-1.653, p-0.001. The study concluded on both individual factors like less ANC attendance and beliefs on safety for HM, social economic factors like low income and cultural support for HM as well as facility related including lack of clear warning on HM use to have contributed to increase in HM use.
Keywords: factors, herbal medicines, mothers, labour

INTRODUCTION

Herbal Medicine is the use of unrefined herbs in diverse ways by a group of people influenced by their culture and personal knowledge in seeking and maintaining good health care [1-6]. It is as well defined as plant-derived material and preparations perceived to have therapeutic benefits, containing ingredients from one or more plants [8]. In Africa, use of Herbal Medicines is reported to be at maximum among all other continents where it is estimated that more than 67.5% of African pregnant or labouring women use unprocessed Herbal Medicine (HM) from non-conventional

practitioner or self-prescription without going through pharmaceutical regulatory processes [9]. This has been associated with low levels of education and low social economic status [10].

In sub Saharan Africa, there, at least 67% of the population rely on traditional medicines including pregnant mothers and mothers in labour, unfortunately, this is hazardous since in various incidences, there are reports of inducing labour pre-termly, infections and puerperal sepsis resulting from herbs used during labour which are among factors that still contribute to poor maternal outcomes in the area [11-13]. In East Africa (EA), Studies found out that about 70% of women use a Herbal Medicine in its law form during pregnancy and labour, moreover 39% of them used HM that were either potentially harmful to use while others that used Herbals used them without obtaining information regarding their safety in labour [14]. However, due to a lack of data on efficacy and safety of HM use in pregnancy, women in labour still continue to use these plant extracts due to social, cultural and economic reasons in addition to weak health system that encourage HM use [15-22].

In Uganda, Safety of laboring mothers who used Herbal Medicines was assessed by Mekuria *et al.* [23] and found undeclared chemicals and contamination with heavy metals, biologically active ingredients that have a potential to mediate actions including precipitated labours leading to ruptured uterus leading to maternal deaths, false labour, eclampsia and pre-eclampsia in addition to producing unpredicted adverse effects with no known antidotes without forgetting common complications like urinary tract infections and sepsis resulting from poor hygiene while handling these Herbal Medicines. This study aimed at identifying factors leading to increased use of herbal medicines by mothers during labour in Kakanju HC III Kakanju - Parish, Bushenyi District.

Study Design and rationale

The study was a descriptive cross-sectional study involving quantitative measures of data collection. Mothers that were on postnatal ward of Kakanju HC III are those from whom were selected those that were interviewed by the researcher to obtain primary data from them. This design was chosen because it allows the researcher to collect data from respondents directly hence saving time and financial resources.

Study Area

This study was conducted at Kakanju HC III, Bushenyi District in Western Uganda

Study Population

The study population consisted of postnatal mothers on postnatal ward in Kakanju HC III. These were chosen because since they are mothers that have been pregnant and have carried pregnancy throughout to its delivery, they could have been directly involved in practices for maintenance of pregnancy including use of Herbal Medicines hence could be a better source on factors that influence them to use Herbal Medicines.

Sample Size Determination

The minimum required sample size was determined using Sloven, (1962) formula with precision of +/-5% at a confidence level of 95%. The formula is given by the expression below.

$N = n/1+n (E)^2$

Where;

N = Number of respondents.

n = Target population, n=45 (estimated number of postnatal mothers delivered at Kakanju HC III monthly)

E = level of precision, E= 0.05

Therefore;

$N = 45/1+45(0.05)^2$

N = 40, therefore 40 mothers were recruited for the study.

Sampling Method

The participants were selected using simple random sampling method where papers written on S representing a sample and N representing non-representative were written, S number of papers were equal to the calculated study population and the same number of non-representative papers will be used in order to have equal chances for a participant to choose S or N. These were kept in a secret ballot, reason for research and a method of choosing sample size was explained to mothers, then they were required to dip a hand into the box and pick one paper at once, those that picked S for sample were considered for the sample size of this study. Then a questionnaire was administered to them. This was continued on wards targeting postnatal mothers until the sample size was realized.

Inclusion Criteria

The participant included mothers that were on postnatal ward of who consented to voluntarily participate in the study.

Exclusion Criteria

All mothers who refused to consent   to the study and those who are very ill were not included.

Data Collection Methods

Data collection was done using a self-developed questionnaire. The reason for the research study and procedure was explained to the Participants on ward, after the researcher got an informed consent from the participants before proceeding. A researcher-administered questionnaire was used to collect information from the participants by the interviewer who may be an assistant or researcher herself. After each participant has finished with the interview, the questionnaires were collected by the researcher who first checked for completeness and ensured that all questions in questionnaire were answered and then they were stored in an envelope for analysis and presentation. The researcher trained an assistant to help in data collection from the respondents

. **Data Processing, Analysis and Presentation**

Data obtained was recorded and checked for completeness then compiled, coded and analyzed using SPSS, statistical results then were transferred to Microsoft Excel where they were converted to frequency tables, charts and graphs for informative results.

Ethical Consideration

The research proposal was produced and submitted to Kampala international university school of nursing ethics and research committee for approval where the permission to introduce the researcher to Kakanju HC III administration was sought. Permission to carry out research at health facility was sought from the in-charge. Also, the researcher sought permission from the participants by introducing herself and her assistants before carrying out the data collection processes. The participants were assured that all the information they give will be confidential and their participation are very important.

RESULTS

Table 1 showing demographic characteristics of participants

			(N=40)
Variable		Frequency	Valid Percent
Age	34 and below	24	60.0
	35 and above	16	40.0
	Total	40	100.0
Marital status	Married	36	90.0
	Single/divorced	4	10.0
	Total	40	100.0
Education	Primary and none	25	62.5
	Secondary or above	15	37.5
	Total	40	100.0
Tribe	Munyankole	34	85.0
	Mukiiga	4	10.0
	Muganda	2	5.0
	Total	40	100.0
Employment	Peasant/housewife	33	82.5
	Formally employed/business	7	17.5
	Total	40	100.0

Findings revealed most 24(60%) of mothers that were aged below 34 years and the least 16(40%) that were aged above 35 years. It was also found that most 36(90%) of mothers were married and the least 4(10%) that were single. The study also found almost a third 25(62.5%) of mothers that had primary education and only 15(37.5%) had secondary education or above. More so, most 34(85.0%) were Banyankole and the least 2(5%) were Baganda. It was also revealed that most 33(82.5%) that were peasants or housewives.

Figure 1 showing overall herbal medicine use during labour

(N=40)
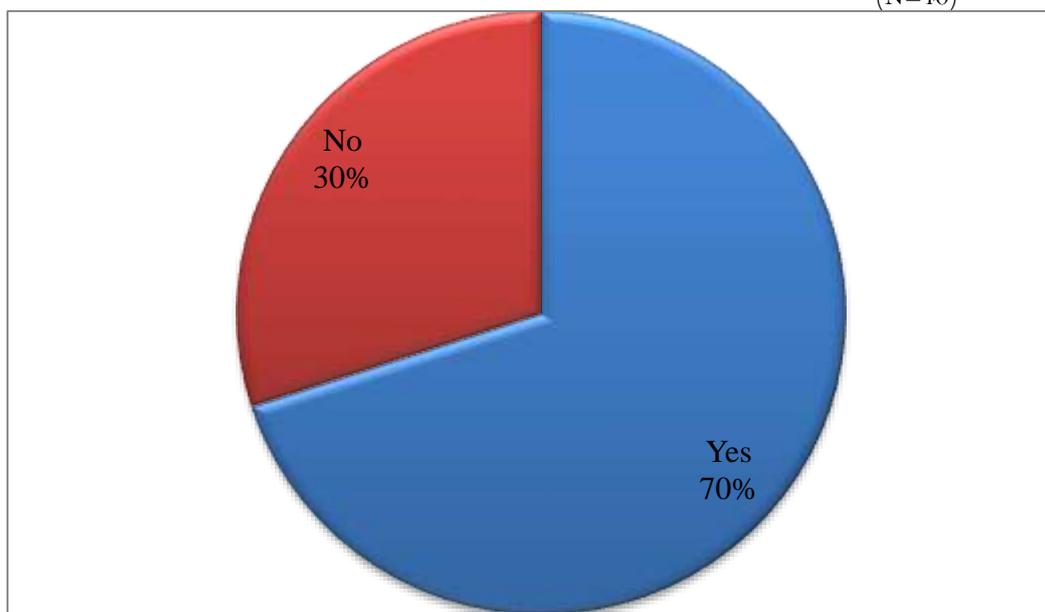
Findings revealed most 28(70%) of mothers who reported to have used herbal medicines whereas only 12(30%) had not used herbal medicines.

Table 2 reasons for use of herbal medicines

(N=28)

Variable		Frequency	Percent	Valid Percent
Why mothers used herbs	For Pregnancy protection	18	45.0	64.3
	For inducing and smoothening labour	10	25.0	35.7
	Total	28	70.0	100.0
Missing	System	12	30.0	
Total		40	100.0	

Of those that used herbal medicines, it was found that most 18(64.3%) used herbal medicines for pregnancy protection whereas the least 10(35.7%) used herbs for inducing and smoothening labour.

Table 3 showing individual factors contributing to herbal medicine use.

(N=40)

Variables		Frequency	Percent	Oddis ratio	p-value
Number of ANC	Less than 4	28	70.0	NA	0.000
	4 or more but less than 8	9	22.5		
	8 or more	3	7.5		
	Total	40	100.0		
Used HM before	Yes	34	85.0	1.190	0.257
	No	6	15.0	0.429	
	Total	40	100.0		
HM are free from bad side effects	Yes	35	87.5	1.446	0.008
	No	5	12.5	0.107	
	Total	40	100.0		
Use of herbs has better pregnancy outcomes	Yes	28	70.0	5.571	0.00
	No	12	30.0	0.086	
	Total	40	100.0		

The study found most 28(70%) of mothers who attended ANC only less than 4 times and only 3(7.5%) of mothers attended 8 or more times where p-0.000 for ANC attendance. Most 34(85.0%) had used herbal medicines before OR-1.190 and the least 6(15%) had not used herbal medicines before with OR-0.429, p-0.257.Mothers who believed that HM were free from side effects were the majority 35(87.5%) with OR-1.446 herbal medicine use whereas others 5(12.5%) believed that HM had side effects OR-0.107, p-0.008. The study also found most 28(70%) of mothers who believed that HM contributed to better pregnancy outcomes with OR 5.571 chances for HM use compared to the least 12(30%) who did not believe that HM use was more predictor for better pregnancy outcomes with OR-0.086, p-0.00.
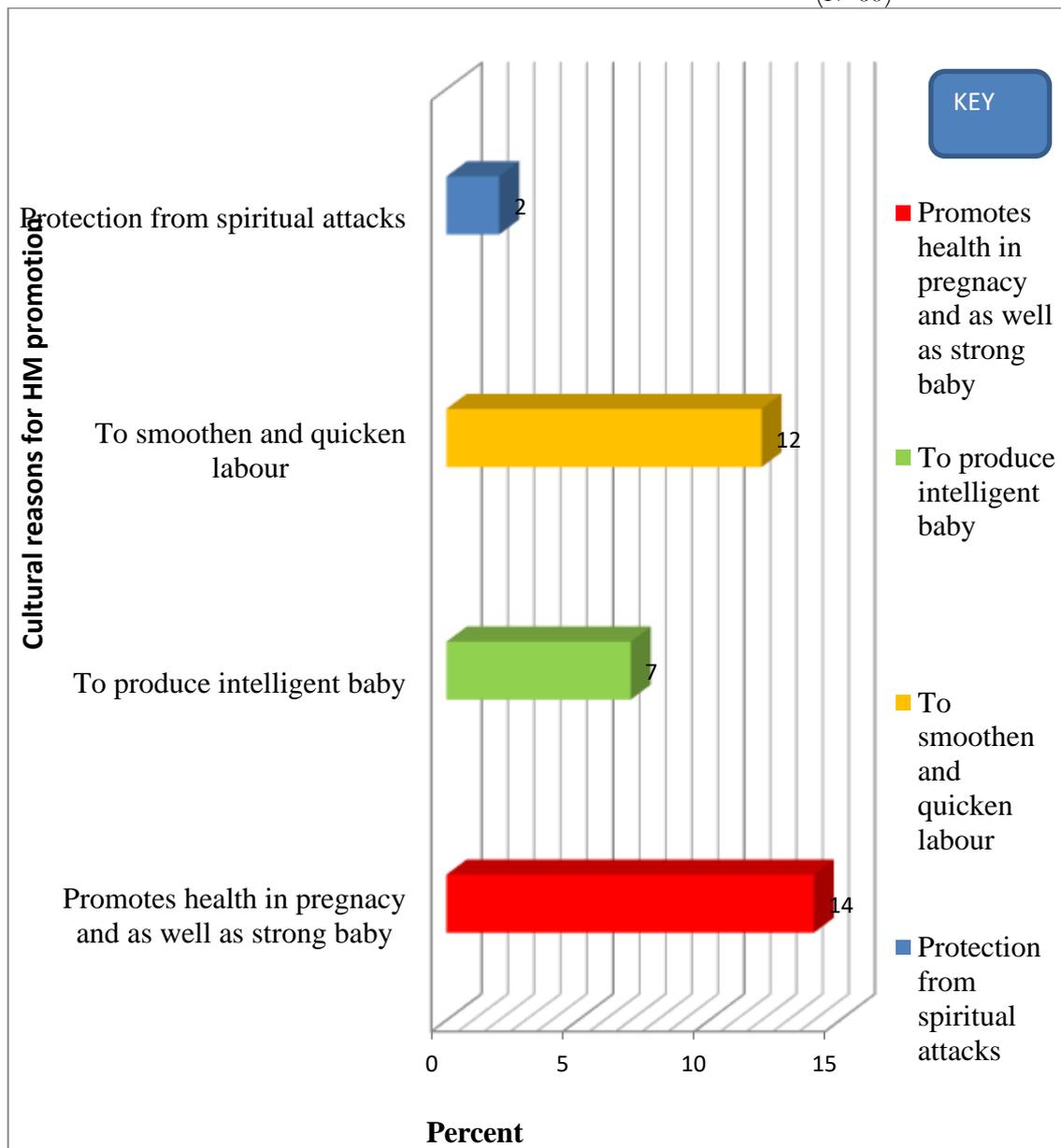
Table 4 showing social economic factors leading to increased use of herbal medicines during labour

(N =40)

Variable		Frequency	Percent	Oddis ratio	p-value
Monthly income	160000 or less	22	55.0	1.143	
	Above 160000	18	45.0	0.857	0.687
	Total	40	100.0		
Used HM because failed to pay for costs	Yes	4	10.0	5.571	
	No	36	90.0	0.086	0.00
	Total	40	100.0		
Determinant of HM use	Mother alone	28	70.0	0.662	
	Husband and other family members	12	30.0	4.174	0.052
	Total	40	100.0		
Who takes ensures that pregnancy remains safe	Mother alone	33	82.5	0.875	
	Mother, Husband and other family members	7	17.5	2.571	0.330
	Total	40	100.0		
Culture promotes HM	Yes	35	87.5	1.238	
	No	5	12.5	0.286	0.124
	Total	40	100.0		

Findings revealed more than a half 22(55.0%) of mothers that earned less than 160,000/= monthly with OR-1.143 for herbal medicine use whereas the least 18(45%) earned more than 160000 monthly, OR-0.857, p-0.687. Majority 36(90%) of mothers said that they had not resorted to HM as result of failing to pay for conventional medicines from hospital/health facility, OR-0.086 for HM use but only 4(10%) used HM when they could not pay for conventional drugs OR-5.571, p-0.000. More so, most 28(70%) of mothers were the main determinants of HM use OR-0.662 and only 12(30%) used HM during labour as determined by husbands or other family members OR-4.174, p-0.052. Most 33(82.5%) were the main responsible people to ensure that pregnancy is kept safe throughout pregnancy OR-0.875, whereas the least 7(17.5%) of mothers reported that joint efforts with husbands and other family members to keep pregnancy safe with OR-2.571, p-0.330. The study also noted most 35(87.5%) whose culture supported HM use during pregnancy and labour whereas the least 5(12.5%) of mothers were from cultural backgrounds with no cultural support to HM use in pregnancy and labour with OR-0.286, p-0.124.

Figure 2 showing reasons for cultural support for HM use.

(N=35)

Most 14(48.3%) of mothers reported that their cultures supposed HM as means for promoting health pregnancy as well as giving birth to a strong baby whereas the least 2(6.9%) that promoted HM as a measure to protect the unborn baby from bad luck and bad spirits.

Table 5 showing health care related factors leading to increased use of herbal medicines during labour

(N=40)

Variable		Frequency	Percent	Valid Percent	OR	p-value
Distance to facility	Less than 3km	22	55.0	55.0	0.619	0.101
	3 or more KM	18	45.0	45.0	2.143	
	Total	40	100.0	100.0		
Easily accessible drugs	Conventional medicines	27	67.5	67.5	0.857	0.520
	Herbal medicines	13	32.5	32.5	1.429	
	Total	40	100.0	100.0		
Health educated on drug use during pregnancy and labour	Yes	7	17.5	17.5	1.071	0.930
	No	33	82.5	82.5	0.986	
	Total	40	100.0	100.0		
Warned on HM dangers in pregnancy	Yes	6	15.0	15.0	0.086	0.001
	No	34	85.0	85.0	1.653	
	Total	40	100.0	100.0		
Charged for pregnancy care	Yes	4	10.0	10.0	0.429	0.370
	No	36	90.0	90.0	1.114	
	Total	40	100.0	100.0		
Used HM because they could not afford paying for medicines	Yes	2	5.0	7.1	0.071	0.000
	No	26	65.0	92.9	0.000	
	Total	28	70.0	100.0		
Missing	System	12	30.0			
Total		40	100.0			

The study found most 22(55%) of mothers that were from less than 3km to the facility with OR-0.619 for HM use and only 18(45%) were from 3 or more Km with OR-2.143, p-0.101. It was also found that most 27(67.5%) of mothers reported that conventional drugs from hospital were easy to get with OR-0.857 whereas the least 13(32.5%) reported that HM were more easily accessible with OR-1.429 chances for HM use and p-0.520. The study also noted most 33(82.5%) of mothers who reported to have not been health educated about rational drug use with OR-0.986 for HM use and only 7(17.5%) who were health educated about rational drug use during labour with OR-1.071 and p-0.930. Majority 34(85.0%) were not warned by health workers on dangers for HM use during labour, their OR-1.653 for HM use during labour and the least 6(15.0%) reported to have been warned by health workers on HM dangers OR-0.086, p-0.001. More so, 36(90%) of mothers reported that they were not charged any finances for pregnancy care OR-1.114 and only 4(10%) reported to have paid some money for pregnancy related care with OR-0.429 HM use and p-0.370. It was also found out that of all mothers, used HM because was not because they could not afford paying for medicines 26(92.9%) whereas OR-0.00 and only 2(7.1%) reported to have used HM because they could not afford paying for pregnancy care related costs to the facility, OR-0.071. p-0.000.

DISCUSSION

Findings revealed most 28(70%) of mothers who reported to have used herbal medicines, of these that used HM, 18(64.3%) used herbal medicines for pregnancy protection. This could be related to multiple reasons including cultural influences for HM use during pregnancy and labour as well as mothers lacking knowledge for the possible side effects and adverse outcomes of this practice. These findings agree with those of Nyeko et al. [24] WHICH estimated that over 60 % of using Herbal Medicines for labour in Uganda. Findings further agree with those of Fatemeh et al. [26] in Tehran, where mothers revealed higher Herbal Medicines to promote fetal health and intelligence. The study found most 28(70%) of mothers who attended ANC less than 4 times. This could be due to the due to poor health seeking behavior, these are likely to miss out on appropriate pregnancy care which could result into practicing of irrational pregnancy care including HM use during their labour. These findings agree with those of Sawalha [25] and Kissal et al. [27] in

Palestine and Turkey respectively which found Consumption of herbal medicines by pregnant women mainly in 80% of mothers who did not attend antenatal care (ANC) adequately. Most 34(85.0%) had used herbal medicines before OR-1.190. This could be because, through this previous exposure, mothers could have confidence in HM use as well as their sources in current pregnancy compared to those that had never taken HM during labour who had lesser chances for HM use OR-0.429, however, the level of influence was not significant with p-0.257. These studies agree with those of Hwang et al. [28] and Marwa *et al.* [29] in Kenya and Tanzania which found high chances of likelihood for Herbal Medicine use during labour among women who had ever used HM in their previous pregnancy.

Mothers who believed that HM were free from side effects were the majority 35(87.5%) with OR-1.446 with p-0.008. This could be due to the fact that mothers who use these drugs have no exposure to scientific studies that suggests side effects of these drugs including their carcinogenic and teratogenic effects especially in their determined doses hence their higher use for HM. These findings agree with those of Ernst [30] and Barnes *et al.* [31] which found mothers using HM because they believed that they were free from side effects. The study also found most 28(70%) of mothers who believed that HM contributed to better pregnancy outcomes with OR 5.571 chances for HM use, p-0.00. This is because they could want to use these drugs for their perceived positive pregnancy outcomes thereby increasing HM use. These findings agree with those of Thomson *et al.* [32], Gaur [33], Schmidt [34] and Babajani [35] which also revealed HM use among mothers that perceived them to have positive contribution to good pregnancy outcomes than those that did not believe HM pregnancy outcomes. Findings revealed more than a half 22(55.0%) of mothers earned less than 160,000/= monthly with OR-1.143 for herbal medicine use than those who earned more than 160000 monthly, OR-0.857, p-0.687. Low income levels could hinder their abilities including facilitating their transportation to hospital for medicines, hence increasing HM use in these mothers. These findings agree with those of Ahmed *et al.* [36] which found women that used Herbal Medicines during pregnancy that belonged to low-income group.

Majority 36(90%) of mothers said that they had not resorted to HM as result of failing to pay for conventional medicines from hospital/health facility, OR-0.086 for HM use, p-0.000. This could be due to availability of ANC services in most health facilities as well as private not for profit facilities in Uganda. Therefore, could reduce their use for HM during labour. These findings disagree with those of Mekuria *et al.* [23] in Ethiopia which reported most of the women used HM in pregnancy because they considered these cheap and accessible than hospital medicines. More so, most 28(70%) of mothers were the main determinants of HM use OR-0.662 compared to 12(30%) used HM during labour as determined by husbands or other family members OR-4.174, p-0.052. This could be due to the fact that they have autonomy about health seeking during their pregnancy hence making their own decisions regarding the type of treatments they take during labour. These findings are contrary to those of Mothupi [37] study in Kenya which revealed women that used Herbal Medicines during pregnancy as influenced by their elders including mothers, mother in-laws and traditional births attendants (TBAs). The study also noted most 35(87.5%) of mothers whose culture supported HM use during labour with OR-1.238 for HM use, p-0.124, of those whose culture supported HM use, 14(48.3%) reported that their cultures supposed HM as means for promoting health pregnancy as well as giving birth to a strong baby. This could be a representation of cultural values along the communities where this study was carried from, therefore; could lead to HM use among these mothers to fulfill the cultural goals. These findings are similarly to those of Lapi *et al.* [38] in Tuscany which revealed that women had strong cultural beliefs in Herbal Medicines like producing blight baby.

The study found most 22(55%) of mothers that were from less than 3km to the facility with OR-0.619 for HM use and 18(45%) that were from 3 or more Km with OR-2.143, p-0.101. This could be because, those that are from near the health facilities find it easy to travel and get medications from the facility which reduces their risks for HM use. It was also found that most 27(67.5%) of mothers reported that conventional drugs from hospital were easy to get with OR-0.857 for HM use compared to 13(32.5%) that reported HM easily accessible with higher OR-1.429 for HM use and p-0.520. This could be due to increasing access of ANC related care and drugs at all facility levels as well as improvement in health infrastructure and service delivery which could rescue HM use. The study also noted most 33(82.5%) of mothers who reported to have not been health educated about rational drug use with OR-0.986 for HM use and p-0.930. This could be due to limited attention given to drug use by health workers, it could lead mothers into using drugs that are not healthy for labour hence leading to poor outcomes of labour. These findings are contrary to those of Ashwini *et al.* [39] which recommended health practitioners to maintain proper

communication with their patients to ensure their health and safety through rational drug use during labour. Majority 34(85.0%) were not warned by health workers on dangers for HM use during pregnancy and labour, OR-1.653 and p-0.001. This implies negligence of the health workers since less attention is given to earning mothers of possible dangers and side effects of these drugs; mothers could remain ignorant of the possible dangers and precautions for use of these HM during pregnancy and labour which could lead to increase in HM use. These findings agree with those of Ahmed *et al.* [36] in Asia, which revealed women that used Herbal Medicines because they had not been educated by any health worker on their safety and use. Furthermore, they agree with those of Raoufi-Nejad *et al.* [40] In Iran where 78.2% of mothers said that they had never seen/heard any warning post against Herbal Medicines during labour hence they presumed HM to be very safe. More so, 36(90%) of mothers reported that they were not charged any finances for pregnancy care OR-1.114 and p-0.370, of those that used HM because was not because they could not afford paying for medicines 26(92.9%). This could be as result of free ANC services in government facilities as well as other non-profitable organizations hence could lead to use of conventional medicines since they are equally freely accessible, therefore failure to use them implies social cultural influence than costs.

CONCLUSION

From the research study findings, it was concluded that both individual factors of among mothers, social economic factors as well as facility related factors all contributed to increase in HM use during labour.

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