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Factors Affecting Utilisation of Antenatal Care Services Among Pregnant Women Attending Kitagata Hospital, Sheema District Uganda

Maniradukunda Christian

Faculty of Clinical Medicine and Dentistry Kampala International University Western Campus Uganda.

ABSTRACT

Factors affecting utilization of antenatal care services among women attending Kitagata Hospital, Sheema district, Uganda. To assess the knowledge about antenatal care services, level of utilization of antenatal care services, and socio-demographic factors affecting utilization antenatal care services among women attending Kitagata Hospital, Sheema district, Uganda. A descriptive cross sectional study design was used, in which 118 participants were conveniently selected to take part in the study. The study was carried out in Kitagata hospital, Sheema district. The study showed that only 86(72.9%) of the mothers were fully utilizing ANC services. More so, the study showed that lack of knowledge on various ANC services was a significant factor in causing low ANC utilization, at 19(59.4%), with an odds ratio of 0.2(0.01-7.12) at 95% confidence interval and p-value of 0.001. The study showed that a mother who was 18-25 years was more likely to utilize ANC 52(60.5%), OR (0.50(0.04-9.09); 95%CI: P-value 0.002, majority of mothers 18(56.2%), who were more than 25 years had a low ANC utilization. The study showed that a mother who attended ANC for checkup 62(70.1%), was more likely to have a good ANC utilization than those who would do ANC visit with an underlying morbidity, 17(53.1%), with an odds ratio of 0.2(0.18-8.31) and P-value of 0.014. There was basic knowledge of 55.8% and a low ANC service utilization among mothers at Kitagata hospital. There is a need for health education among pregnant mothers about ANC its componets and importance to enhance its usage, husbands should also be encouraged to accompany their spouses to health facilities for ANC services.

Keywords: Utilization of antenatal care services, Pregnant Mothers, Health facilities, Husbands, Health education.

INTRODUCTION

Antenatal care is the care given to pregnant women so that they have a safe pregnancy and healthy babies [1]. The provision of antenatal care (ANC) services brings with it a positive impact on pregnancy as it enables the identification of risk factors and early diagnosis of pregnancy complications like preterm delivery and appropriate management, [2]. Globally, there are very low maternal/infant morbidity and mortality rates reported for developed countries, the positive impact has been achieved through screening for pregnancy problems, [3], Assessing pregnancy risk, treating problems that may arise during the antenatal period, giving medication that may improve pregnancy outcomes, providing information to the Pregnant woman, preparing physically and psychologically for childbirth and parenthood [4]. A minimum of eight contacts is recommended to reduce perinatal mortality and improve women's experience of care [5]. In addition, ANC along with family planning, skilled delivery care, and emergency obstetric care, is a key element of the package of services aimed at improving maternal and newborn health [6]. Across developing countries, 1 in 4 pregnant women receive no antenatal care, and more than 40% give birth without the assistance of a skilled attendant. Therefore, to reduce child mortality, improving the health of pregnant women and new mothers is critical [5]. Yet according to the Ethiopian Demographic and Health Survey 2011, only 34% of pregnant mothers who give birth in the five years preceding the survey received antenatal care from a skilled provider that is from a doctor, nurse, midwives for their most recent birth. About six in every ten Ethiopian women (57%) did not receive any antenatal care for their last birth in the five years preceding the survey;

about 10% of women were assisted by health professionals for their most recent birth [7]. Though in 2017 another study in Ethiopia found the overall coverage for antenatal care service utilization was 87.9% for women in their pregnancy time which is relatively good [8].

A study done in Kenya showed that timely and frequent use of ANC enables the delivery of essential services, including malaria treatment, immunizations, and health counselling [9]. Despite the importance of ANC, recent findings reveal a maternal mortality ratio of 435: 100,000 live births and a neonatal mortality rate of 29 deaths per 1000 live births and according to the report, only 8% of rural women in Uganda received ANC from a doctor. Regionally Southwestern Women were more likely to receive skilled care (20%), than Eastern women (3%), while only 2% of the women in Karamoja were reported to seek the same [10]. The Ministry of Health, Uganda in adherence to WHO recommends simplified antenatal care of four visits; First visit: occurs in the first trimester, between (10 – 20) weeks of pregnancy, the Second visit: was scheduled close to week 26 (20 – 28) of pregnancy, Third visit: occurring in or around week 32 (28 – 36) of pregnancy, and lastly Fourth visit (final visit): taking place between weeks 36 and 38 (>36) of pregnancy [11]. In western Uganda, a study carried out in Kisoro found only 17% of the women in the study had attended the ANC clinic in the first trimester and 57% attended the ANC clinic in the late trimester, [12]. In Sheema District and Kitagata Hospital in particular, there was limited information and no published studies were found regarding factors affecting utilization of antenatal care services among pregnant women. Therefore, as suggested by [13], understanding factors affecting the utilization of ANC services in the community is required for program implementation. Thus the result of this study was of great importance.

Statement of Problem

A woman's health is critical to her own life, the well-being of her family, and the economy of her community/country [14]. By 2030, the WHO aims at reducing the global maternal mortality ratio to less than 70 per 100 000 live births and reduce neonatal mortality to at least as low as 12 per 1000 live births [3]. Yet globally, only three in five (62 per cent) receive at least four antenatal visits and in regions with the highest rates of maternal mortality, such as sub-Saharan Africa and South Asia, even fewer women received at least four antenatal visits (52 per cent and 46 per cent, respectively) [15]. The situation was revealed to be worse in Uganda where the maternal mortality ratio was 343 per 100 000 live births and neonatal mortality was 19 per 1000 live births [5]. But women tend to seek antenatal care very late and 37% had attended ANC at 6 months of pregnancy for the first time [10]. Therefore since antenatal care services help pregnant women by identifying complications associated with the pregnancy or diseases that might adversely affect the pregnancy [16]. It implies that if inadequate utilization of ANC is not addressed well, the WHO target (SDG goal 3) will still remain unachievable in Uganda and the rest of the world. At Kitagata Hospital, based on the unpublished information from records in August 2020, 312 mothers attended the ANC clinic of which 89 mothers were on their 1st ANC visit, of which only 16 mothers visited ANC early and 33 mothers were on their 4th ANC, the research was prompted to assess the factors affecting utilization of antenatal care services among pregnant women attending Kitagata Hospital, Sheema district, Uganda.

Aim

To assess the factors affecting the utilization of antenatal care services among women attending Kitagata Hospital, Sheema district, Uganda.

Specific objectives

- ✦ To determine the level of utilization of antenatal care services among women attending Kitagata Hospital, Sheema district, Uganda.
- ✦ To assess the knowledge about antenatal care services among women attending Kitagata Hospital, Sheema district, Uganda.
- ✦ To find out the socio-demographic factors affecting the utilization of antenatal care services among women attending Kitagata Hospital, Sheema district, Uganda.

Research questions

- i. What was the knowledge of pregnant women attending antenatal care services in Kitagata Hospital, Sheema district, Uganda?
- ii. What was the level of utilization of antenatal care services among women attending Kitagata Hospital, Sheema district, Uganda?
- iii. What are the social demographic factors that affect the utilization of antenatal care services among women attending Kitagata Hospital, Sheema district, Uganda?

METHODOLOGY

Study design

A descriptive cross-sectional study design was used, it was suited for this study since it measures or estimates the variable attributes of the target population at a particular point in time [17].

Area of Study

This study area was carried out in Kitagata HOSPITAL, Sheema District western Uganda. Sheema District is bordered by Bushenyi District to the north, Sheema District to the east, Ntungamo District to the south, and Rukungiri District to the west. Mitooma, where the district headquarters are located is located approximately 25 kilometres, by road, southwest of Bushenyi, the nearest large town.

Study population

The study population was all pregnant women attending Kitagata Hospital, in Sheema District western Uganda. These were chosen following the criteria explained here under.

Inclusion criteria

This study included pregnant women attending Kitagata Hospital, in Sheema District Uganda during the period of the study and those who consented in writing to take part in this study.

Exclusion criteria

This study excluded pregnant women from Kitagata Hospital, Sheema District, Uganda who were critically ill, having mental problems, or were not willing to take part and those who consented in writing to take part in this study.

Sample size determination

The sample size was determined by using the Fisher formula:

$$s = \frac{Z^2 PQ}{d^2}$$

Where S= Sample size

Z= standard Deviation at the required degree of accuracy which at 90% which gives 1.96

P= proportion of population with desired characteristics.

Q= 1-P

d = degree of error you are able to accept.

$$s = \frac{1.96)^2 * 0.5(1 - 0.5)}{0.09^2}$$

S= 118

Sampling method

Convenient non probability sampling method was used in that the interviewer administered the questionnaire to the available respondents who met the required inclusion criteria at a particular time of the day.

Study variables

The study has dependent, intervening and independent variables as shown below;

Dependent variable

The dependent variable in this study is the ANC services.

Independent variables

The independent variables in this study are; Socio-demographic factors such as, (Age of respondent, Education level, Number of children, Marital status, Occupation, Religion, Tribe) and Utilization of antenatal care services, (Ever attended ANC clinic, ANC sites, Period of starting ANC clinic visits, Number of ANC clinic visits attended, ANC follow-ups)

Intervening variables

The intervening variables are; Knowledge of antenatal care services, (Awareness of ANC services, commonly known ANC services, Source of information, Number of visits for adequate antenatal care clinic visits, Knowledge of benefits of ANC services, and Overall knowledge)

Data collection methods/instruments

Data on dependent, intervening and independent variables was collected using a pre-validated questionnaire with several open and close-ended questions. A questionnaire was used to collect both qualitative and quantitative data. Questionnaires were given to those who know English and can read and write. For those who did not know English and cannot read and write, a direct translation of the questionnaire through a verbal interview in Runyankole was done by the researcher.

Data Analysis and presentation

Data were checked for completeness and then entered into a computer software called Microsoft Excel. The entered data was then exported into SPSS version 25 for analysis. The analyzed data was presented as means of standard deviation inform by tables, charts and figures.

Data quality control

To preserve the worthiness of the data, the researcher ensured the content validity of the research questionnaire by ensuring conformity to the study's research objectives and the conceptual framework. Research experts and the

research supervisor were contacted to evaluate the relevance, wording and clarity of elements in the research instrument. The researcher with help from the supervisor revised the research instrument.

Ethical consideration

This relates to moral standards that were considered in the research at all stages. This study avoided any potential risks that would arise due to the leakage of personal information [18]. We ensured that participants do not provide any of their names in the research instruments so as not to violate their privacy and avoid bias. Approval was acquired and provided by the research and ethics committee of Kampala international university. After approval, Permission was sought from the office of the district health officer to allow the research to be carried out in the facility in the district. At the health facility level, permission from the facility administrator was sought to allow access to the patients. Participation in this study was not in any way compulsory. Detailed information about the study was explained to the participants. After understanding all the details, informed consent forms were issued and they will consent before the interview. Every respondent was given an equal opportunity to participate in the study.

RESULTS

Mothers fully utilizing ANC services

Table, showing making ANC visits as per trimester

Mothers making all ANC visits as per trimester	Frequency	Percentage
Fully attended	86	72.9
Partially attended	32	27.1
Total	118	100

From Table one above, only 86(72.9%) of the mothers were fully utilizing ANC services as per trimester required visits, while 32(27.1%) were not fully using ANC services.

Knowledge of mothers on ANC services

Table 2: shows mothers' knowledge of ANC services

ANC usage	Partially attended n ₁ =32		Fully attended n ₂ =86		Odds Ratio (95% CI)	p-value
	Freq.	Per cent	Freq.	Per cent		
Response on knowledge						<0.05sgnf
Different ANC services						
Knows the services	13	40.6	48	55.8	Ref 0.2(0.01-7.12)	0.001
Didn't know	19	59.4	38	44.2		
Beginning ANC services						
First trimester	15	46.9	45	52.3	Ref 0.3(0.19-14.05)	0.042
2 nd /3 rd trimester	17	53.1	41	47.7		
Number of visits						
Less than 4	12	37.5	36	41.9	Ref 0.8(0.32-5.44)	0.581
4 or more visits	20	62.5	50	58.1		
Importance of ANC						
Knows	24	75.0	71	82.6	Ref 0.5(0.25-18.01)	0.065
Didn't know	08	25.0	15	17.4		

From Table 2, the study showed that lack of knowledge of various ANC services was a significant factor in causing low ANC utilization, at 19(59.4%), with an odds ratio of 0.2(0.01-7.12) at a 95% confidence interval and p-value of 0.001 The study showed that, a mother who knew that, her first ANC is done in the first trimester was more likely to effectively utilize ANC services, at a 45(52.3%), at odds ratio of 0.3(0.19-14.05) and 0.042 p-values. From the table above, there was no significant correlation between having knowledge on the number of ANC visits to be made and ANC utilization, at a p-value of 0.581 and odds ratio of 0.8(0.32-5.44, majority 50(58.1%) who had utilized ANC well, knew that they would make 4 or more ANC visits. The study showed that the majority of the mothers, both with low 24(75%), and good 71(82.6%) ANC utilization, knew the importance of ANC. There was no significant correlation between knowledge of the importance of ANC and its utilization.

Demographic characteristics of mothers and ANC utilization.
Table 3: shows the demographic characteristics of ANC utilization.

ANC usage	Partially attended n=32		Fully attended n=86		Odds Ratio	p-value
Maternal demographics	Freq.	Per cent	Freq.	Per cent	(95% CI)	<0.05sgnf
Age						
18-25	14	43.8	52	60.5	Ref 0.50(0.04-9.09)	0.002
More than 25 years	18	56.2	34	39.5		
Marital status						
Married	26	81.3	75	87.2	Ref 0.77(0.27-4.90)	0.725
Not married	06	18.7	11	12.8		
Education						
Primary	17	53.1	42	48.9	Ref 0.95(0.01-7.41)	0.001
Secondary	15	46.9	44	51.1		
Parity						
Prime gravid	12	37.5	29	33.7	Ref 0.32(0.11-5.13)	0.802
Multi gravid	20	62.5	57	66.3		

From the table3 above, a mother who was 18-25 years was more likely to utilize ANC 52(60.5%), OR (0.50(0.04-9.09);95%CI: P-value 0.002, majority of mothers 18(56.2%), who were more than 25 years had a low ANC utilization. The study found out that the majority of the mothers both with low 26(81.3%) and good 75(87.2%) ANC utilization, were married, there was however no significant correlation between marital status and ANC utilization, OR (0.77(0.27-4.90); 95%CI: P-value, 0.725. From the table above, a mother who had attained a secondary level of education 44(51.1%)was more likely to have a good ANC utilization than those in primary, there was a signification correlation between education level and ANC utilization, with an odds ratio 0.95(0.01-7.41) and 0.001 p-value. The study found that most of the mothers were multigravida, 20(62.5%), and 57(66.3%) for low and high utilization respectively, there was no significant correlation between parity and ANC utilization, at odds ratio of 0.32(0.11-5.13) and p-value of 0.802.

ANC utilization
Table 4: shows the demographic characteristics of ANC utilization

ANC usage	Partially attended n=32		Fully attended n=86		Odds Ratio	p-value
ANC utilization	Freq.	Per cent	Freq.	Per cent	(95% CI)	<0.05sgnf
Attended the first trimester						
Yes	14	43.8	47	54.6	Ref 0.99(0.3-6.14)	0.022
No	18	56.2	39	45.4		
Obtained all prescriptions						
Yes	28	87.5	80	93.0	Ref 0.45(0.08-2.65)	0.072
No	04	12.5	06	7.0		
Reason for ANC visit						
Check up	15	46.9	62	70.1	Ref 0.2(0.18-8.31)	0.014
Illness	17	53.1	24	27.9		

From Table 4, above, most of the mothers who had full utilization of ANC services had attended their first ANC in the first trimester 47(54.6%), the study found that there was a positive correlation between doing ANC visit in the first trimester and good ANC utilization, at an odds ratio of 0.99(0.3-6.14) and a P-value of 0.022. Most of the mothers 28(87.5%) and 80(93%), for low and good ANC utilization respectively, had obtained their prescriptions, there was however no significant correlation between ANC utilization and treatment prescriptions. The study showed that a mother who attended ANC for a checkup 62(70.1%), was more likely to have a good ANC utilization than those who would do an ANC visit with an underlying morbidity, 17(53.1%), with an odds ratio of 0.2(0.18-8.31) and P-value of 0.014.

DISCUSSION

Mothers fully utilise ANC services

The study found that only 86(72.9%) of the mothers were fully utilizing ANC services as per trimester required visits, while 32(27.1%) were not fully using ANC services, this result shows a high ANC percentage, this could be because of the available media sensitization for ANC usage, this is far below a percentage as compared to the

developed world, according to a study by on the use of Ante Natal Care (ANC), they showed that 71 per cent of women worldwide utilize ANC services and in industrialized countries, 95 per cent, of women utilize ANC services.

Knowledge of mothers on ANC services

The study showed that lack of knowledge of various ANC services was a significant factor in causing low ANC utilization, at 19(59.4%), with an odds ratio of 0.2(0.01-7.12) at 95% confidence interval and p-value of 0.001, this could be because the mothers might consider ANC being less important if they are not aware of the services offered and this could affect the percentage attendance when this study is compared with other studies, this study shows a difference from a study by [19]. done in Ethiopia among women and found out that majority 313 (90.7%) of women had good knowledge regarding ANC. 116 (35.5%) women had reported that their source of information about ANC service was health institutions and 103 (31.5%) said health extension workers. The study showed that a mother who knew that, her first ANC is done in the first trimester was more likely to effectively utilize ANC services, at a 45(52.3%), at an odds ratio of 0.3(0.19-14.05) and 0.042 p-value, this could be because after attending the ANC for the first time, it consequent visits are follow up visits which become easier for a pregnant mother to do when the study is compared with other studies, the study shows a correlation with a study by [20], in India among mothers aged 15-49 years which found out that mothers had adequate knowledge about ANC services except for the minimum number of visits for ANC, of which, 89.6% (189) of the respondents had registered for ANC, of which 64.5% (136/211) and 9.9% (21/211) had registered in the 2nd trimester and 1st trimester, respectively. The study also showed that there was no significant correlation between having knowledge on the number of ANC visits to be made and ANC utilization, at a p-value of 0.581 and odds ratio of 0.8(0.32-5.44, majority 50(58.1%) who had utilized ANC well, knew that they would make 4 or more ANC visits, this could be because some mothers could be told about the number of ANC they are required to make without necessarily attending the ANC visits when compared with other studies, this study shows a difference from a study by [21], done in Dodoma Tanzania among 500 women revealed that majority of interviewed women knew that, a woman needs at least five visits of antenatal follow up throughout her pregnancy 461(92.2%), About 39(7.8%) of the women didn't know that pregnancy women need at least five visits of antenatal follow up throughout her pregnancy. The study showed that the majority of the mothers, both with low 24(75%), and good 71(82.6%) ANC utilization, knew the importance of ANC. There was no significant correlation between knowledge of the importance of ANC and its utilization, this could be because the mothers most of the mothers have been told about ANC, and although they may not necessarily utilize the services when compared with studies, this study shows a correlation with a study by Adewoye KR, 2013 done in Northcentral among 405 women of reproductive age group (15-49) years showed 355 (87.7%) of the respondents were aware of antenatal care, 248 (69.9%) had good knowledge on the activities carried out in the provision of antenatal care services.

Demographic characteristics of mothers and ANC utilization

From the study, a mother who was 18-25 years was more likely to utilize ANC 52(60.5%), OR(0.50(0.04-9.09);95%CI: P-value 0.002, majority of mothers 18(56.2%), who was more than 25 years had a low ANC utilization, this is could be during 18-25 years, most of the mothers are having their first pregnancies and are inquisitive about attending ANC visits when the study is compared with other studies, a study by [22], in Central Ethiopia had found out that the odds of attending ANC are 1.2times higher for women in the age group of 20-34 as compared to those in the age group 15-19 women. The study found out that the majority of the mothers both with low 26(81.3%) and good 75(87.2%) ANC utilization, were married, there was however no significant correlation between marital status and ANC utilization, OR (0.77(0.27-4.90); 95%CI: P-value, 0.725, this could be because both mothers are exposed to information which gives them equal chances into attending when this study is compared with other studies it, shows a difference from a study by [23], which indicated that respondents with first pregnancy were about two times more likely to book early than those with more children. From the study, a mother who had attained a secondary level of education 44(51.1%)was more likely to have a good ANC utilization than those in primary, there was a signification correlation between education level and ANC utilization, with an odds ratio 0.95(0.01-7.41)and 0.001 p-values, this could be a mother with secondary education is exposed more to information regarding ANC than those with less education when compared with other studies, it shows a correlation with a study by [24-27], in Central Ethiopia which had found out that women with some education were more than two times more likely to attend ANC as compared with those who had no education [and similar findings were found in the study conducted in North Ethiopia, Nigeria and China. The study found out that most of the mothers were multigravida, 20(62.5%), and 57(66.3%) for low and high utilization respectively, there was no significant correlation between parity and ANC utilization, at an odds ratio of 0.32 (0.11-5.13) and p-value of 0.802, this study a could be because of the higher number of participants were as well multigravida, however, this study is different from study results by [23, 28], who had instead cited that high parity women relied on their experiences from previous pregnancies and not feel the need for antenatal care, and due to their greater level of experience, these women might feel more confident during pregnancy and consider antenatal care to be less important, this was evidenced by findings in different studies in which respondents with first pregnancy were about two times more likely to book early than those with more children.

ANC utilization

The study found that most of the mothers who had full utilization of ANC services had attended their first ANC in the first trimester 47(54.6%), the study found that there was a positive correlation between doing ANC visit in the first trimester and good ANC utilization, at an odds ratio of 0.99(0.3-6.14) and a P-value of 0.022, mothers who attended a first trimester ANC visit, had a good utilization behaviour, this could be attributed to the health education that these mothers receive, during their, ANC visited, that compelled them to ensure continuous ANC usage when compared with other studies, the study shows a difference from a study by [25], in Zambia which had indicated that although all women in the selected sample had at least one ANC visit, 40% did not have the minimum number required (four), whereas more than 80% of the initial check-ups did not occur in the first trimester. Most of the mothers 28(87.5%) and 80(93%), for low and good ANC utilization respectively, had obtained their prescriptions, there was however no significant correlation between ANC utilization and treatment prescriptions, this could be because of availability of the treatments which are in most cases given to mothers for free, this study, however, shows a difference from study results by Adewoye KR, 2013A study done in North central Nigeria among 405 women in which, 311 (76.8%) of the respondents attended antenatal care with the high patronage of government health facilities by over three quarter (86.5%) of the respondents that attended antenatal, however majority, 51% could not get the prescribed treatments as they were out of stock. The study showed that a mother who attended ANC for checkup 62(70.1%), was more likely to have a good ANC utilization than those who would do ANC visit with an underlying morbidity, 17(53.1%), with an odds ratio of 0.2(0.18-8.31) and P-value of 0.014, this could be because majority of the mothers could have had their previous visits and are only doing follow up visits, and therefore becomes easier to attend, when compared with other studies, a study by [19], in Ethiopia, showed that the majority women who had ANC follow up 84 (37.7%) attained the recommended four ANC visits by WHO. About 208 (93.3%) of women received ANC follow-up from health centres,

CONCLUSION

The study concludes that there was a low ANC service utilization in which only 86(72.9%) effectively utilized ANC services. There was basic knowledge of mothers on ANC, 48(55.8%) but the attendants lacked detailed information about the services, 17(53.1%). Young Age and secondary education level significantly enhanced ANC usage among mothers. Mothers, who attended their first ANC during the first trimester had good ANC utilization behaviour, 47(54.6%).

RECOMMENDATIONS

Health education among pregnant mothers should be done to enhance ANC utilization.

The government should increase mass media campaigns aimed at promoting ANC utilization.

Male counterparts should be encouraged to accompany their spouses for ANC as a strategy to promote ANC utilization.

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