

An Assessment of the Socio-Demographic Factors Affecting Utilization of Focused Antenatal Care at Mbaare Health Centre III Isingiro District, Uganda

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ABSTRACT

Background: Focused Antenatal care is an effective health intervention for averting maternal morbidity and mortality. Although there has been progressed improvement in antenatal care and access in Uganda, the use of FANC services remains low. The study was on the assessment of the factors affecting utilization of focused antenatal care at Mbaare Health Centre III Isingiro District. The specific objectives were to; determine socio-demographic, cultural behavioral, and health facility-based factors affecting the utilization of focused antenatal care services.

Methods: The study was cross-sectional and employed both qualitative and quantitative approaches for data capture and analysis. Information was captured from 359 women attending ANC using questionnaires and interviews. Data were analyzed using STATA version 13 to generate both descriptive and inferential statistics.

Results: the study found out main socio-demographic factors associated with the utilization of FANC services included level of education [AOR = 2.624; (95% CI: 1.056 – 6.516); p = 0.038], marital status [AOR = 0.47; (95% CI: 0.275 – 0.804); p = 0.006], and employment [AOR = 1.58; (95% CI: 1.014 – 2.46); p = 0.043] The study also identified tribe [AOR = 1.71; (95% CI: 1.11 – 2.641); p = 0.016] as the main cultural obstacle to FANC service utilization at the Health Centre. The study further identified poor behavior of the health workers [AOR = 0.51; 95% CI: 0.302 – 0.851; p = 0.01], long waiting time at the facility [AOR = 2.013; 95% CI: 1.12 – 3.62; p

= 0.019] and un-flexible clinical hours [AOR = 2.72; 95% CI: 1.52 – 4.851; p = .001] as the main health facility based factors that affect utilization of focused antenatal care services.

Conclusion: as a result of the significant results, the study concludes that there are different socio-demographic, cultural behavioral, and health facility-based factors associated with the utilization rate of FANC services at Mbaare Health Centre III Isingiro District. Therefore, the study recommends Ministry of Health increases regular community sensitization campaigns to ensure greater awareness of the importance of ANC services among the vulnerable groups. It also recommends behavior change strategies through behavior change campaigns at the community level to provide a platform for both the health care workers to learn about the perceptions of women to get to know them better and also to use that opportunity to educate women on the benefits of FANC services.

Key words: Assessment of factors, utilization, focused antenatal care (FANC), Mbaare Health Centre III, Isingiro, Uganda.

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Introduction

Focused antenatal care refers to interventions to curb maternal and infant mortality. It is a planned program of medical management of pregnant women directed towards; making pregnancy and labor a safe and satisfying experience (Beeckman et al., 2013). Antenatal care is concerned mainly with the prevention, early diagnosis, and treatment of general medical and pregnancy-associated disorders (Farah & Karim, 2016).

Antenatal care is one of the most effective health interventions for preventing maternal morbidity and mortality particularly in places where the general health status of the women is poor (Gupta et al., 2014). The antenatal period presents an important opportunity for identifying threats to the mother and unborn baby's health, as well as for counseling on nutrition, birth preparedness, delivery care, and family planning options after the birth

According to Ononokpono & Odimegwu, (2014) early entry to antenatal care (ANC) is significant in the early detection and management of critical pregnancy-related outcomes. The World Health Organization (WHO) proposes that pregnant women in developing countries to seek ANC within the first 4 months of pregnancy.

Globally 30% of women between the age group of 15-40 years do not have ANC, 46% of those who did not have ANC are in South Asia while 34% are in sub-Saharan Africa (WHO, 2015). This low use of services leads to death and disability due to untreated hypertensive disorders or due to mal- or sub-nutrition like iron deficiency anemia. There has been a significant increase in antenatal service use between the years 1990-2015, the increase has been more than 20% in all the regions of the world except the sub-Saharan regions where only a 4% increase was noted (Worku, 2013).

Africa has the highest burden of maternal mortality in the world and sub-Saharan Africa is largely responsible for the dismal maternal death figure for that region, contributing approximately 98% of the maternal deaths for the region (WHO, 2016). According to a report of Mexican DHS, socio-economic and other factors are linked to differentials in maternal mortality (Cabieses & Bird, 2014). For instance, women with no formal education are 9 times more likely to die than those women who have finished high school, and women who live in highly marginalized areas are 3 times more likely to die than those who live in the least marginalized areas (Berhan & Berhan, 2014). A number of studies show that Women education influences

their uptake and use of maternal health services. Educated women are more likely than are uneducated women to use ANC, to use it early and frequently, and to use trained providers and medical institutions, similarly education is positively associated with safe delivery. Female education was also seen to be a strong predictor of maternal mortality independent of income per head. Additionally, ones' place of residence significantly influences the use of maternal health care services. Rural women are generally less likely to give birth in health facilities than their urban counterparts (Abosse et al., 2010).

The lower rate of FANC utilization and delivery assistance services has been established as contributing factors for a higher rate of maternal mortality (Alemayeh & Adama, 2014). In disadvantaged regions of the world like Uganda where such service is poorly developed, maternal mortality has remained a big challenge in public health (Pell et al., 2013). To address these issues, different stakeholders at national and regional levels have implemented different strategies. However, in some where countries where the infrastructure is poor, the ANC utilization is low, the assistance delivery rates have been progressively poor.

Uganda is one of the few countries that account for most of the maternal deaths; others include Nigeria, Bangladesh, Ethiopia, and India (Rutaremwya et al., 2015). According to the Ministry of Health, (2010), the maternal mortality rate of Uganda is 336/100,000 live births (UBOS and ICF Macro, 2012). This ratio is startlingly high given that the field of maternal health has received significant attention from the government (Chi et al., 2015). Pregnancy complications are more common and aggravated across.

Access to health services such as antenatal care services has been promoted as one of the ways to eliminate pregnancy-related complications. Antenatal consultations provide opportunities for health education, health promotion, and social support at both the individual and community levels (Finlayson & Downe, 2013). Especially in the rural setting, accessing antenatal care is an important step in bringing women into contact with the health care system. This contact has facilitated women's access to medical care for future health needs, including postnatal care. It is important for early diagnosis and prompt treatment for complications of pregnancy and other illnesses that can arise during pregnancy, such as sexually transmitted diseases (STDS), malaria, and helminths infections. Promoting healthy behaviors and increasing knowledge about

pregnancy and pregnancy-related complications among women, families, and communities are essential to the health and wellbeing of pregnant women (MOH, 2010).

Despite progress in increasing the use of antenatal care and access to health care facilities, the use of these services has remained low. Only 58.1% of births are attended by a skilled birth attendant, Different factors are related to the utilization of maternal health care services (Rutaremwā et al., 2015). Generally, socio-economic and demographic factors such as; mothers' education background, maternal age, source of livelihood, knowledge on danger signs, marital status, mothers' independency, birth order, religious background, house hold head's sex, household income levels, size of the household, husbands' education background, accessibility factors and factors related with women's perceived quality of maternal health care services. Mothers' knowledge of danger signs and autonomy were reported as significant determinants of care utilization (Rutaremwā et al., 2015).

Statement of the Problem

Antenatal is the care given to pregnant women to have a safe pregnancy and a healthy baby (Chi et al., 2015). Antenatal care is an important determinant of the high maternal mortality rate and one of the basic components of maternal care on which the life of mothers and babies depend (UBOS) and ICF Macro, 2012). It is concerned mainly with the prevention, early diagnosis, and treatment of general medical and pregnancy-associated disorders. Yet, Antenatal care is significant strategy in improving maternal and infant health. To reduce the high maternal mortality rate, Government through agencies like MOH has offered and promoted free antenatal care services as part of maternal health care services at public health facilities across the country (Rutaremwā et al., 2015). This is aimed at saving heavy mothers from pregnancy-related complications.

Despite the government efforts of having antenatal health care services in all public health facilities across the country, turn up for focused antenatal health care is as low as 11% for health facilities found in rural settings (Rutaremwā et al., 2015). For example, the number of pregnant mothers turning for focused antenatal health care at Mbaare Health Centre III Isingiro district has remained minimal even though the being facility is well equipped with manpower and supplies (Isingiro district health records 2019). Studies done in different settings have connected low turn

up to focused antenatal health care services with different socio-demographic, cultural, and health facility-based factors. However, it remains unclear for the study area as no empirical study has been conducted yet to assess the situation at Mbaare Health Centre III Isingiro district. It is within this context that the study was carried out to explore the factors affecting the utilization of focused antenatal health services and recommend the appropriate measures for promoting the use of the services.

Objectives of the Study

The general objective of the study was to assess the factors affecting the utilization of focused antenatal care services at Mbaare Health Centre III Isingiro district.

Conceptual framework

The study looked at focused antenatal care utilization as the dependent variable while socio-demographic and health facility based factors were the independent variables. A conceptual model developed below is intended to facilitate the understanding of how these factors were associated with the utilization of focused antenatal care.

Independent variables

Dependent variables

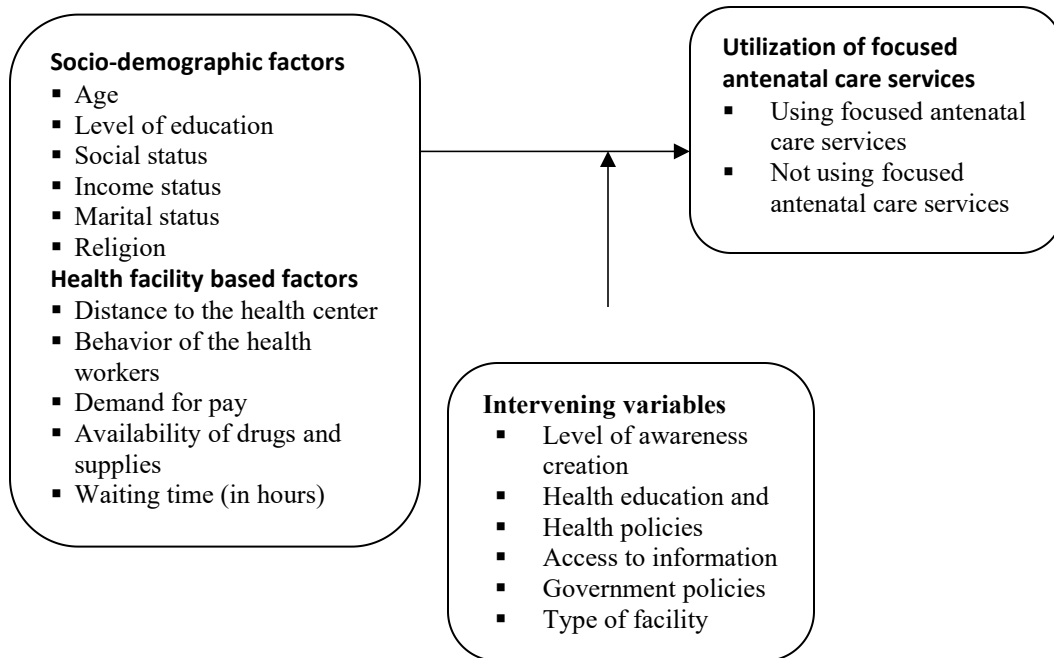


Figure 1: A conceptual framework describing the utilization of focused antenatal health services and its associated socio-demographic and health facility based factors.

From the figure above, utilization of focused antenatal health care is hinged on different socio-demographic and health facility based factors like age, level of education, social status, income status, marital status, distance to the health center, behavior and attitude of the health workers, demand for pay, availability of drugs and supplies as well as waiting time at the healthy facility. All these factors determine the uptake and use of antenatal health care services. Proper use of antenatal health care services following the recommended procedures reduces maternal and infant mortality. However, for mothers to fully utilize antenatal health care services, they require health education and awareness, government support and well-defined health policies.

Methodology

The study was conducted at Mbaare Health Centre III, Isingiro district Uganda. Mbaare Health Centre III is among the current functional Government Health Center threes' in the district. The facility offers different services ranging from maternity services, HIV testing and counseling, circumcision, and obstetrics care. It serves an estimated 15,000 people annually who seek for different medical services (Mbaare Health Centre III records, 2019). Like any other rural areas of Uganda, access to antenatal health care services in the study area has remained a serious challenge to pregnant women. This is largely been attributed to high poverty levels, lack of antenatal knowledge and other socio – demographic and cultural hindrances. Perinatal mortality rate in the area stands at 22/1000 (Mbaare Health Centre III records, 2019).

A cross sectional design engaging both qualitative and quantitative approaches was used to generate and analyze responses from mothers and other key informants. The quantitative approach enabled exactness and clarity in the measurement of the variables while the qualitative approach enabled extensive and deeper investigation into the factors. Data was collected from a sample of 359 respondents

The study adopted both simple random and purposive sampling techniques in the selection of respondents. Simple random is a type of probability sampling method in which sample members have equal chances of being selected. In this case, the researcher assigned numbers to mothers attending ANC as they arrived and registered at the health facility, these numbers were then written on small pieces of paper and rolled them and then placed in a box. The researcher picked

at random one paper at a time without replacement while shaking the box to ensure thorough mixing. This was repeated on each ANC clinic day until 359 mothers were reached and interviewed. 25 respondents were selected and interviewed on each ANC clinic day for 14 days and on the 15th ANC clinic day, only 9 respondents were selected to make a total of 359 women respondents. Key informants such as health workers, VHT's and TBA's were selected on purpose because of their position and supplementary information they had on the subject matter.

A structured interviewee administered questionnaire was used to elicit responses from the study participants. Questions were designed in English and later translated into local languages for respondents to read and respond in the languages they understood. The tool was checked for completeness, coded and entered into STATA version 13 software for cleaning and analysis. Data was analyzed to generate descriptive and inferential statistics which aided in presentation and interpretation of findings. The generated findings were presented in statistical tables.

Results

Table 4.1: Percentage distribution of respondents by socio-demographic and economic characteristics (n=359)

Variable	Category	Frequency	Percent
Age bracket	18 - 29	171	47.6
	30 - 40	138	38.4
	41 and above	50	13.9
Education level	None	25	7.0
	Primary	95	26.5
	Secondary	113	31.5
	Diploma	73	20.3
	Degree	53	14.8
Marital status	Never married	85	24
	Married	273	76
Religion	Christian	214	59.6
	Pentecostal	102	28.4
	Muslim	43	12.0
Employment status	Employed	190	52.9

Un-employed

168

47.1

Age of the respondents

Results in table 4.1 indicate that 47.6% of the respondents interviewed were aged 18 - 29 years, 38.4% were aged 30 - 40 while 13.9% were above 41 years

Level of education

Results in table 4.1 revealed that majority (31.5%) of the respondents had secondary education, 26.5% primary education, 20.3% diploma, 14.8% university degrees and 7% had never attended school.

Marital status

Results show that the study was dominated by married respondents at 76%, while the never married accounted for 24%.

Religion

Regarding religious affiliation, more than a half (59.6%) of the respondents were Christians, 28.4% Pentecostal and 12% Muslims.

Employment status

Results indicate that majority (52.9%) of the respondents had employment in both formal and none formal ventures whereas 47.1% were un-employed.

Table 4.2: Results of the logistic regression model of utilization of focused antenatal care services in relation to socio-demographic factors

Variable	Value	COR(95%CI)	p-value	AOR(95%CI)	p-value
Level of education	None	1		1	

	Primary	1.06(0.44-2.56)	0.896	1.058(0.427-2.621)	0.902
	Secondary	2.41(1.01-5.82)	0.05	2.624(1.056-6.516)	0.038
	Diploma	1.74(0.70-4.35)	0.235	1.707(0.664-4.39)	0.267
	Degree	1.13(0.43-2.91)	0.808	1.120(0.420-2.984)	0.821
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Religious					
affiliation	Catholic	1		1	
	Muslim	0.79(0.49-1.263)	0.319	0.727(0.442-1.196)	0.209
	Protestant	1.45(0.72-2.895)	0.297	1.663(0.811-3.410)	0.165
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Marital	Never				
status	married	1		1	
	Married	0.521(1.02-2.38)	0.014	0.470(0.275-0.804)	0.006
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Employment	Un				
status	employed	1		1	
	Employed	1.56(1.02-2.38)	0.04	1.58(1.014-2.46)	0.043
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HIV status	Positive	1		1	
	Negative	0.58(0.308-1.11)	0.1	0.516(0.312-1.14)	0.101

Dependent variable: utilization of focused antenatal care services (1-using, 0- not using)

- COR → Crude Odds Ratio
- AOR → Adjusted Odds Ratio
- CI → Confidence Interval

Results in Table 4.2 showed the relationship between socio-demographic factors and utilization of focused antenatal care services and the relationship was measured at 5% level of probability. At bivariate level, level of education secondary (COR = 2.41; 95% CI, 1.01-5.82) p=0.05), marital status married (COR= 0.52; 95% CI, 0.31-0.874), p= 0.014, employment status, employed (COR = 1.56; 95%CI, 1.02-2.38), p= 0.04 shows that education level secondary, marital status married and employment status employed have statistical significance on utilization of focused antenatal care. Other factors like HIV status, and religious affiliation show no statistical significance on utilization of antenatal care services.

At multivariate level, secondary level of education (COR= 2.624; 95% CI, 1.056-6.516), $p = 0.038$, marital status married (COR = 0.47; 95% CI, 0.275-0.804), $p = 0.006$ and employment status, employed (COR = 1.58; 95% CI, 1.014-2.46), $p = 0.043$ show that these three factors remained statistically significant on utilization of focused antenatal care and religious affiliation and HIV status showed had no association with utilization of focused antenatal care at multivariate level.

There was however no observed difference in the utilization of focused antenatal care services for those with none formal education, primary and diploma. In this case the earlier stated null hypothesis that there was no association between education level and focused antenatal care utilization was rejected. In an interview with one of the TBA's in the area, she had this to say;

“.....in this village, we do not have a lot of women that finished education up to university. Most of them stopped in secondary so it's no doubt that with secondary education would utilize focused antenatal care services than any other group because they are the majority”.

Religious affiliation had no significant probability of affecting utilizing focused antenatal care and there was no difference in the utilization of services between Christians and Muslims. Therefore earlier stated null hypothesis that there was no association between religion and focused antenatal care utilization was in this case rejected. In an interview with one of the health workers, he stated;

“.....Muslims are much strong in faith and it is easy for them to adopt any practice as long as it saves lives health of the followers. On other hand, Pentecostal and Christianity teachings are at times against health practices. Therefore Muslims stand more chances of utilizing health services than Christians”.

Marital status increased the probability of utilizing focused antenatal care services whereby women who are married were 4 times more likely to utilize focused antenatal care services compared to those that were never married [AOR = 0.47; (95% CI: 0.275-0.804); $p = .006$]. This because being married increases marital experience and hence increasing the probability of utilizing focused antenatal care services to avoid the likely negative outcomes. The earlier stated

null hypothesis that there was no association between marital status and use of focused antenatal care utilization was rejected. In an interview with one of the respondents, she stated;

“.....it is very obvious that married women use focused antenatal care services than the unmarried. Married have a lot of marital experience and wouldn't want to experience negative outcomes by just missing antenatal care services”.

Employment status decreased the log odds of the probability of utilizing focused antenatal care services by 1.58. Women with formal employment were 1.58 times less likely to utilize focused antenatal care services than the non-employed [AOR = 1.58; (95% CI: 1.014 – 2.46); p = 0.043]. The earlier stated null hypothesis that there was no association between employment status and utilization of focused antenatal care utilization was rejected. In an interview with one of the VHT's, she stated;

“.....employed women are always busy with their jobs and so may not get time to go for focused antenatal care unlike the unemployed women who always have plenty time to do anything. Actually we usually receive large numbers of unemployed women for antenatal care services compared to the employed”.

Table 4.3: Results of the logistic regression model of utilization of focused antenatal care services in relation to cultural behavioral factors

Variable	value	COR(95%CI)	p-value	AOR(95%CI)	p-value
Negative perception					
and attitudes	No	1		1	
	Yes	1.012(0.66-1.55)	0.956	0.98(0.63-1.52)	0.928
Deep rooted values					
	No	1		1	
	Yes	0.995(0.654-1.513)	0.98	1.04(0.67-1.622)	0.85
Traditional beliefs					
	No	1		1	
	Yes	1.16(0.761-1.763)	0.492	1.31(0.84-2.06)	0.237
Tribe (Mukiga)					
Other tribes	No	1		1	
	Yes	1.61(1.05-2.46)	0.027	1.71(1.11-2.641)	0.016
Myths and					
	No	1		1	

misconceptions

Yes 0.754(0.482-1.181) 0.218 0.73(0.46-1.164) 0.19

Dependent variable: utilization of focused antenatal care services (1-using, 0- not using)

- COR → Crude Odds Ratio
- AOR → Adjusted Odds Ratio
- CI → Confidence Interval

Results of the logistic regression model of utilization of focused antenatal care services in relation to cultural factors were presented in table 4.3. Five cultural behavioral factors were hypothesized and only one variable (tribe) remained statistically significant at multivariate level of analysis.

Being Mukiga decreased the chances of using focused antenatal care services than being from other tribes in the area [AOR = 1.71; (95% CI: 1.11 – 2.641); p = 0.016]. Therefore, the earlier stated null hypothesis that there was no association between tribe and use of focused antenatal care utilization was rejected. In an interview with one of the respondents, she stated;

“.....Bakiga are known for their energy and therefore prefer to waste their energy on productive activities like farming and business than coming for Antenatal Care. Therefore there is no doubt that a Mukiga would take less interest in focused antenatal care services”.

Table 4.4: Results of the logistic regression model of utilization of focused antenatal care services in relation to health facility based factors

Variable	Value	COR(95%CI)	p-value	AOR(95%CI)	p-value
Distance to the health center (kms)	No	1		1	
	Yes	1.032(0.912-1.134)	0.498	1.03(0.94-1.14)	0.532
Behavior of the health	No	1		1	

workers	Yes	0.59(0.36-0.96)	0.034	0.51(0.302-0.851)	0.01
Demand for pay	No	1		1	
	Yes	1.25(0.68-2.3)	0.48	1.34(0.71-2.54)	0.366
Limited drugs and supplies	No	1		1	
	Yes	0.71(0.451-1.103)	0.126	0.744(0.47-1.19)	0.214
Long waiting time at the facility	No	1		1	
	Yes	2.04(1.16-3.61)	0.014	2.013(1.12-3.63)	0.019
Shortage of staff	No	1		1	
	Yes	0.84(0.5-1.408)	0.507	0.85(0.492-1.45)	0.544
Un-flexible clinical hours	No	1		1	
	Yes	2.5(1.427-4.35)	0.001	2.72(1.52-4.851)	0.001

Dependent variable: utilization of focused antenatal care services (1-using, 0- not using)

- COR → Crude Odds Ratio
- AOR → Adjusted Odds Ratio
- CI → Confidence Interval

Results of the logistic regression model of utilization of focused antenatal care services in relation to health facility based factors were presented in table 4.7. The log odds explain the changes in the probabilities of the outcome as a result of a unit change in the explanatory variables. Seven variables were hypothesized and only three (3) variable remained statistically significant at multivariate level including behavior of the health workers [AOR = 0.51 95% CI: 0.302 – 0.851; p = 0.01], long waiting time at the facility [AOR = 2.013; 95% CI: 1.12 – 3.62; p = 0.019] and un-flexible clinical hours [AOR = 2.72; 95% CI: 1.52 – 4.851; p = 0.001].

Behavior of the health workers increased probability of using focused antenatal care services by 0.51 and this was statistically significant at p = (0.01). Mothers who had an encounter with

friendly health workers in the previous visit(s) were 5 times more likely to show up for the services next time. In this case the earlier stated null hypothesis that there was no association between health worker behavior and use of focused antenatal care utilization was rejected. In an interview with one of the respondents, she stated;

“.....i like nurses and doctors who are friendly because they motivate us women to show up for the services next time. However I have had a bad encounter with a nurse and I almost lost my temper”.

Secondly, long waiting time at the facility presented a significant effect on the utilization of focused antenatal care services. The more the waiting time at the facility, decreased the probability of utilizing focused antenatal care services by 2.013. Therefore women who stayed long at the healthy facility were 2 times less likely to use focused antenatal care services next time [AOR = 2.013; 95% CI: 1.12 – 3.62; $p = 0.019$]. Therefore the earlier stated null hypothesis for this case was rejected. In an interview with one of the respondents, she stated;

“.....the reason I don't like going Antenatal Care is partly because of the long time we women stay there waiting for the services. Those long hours waiting irritate me a lot”.

Lastly, un-flexible clinical hours decreased the probability of using focused antenatal care services by 2.72 and was statistically significant at ($p = 0.001$). The more clinical hours were un-flexible, reduced the probability of women using focused antenatal care services [AOR = 2.72; 95% CI: 1.52 – 4.851; $p = 0.001$]. The earlier stated null hypothesis that there was no relationship between clinical hours and use of focused antenatal care utilization was rejected.

Discussion

5.2.1 Socio-demographic factors affecting utilization of focused antenatal care services

The study identified different socio-demographic factors affecting utilization of focused antenatal care services at Mbaare Health Centre III Isingiro district. Of the eleven socio-demographic factors hypothesized, five (5) were statistically significant including level of education, religion, marital status, employment status and HIV status.

Education level increased the log of the probability of utilization of focused antenatal care services where by those with secondary education used focused antenatal care services than those with other educational levels. Education level is one of the major boosters of knowledge and capacity to make informed decisions regarding marital affairs. Better-educated women are more willing to engage in innovative behavior than are less educated women. Therefore there was doubt that those partially education would welcome and participate in ANC related services. This study finding concurs with Boerleider et al., (2013) who reported that women who had 8 or more years of education were 2 times more likely to get involved in maternal health care than those with less education. This is because uneducated men tend to hold on traditional beliefs which greatly impair inter spousal communication leading to low involvement in reproductive health.

Marital status increased the log odds of probability of utilizing focused antenatal care services. Those that were never married were 4 times less likely to utilize focused antenatal care services compared to the married status. This because being married increases marital experience and hence increasing the probability of utilizing focused antenatal care services to avoid the likely negative outcomes. This study finding contradicts with findings by Cabieses & Bird, (2014) who revealed that none married women are more likely to go for FANC services than the married. This was because married women may lack power and the independence to take decisions on their own in issues related to ANC services utilization. However findings were in support with WHO, (2016) which found that married women were 40% more likely than unmarried women to utilize ANC services during their pregnancy in Ethiopia.

Employment status decreased the chances of utilizing focused antenatal care services. Those with formal employment were 5 times less likely to utilize focused antenatal care services than the non-employed. This is because women who are employed are always busy with their work schedules and hence may not get time to access FANC services. This finding contradicts findings by Ononokpono & Odimegwu, (2014) who reported that due to social economic difficulties, men did not have time to attend to maternal health services for they struggle to look for money to provide for their families.

Religious affiliation presented association with the utilization of focused antenatal care services. Muslims were 2 times more likely to use focused antenatal care services than Christians.

However there was no difference in the utilization of services between Catholics and Protestants. This could be because Muslims religion is represented by a smaller group of but strong in faith and therefore could welcome any health practice saves the health of the Muslim believers. Another factor could be because Christianity is against some of FANC services like use of artificial contraception which perhaps explains why Muslims have welcomed focused antenatal care services than any other religion in the area. This finding is in agreement with a study by Farah & Karim, (2016) which found a positive association between religion and ANC utilization. Christians were found to have low levels of ITN utilization compared to the Muslims.

5.2.2 Cultural behavioral factors effecting the utilization of focused antenatal care services

The study came out with the cultural behavioral factors affecting utilization of focused antenatal care services at Mbaare Health Centre III Isingiro district. Among all five cultural factors hypothesized and only tribe showed a positive significant association with utilization focused antenatal care services. Being Mukiga decreased the chances of using focused antenatal care services compared to being from other tribes in the area. This is because Bakiga are known for their energy and sharp decision making capacity and hence gives them an opportunity to focus more on farming and businesses for earn a living than wasting time on Antenatal health Care. Therefore there is no doubt a Mukiga would make slow decisions regarding ANC than other tribe. This finding concurs with Pandey & Karki, (2014) who revealed that most communities around the world still rely on their culture to dictate their health choices, especially on pregnancy and child birth. Tribe, cultural norms and restrictions prevent women from seeking health care outside the home for themselves and their children. This barrier is often raised still further when men provide services, and has been offered as one reason why Asian women living in Western countries often make little use of health services.

5.2.3 Health facility based factors that affect utilization of focused antenatal care services

The study came out with different significant health facility based factors affecting utilization of focused antenatal care services at Mbaare Health Centre III Isingiro district. Seven variables were hypothesized and three remained statistically significant at multivariate level. For example, Poor behavior of the health workers presented a significant effect on use to focused antenatal

care services in the area. Mothers who had an encounter with friendly health workers in the previous visit(s) were 2 times more likely to show up for the services next time compared to those who were abused. A big fraction of participants quoted harassment by health workers as a big challenge to using FANC services. Respondents revealed that women who are ignored or subjected to unfriendly attitude and abusive language by health workers do not turn up for the next FANC visit. This poor attitude of health workers and fear of being harassed are some of the reasons some other women fear showing up for ANC services. The study finding is consistent with a study conducted by MOH, (2010) reported that harsh and critical language directed at Ugandan women from skilled health professionals was a barrier to male participation. Harsh treatment of men by health providers discouraged them from returning or participating in prevention of mother-to-child transmission (PMTCT) of HIV activities.

Secondly, long waiting time at the facility presented a significant effect on the utilization of focused antenatal care services. An increment in waiting time at the facility, decreased the probability of utilizing focused antenatal care services by 2.013. Mother who stayed long at the healthy facility were 2 times less likely to utilize focused antenatal care services next time. Due to a big gap in patient to health ration, women had to wait for a long time before receiving ANC services because of burdensome administrative procedures which result in poor patient/client through-put in health facilities. Women who are in the paid workforce (employed) are often not in a position to spend virtually the entire day participating in FANC services. Hence face challenges in accessing ANC. The finding of this study is in agreement with the findings from several studies that have reported long waiting time at the health facility as being one of the reasons for low participation in maternal health services (Farah and Karim, 2016).

Un-flexible clinical hours decreased the log of the probability of using focused antenatal care services. The more clinical hours were un-flexible, reduced the probability of clients using focused antenatal care services. This finding is comparable to findings by Pandey & Karki, (2014) who urged that if waiting time at the health facility was reduced and set clearly, it will result in increased use of FANC services. This is because many women have long working hours and long waiting time makes it difficult to find off time to attend maternal health services.

5.3 Conclusions

In conclusion, the results of this study confirmed that the utilization rate of FANC services at Mbaare Health Centre III Isingiro District is relatively low due to different factors. The main socio-demographic factors influencing the utilization of FANC services included level of education, religion, marital status, employment and HIV status. In addition, tribe was the main cultural obstacles to FANC service utilization at the Health Centre. The study further confirmed that poor behavior of the health workers, long waiting time at the facility and un-flexible clinical hours are the main health facility based factors that affecting the utilization of focused antenatal care services.

5.4 Recommendations

Based on these findings, it is recommended that health education programs should be undertaken to improve women's awareness of FANC, MOH should provide FANC services such as mobile health care and home care visits for remote villages or those difficult to reach. MOH should give priority to TBAs/VHVs training in order to extend the scope of FANC services and enhance the ability of pregnant women to reach them. At the same time, FANC services should be provided free of charge, especially for pregnant women who are poor.

Behavior change strategy through behavior change campaigns at the community level should be used to provide a platform for both the health care workers to learn about the perceptions of women in order to get to know them better and also to use that opportunity to educate women the benefits of FANC services.

The Ministry of Health should increase regular community sensitization campaigns to ensure greater awareness of the importance of ANC services among the vulnerable groups. A study to assess the impact of utilization of FANC services with regard to health benefits should be undertaken.

To improve women access and utilization of FANC services in this rural setting, there is need to establish or strengthen national policies and locally adapted guidelines to protect the rights of all women, regardless of their socioeconomic status or place of residence. There is a need for evidence-based guidelines at the national level detailing the essential minimum components of ANC, in line with the country epidemiological profile and country priorities and based on WHO guidelines and recommendations.

The study also recommends the need to strengthen the quality of ANC services by promoting evidence based guidelines and standards for focused ANC. This is because quality improvement approaches and tools help identify and overcome local constraints to providing client-orientated, effective ANC and ensure that women return after their first ANC visit.

Continuous community based health education and facility-based education, peer group discussions in the community and group education among pregnant women and mothers and at the same time raise the issue and discuss ANC and its advantages will help to create a sense of belongingness, build their consciousness to seeking health services.

Government should reduce on hospital/clinic charges, but also provide pregnant women with social and financial support, as well as transportation to health facilities. The need for women themselves to generate and save income for transport and delivery costs was also highlighted. Women should have their own income generating activities to enable them have control over finances and to save money to help them in case of an emergency.

The study recommends an improvement in health care systems at all levels and improving maternal survival and well-being, through improving physical infrastructure, essential drugs supplies, equipment to improve the extremely difficult working conditions for staff and enable providers to offer quality care.

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Competing interests

The authors declare that they have no competing interests.

Conflict of interests

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