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Antenatal Care Services among Pregnant Women in Kampala International University Teaching Hospital Bushenyi-Ishaka Municipality

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ABSTRACT

The study sought to determine the level at which pregnant women utilize ANC services, reasons contributing to low level of attendance and the consequences of low level of attendance. A cross sectional quantitative study was conducted which included pregnant mothers at any gestation. Structured questionnaires were used to obtain information from study participants. In the present study, low utilization of ANC services among pregnant women was determined based on number of visits. SPSS software was used to generate descriptive statistics and cross tabulations. Almost all (96%) participating women had at least some knowledge of ANC also 85% of participating mothers agreed that ANC would enable them to receive vaccines, supplements and malaria prophylaxis. on average, only 16% of women used the full content of antenatal care. Only 12% of women had a urine sample taken, 28% a blood sample taken, and all women had their blood pressure measured. All women took iron supplements, 27% were given drugs for intestinal parasites. The utilization of the content of care was significantly associated with education of the mother and her partner, wealth status, location disparities, timing and frequency of antenatal visits. The study has shown that majority of participating mothers knew the importance of ANC. low utilization of ANC among pregnant women showed to be influenced by high parity, long distance, seeking permission and pregnancy associated beliefs notably witch craft. So, efforts are needed to educate girls beyond secondary level, establish village outreach clinics with qualified staff to attract the hard-to-reach women in the rural areas, and facilitate ANC utilization irrespective of the ability to pay.

Keywords: Pregnant Women, Attendance, Utilization, Antenatal care, Supplement.

INTRODUCTION

Antenatal care (ANC) is special care for women during pregnancy whose goal is to prevent health problems in both the fetus and the mother and to ensure that each new born child has a good start and to keep the mother healthy. Maternal mortality remains a huge public health problem in developing countries [1, 2, 3, 4, 5]. One of the strategies to improve maternal health is the implementation and appropriate use of Focused Antenatal care (FANC) [6, 7, 8, 9]. Utilization of FANC is influenced by several factors that vary from one country to another [1, 10, 11, 12]. Globally, there has been a tremendous decline in maternal mortality ratio (MMR). Despite this recent decline, sub-Saharan Africa has the highest MMR in the world albeit strategies and interventions that priotize maternal health [2, 3, 13, 14, 15]. In sub-Saran Africa MMR was estimated to be 500 per 100,000 live births in 2010 [16, 17, 18, 19]. The United Nations sustainable Development Goals (SDG) on maternal health aims to reduce the number of women dying during pregnancy and child birth by three quarters between 1990 and 2015 [20, 21, 22]. To achieve this goal, it is estimated that an annual decline in maternal mortality of 5.5% is needed, however between 1990 and 2010 the annual decline was only 1.7% in the sub-Sahara region [3]. Thus, many countries in the sub-Saharan Africa will not be able to achieve the goal by 2015. World Health Organization (WHO) recommended that pregnant women in developing countries should seek ANC with in the first three months of pregnancy

for programme areas in particular like; nutrition immunization against tetanus, and prophylaxis of malaria and immunodeficiency virus/AIDS testing and other sexually transmitted diseases (STD's) [4, 17, 18, 19, 20, 21, 22]. Failure to attend ANC leads to increased maternal mortality and child mortality. Maternal mortality is still a major health problem in the world. According to the recent estimate by WHO, the number of maternal deaths worldwide was estimated to be 303,000 in 2015 globally, yielding an overall maternal mortality rate (MMR) of 216 per 100,000 live births [5]. In the same report, developing countries accounted for approximately 99% of the estimated global maternal deaths in 2015, with sub-Saharan Africa alone accounting for roughly 66%. In developing countries including Uganda and Bushenyi district, complications of pregnancy and child birth are the leading causes of deaths among women of reproductive age [3]. Most of these maternal deaths and injuries are caused by biological processes, not from disease, which can be prevented and have been largely eradicated in developed countries. Hemorrhage is one of those biological processes and accounts for 25% of maternal death globally, 34% in developing countries and 13% in developed countries. Sepsis, indirect causes (malaria, anemia), unsafe, Abortion obstructed labor, eclampsia and direct causes account for over half of all maternal mortality. Insufficient obstetric care in poor resource settings, low utilization of both antenatal and postnatal care as well as low coverage of births attend by skilled labor further exacerbate the MMR [6]. In 2015, the maternal mortality rate in Uganda was estimated to be 343 deaths per 100,000 live births (UNICEF, 2016). Most of these deaths occur unpredictably during labor, delivery and the immediate post-partum period. Early ANC attendance during the first three months of gestation plays a major role in detecting and treating some complications of pregnancy and forms a good basis for appropriate management during delivery and after child birth. Failure to utilize ANC services early results in the potential for complications during pregnancy, delivery and peurperium [7]. However, existing evidence from developing countries including Uganda indicates that few women seek ANC services at early stage of their pregnancy [8].

Statement of Problem

Recent findings reveal maternal mortality ratio of 343; 100,000 live births and neonatal mortality rate of 29 deaths per 1000 live births in Uganda and these remain a challenge. Women in rural areas of Uganda are two times less likely to attend ANC than urban women. Most women in Uganda have registered late ANC attendance, averagely at 5.5 months of pregnancy and don't complete the required four visits. The inadequate utilization of ANC is greatly contributing to persistently high rates of maternal and neonatal mortality in Uganda. The study is set to identify factors associated with poor utilization of ANC services In Kampala international university teaching hospital, bushenyi Ishaka municipality.

Aim of the study

To assess the utilization of ANC services among pregnant women attending at Kampala international university teaching hospital (KIUTH) Ishaka Bushenyi municipality.

Specific objectives

- ✓ To access the level of mothers' utilization of antenatal care services at KIUTH.
- ✓ To determine the factors responsible for the low attendance to ANC at KIUTH.
- ✓ To assess the impact of low ANC attendance to both the mother and the fetus.

Research questions

- ➢ What is the level of Mothers utilization of ANC at KIUTH?
- ➢ What are the factors responsible for the low utilization of antenatal care services?
- ➢ What is the impact of low AC attendance to both mothers and fetus?

Justification of Study

Mothers attending ANC at KIUTH are still very few and no study has been done so far in my area of concern that is Kampala international university teaching hospital, ishaka-bushenyi municipality. According to the hospital data base from antenatal care attendance for financial year 2015-2016, only 69 out of 238 mothers completed the four visits recommended by World Health Organization (source; hospital data 2015-2016). The study findings will help the hospital to design measures that will enable it reach the set target.

METHODOLOGY

Study design

A cross sectional study was conducted among mothers attending ANC at KIUTH antenatal clinic, data was collected using an investigator administered questionnaire.

Area of Study

The study was conducted in Kampala International University Teaching Hospital at OPD in antenatal clinic.

Study population

The target population was pregnant women attending antenatal care at KIUTH.

Sample size

Three hundred and eighty-four (384) women participated in the research. This was calculated from the formula in sample size determination below;

Sample size determination

This was determined by using [9].

$$N = \frac{z2p.q}{d2}$$

Where:
N is the desired sample size for the population > 10.000
Z is the standard deviation at the desired degree of accuracy (95%) and since our desired degree of accuracy is 95%, then Z is 1.96.
Q = (1-p)
P = 0.5
d= degree of accuracy for 95% confidence interval (0.05)

Inclusion criteria

Pregnant women attending antenatal care at KIUTH.

Exclusion criteria

Those women found in the clinic and they are not willing to give informed consent.
Women found in the clinic at the time of the study but they had not come for obstetric reasons.

Data collection methods and tools

The data was collected by investigator administered questionnaires. I introduced myself, explain to the mothers the aim of the study and what I wanted them to do, issued consent forms to fill and gave them the questionnaires to fill. When filling the questionnaires, I would explain to them each question as they answer both as a group and individually.

Data analysis methods

Data was processed and analyzed using SPSS version 16. It was presented by use of tables and pie charts for easy interpretation and analysis. Descriptive statistics were used to describe distribution of variables.

Data quality control

Questionnaire was pretested prior to its use from another health facility to assess its validity and re-editing was done where necessary.

RESULTS

Demographic Data

This section describes the Participants age, marital status, education level and number of previous pregnancies. The mean age of the respondents was 26 years and median was 25 years suggesting the age distribution of the participants was not normally distributed, two-thirds of the participants were between 20 and 29 years of age but 60 (15.6%) were pregnant teenagers. Marital status, most of the participants were in partnership (n=235; 61.2%), (n=139; 36.2%) were single, (n=10; 2.6%) were living alone for various reasons. Level of education, most participants had obtained some level of education and the majority (n=162) had attained O-level.

Table 1: Age distribution, marital status, and education level of pregnant women attending subsequent antenatal care visits in KIUTH between March and May 2017.
N=384

	Frequency	Percentage
Age		
18-19	60	15.6
20-24	120	31.3
25-29	116	30.2
30-34	61	15.9
35+	27	7.0
Total	384	100
Marital status		
Married / life partner	139	36.2
Living with partner/ boyfriend	121	31.5
Single	114	29.7
Widowed	1	0.3
Divorced	3	0.8
Separated	6	1.6
Total	384	100
Education level		
Tertiary	28	7.3
A level	86	22.4
O level	162	42.2
Primary	86	22.4
None	22	5.7
Total	**384**	**100**

ANTENATAL CARE ATTENDANCE

This section includes the number of previous pregnancies, gestational age at the time of booking for pregnancy and last previous pregnancy. It describes their primary reasons for ANC at a stated trimester, their perceived reasons for attending ANC, previous time to start ANC and the reasons for such. It determines if any information was accessed before falling pregnant and its sources, barriers to utilization of ANC services.

Antenatal care booking

Number of previous pregnancies

The participants were asked to indicate the number of pregnancies they had previously excluding the current pregnancy. This was collected to determine whether there is an association between number of pregnancies and low level of utilization of ANC services. The majority were nulliparous. The results indicated that 45% (n=173) had no previous pregnancy, 29.2% (n=112) had had one pregnancy, 13.3% (n=51) had two other pregnancies, 8.3% (n=32) had three other pregnancies, 4.2% (n=16) had four or more other pregnancies.

Table 2; Distribution of number of previous pregnancies of mothers attending ANC at KIUTH between March and May 2017 n=384

Previous pregnancy	Frequency	Percentage
Nulliparous	173	**45**
One	**112**	**29.2**
Two	**51**	**13.3**
Three	**32**	**8.3**
Four or more	**16**	**4.2**
Total	**384**	**100**

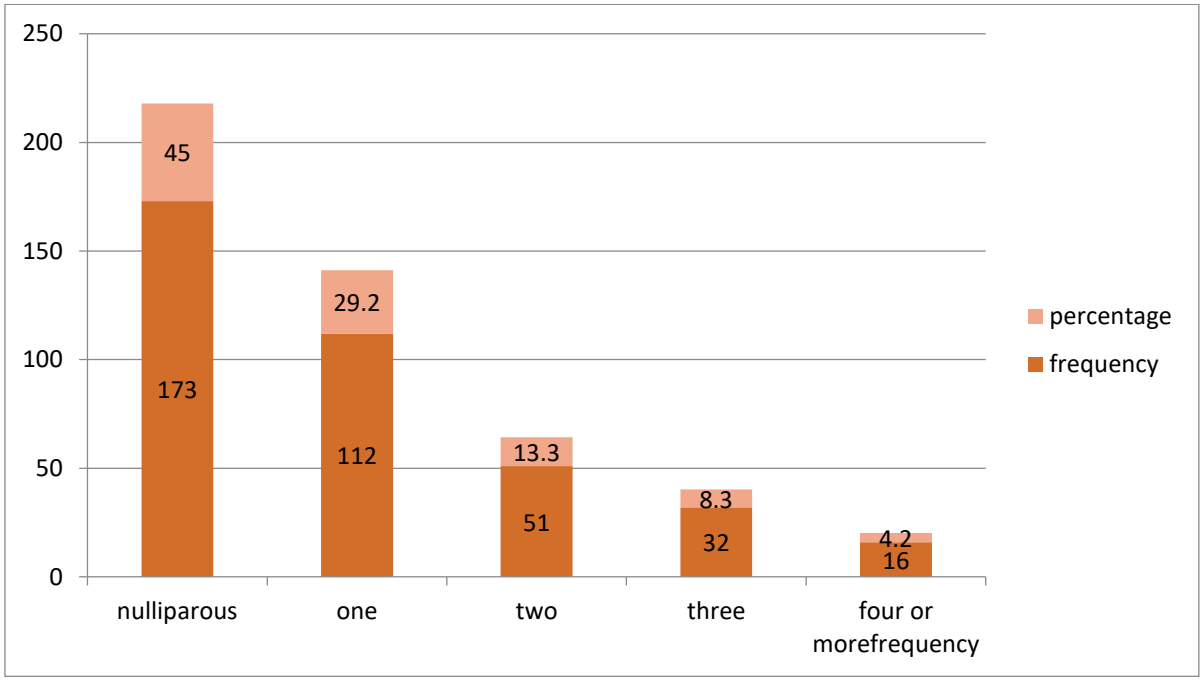

Figure 1; Distribution of number of previous pregnancies of mothers attending ANC at KIUTH between March and May 2017.

Gestational age at time of antenatal care booking for current pregnancy

Gestational age at time of ANC booking was collected to determine whether the pregnant women started ANC within the first trimester of pregnancy according to guidelines and recommendations. This study has shown that only 56.8% (n=218) started ANC in their first trimester (see table 4.4).

Table 3; Distribution of participants by gestational age at time of antenatal care booking in KIUTH between March 2017 and May 2017 (n=390)

Gestational age	Frequency	Percentage
1-3 months (1-13weeks)	218	56.8
4-6 months (14-26 weeks)	150	39
7-9 months (27—40 weeks)	16	4.2
Total	**384**	**100**

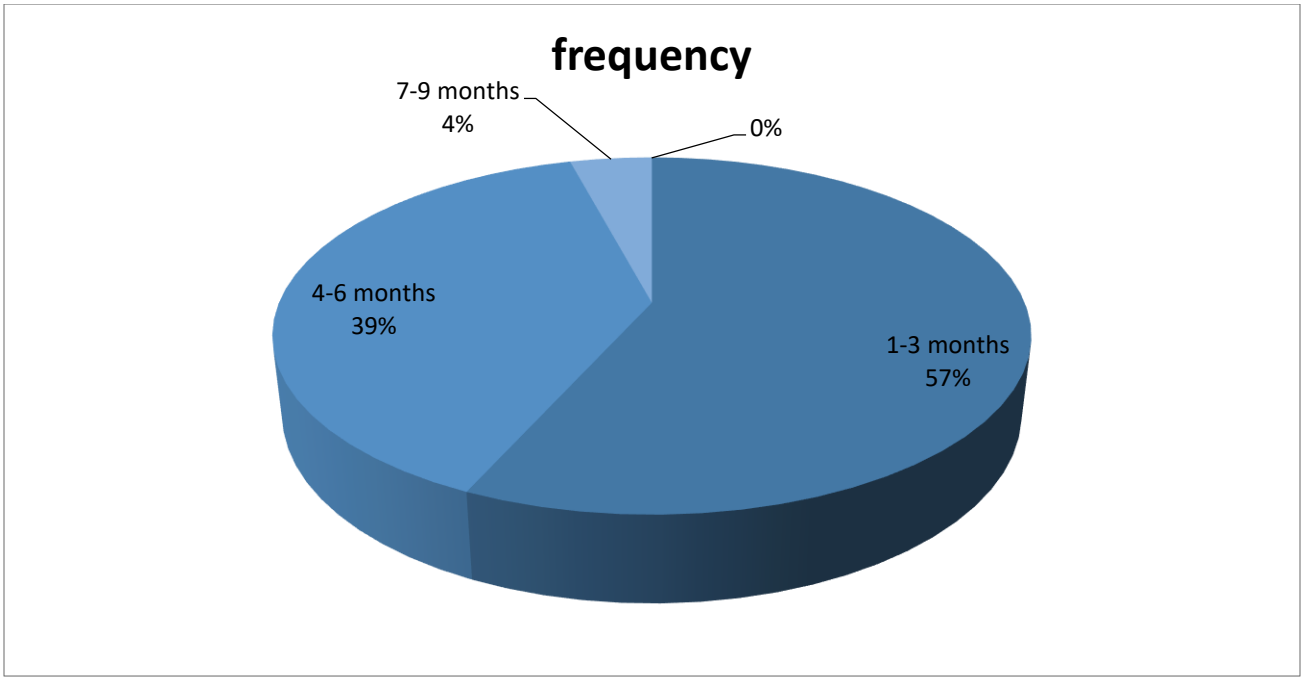

Figure 2; Distribution of participants by gestational age at time of ANC booking in KIUTH between March and May 2017

Primary reasons for starting antenatal care at a stated trimester

A closed end question with a possibility of multiple responses was asked to identify the primary reasons why the pregnant women started ANC. the findings of this study suggested several reasons why these participants started ANC, however the most common reason was to get an antenatal card for delivery usage, thus 29% (n=112) of all participants. Other various reasons were also given (see table 4.5).

Table 4; Distribution of participants' primary reasons for starting antenatal care in KIUTH between March 2017 and May 2017 at a stated trimester.
N=384

Reason	Frequency	Percentage
To get an antenatal card for delivery use	112	29.2
Encouraged by family and/ or friends	102	26.6
To have an HIV test	92	24
To confirm pregnancy	80	20.8
Illness	71	18.5
To get vaccines and vitamins	70	18.2
To check for gestational age	26	6.8
Routine check-ups	10	2.6
Voluntary decisions	8	2.1
Work obligations	4	1.0
Doctor's advice	3	0.8

Perception of the best time to start antenatal care

Participants' perceived best time to start ANC was asked to determine their level of awareness on the recommended time to start ANC. Majority (n=326, 84.9%) of the respondents indicated first trimester as the best time to start ANC; (n=54, 14.1%) indicated second trimester and only 1% (n=4) indicated third trimester.

Antenatal care information accessed before pregnancy

To find out if the information on pregnancy was readily available before getting pregnancy. The results indicated that the biggest proportion of women accessed ANC information before pregnancy (69.8%, n=268) and 30.2% (n=116) did not.

Sources of the antenatal care information accessed before pregnancy

A possibility of multiple responses was asked to determine the common sources of this readily available ANC information. Most of the women accessed the information from the clinic/ hospital (n=120, 31.3%), (n=71, 18.5%) accessed it from their families and friends, 12.8% (n=49) through television, 11.7% (n=45) through the radio, 10.2% (n=39) through newspapers stand magazines, 5% (n=19) through community mobilization, 3.6% (n=14) from ANC attendance during previous pregnancy and 0.5% (n=2) through traditional health practitioners.

Content of the antenatal care information accessed before pregnancy

A possibility of multiple responses was asked to determine the kind of information that was commonly accessed. The most common content was on HIV screening and treatment (n=176, 45.8%) (See table 5).

Table 5; Distribution of the content of the antenatal care information provided to pregnant women in KIUTH between March 2017 and May 2017
N=384

Content	Frequency	Percentage
HIV screening and treatment	176	45.8
Prevention of complications	98	25.5
Baby feeding options	84	22
Signs of complications	68	17.7
Nutrition in pregnancy	60	15.6
Signs of hypertension	18	4.7

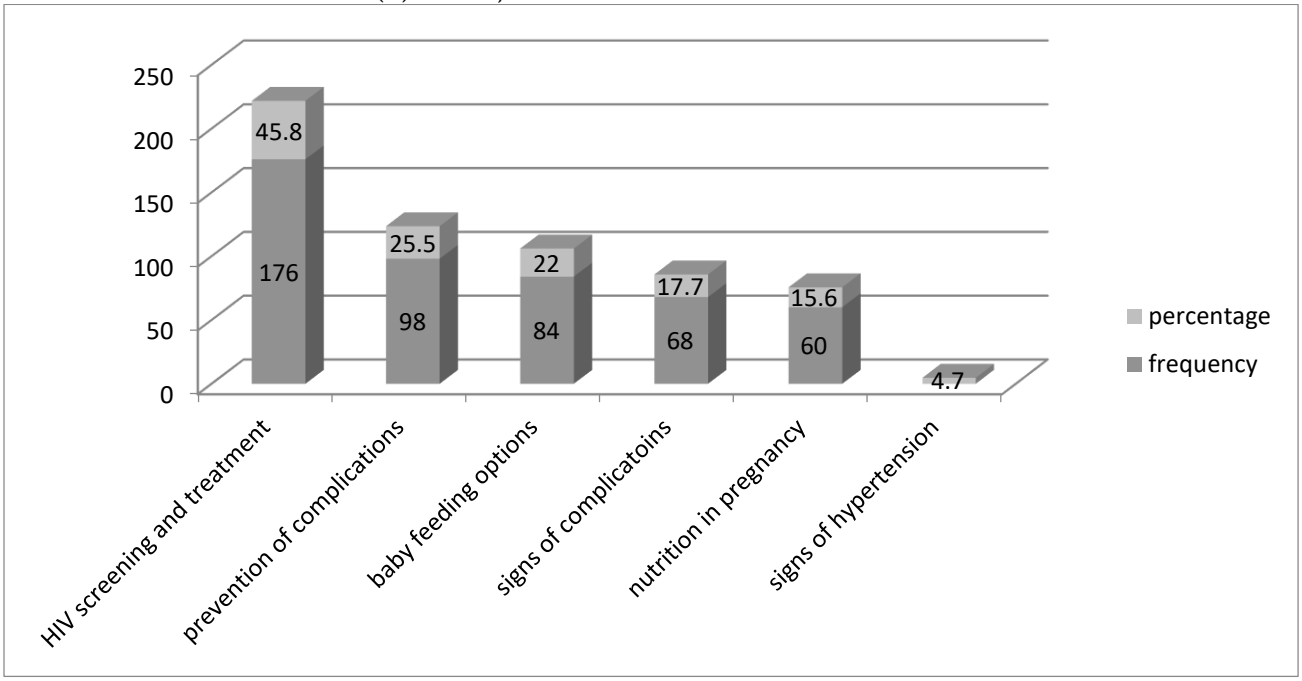

Figure 3; Distribution of the content of the antenatal care information provided to pregnant women in KIUTH between March 2017 and May 2017.

Table 6; Distribution of perceived barriers to utilization of antenatal care services in KIUTH as reported by pregnant women between March 2017 and May 2017.
N=384

Barriers	Frequency	Percentage
Fear for HIV results	257	66.9
Long waiting time	124	32.3
Distance	42	10.9
Transport problems (accessibility)	48	12.5
Luck of money	34	8.9
Limited resources	18	4.7
Health worker's attitude	112	29.2
Fear of disclosure of pregnancy	14	3.6
Clinic availability hours (open hours)	20	5.2
Laziness	8	2.1

Perceptions on health care workers

To determine whether the standards were being achieved. The results of the combined categories are stipulated in table 7.

Table 7; Participants' combined categories for "agree" and "disagree" on the perceptions on health care workers in KIUTH.

N=384

Variable		Frequency	Percentage	Total
Good attitude	**Agree**	262	83.4	314
Provide enough information about HIV/AIDS	**Agree**	321	89.4	359
Being judgmental	**Disagree**	251	78.7	319
Make you feel comfortable	**Agree**	302	88.3	342
Ask you questions	**Agree**	349	95.4	366
Allow you to ask questions	**Agree**	264	81.5	324
Respect you	**Agree**	343	95.3	360
Assured of confidentiality	**Agree**	290	91.8	316
Privacy is maintained	**Agree**	219	74.7	293
Referred for other services	**Agree**	197	85	232
They know what they are doing	**Agree**	345	97.7	353

Table 8; Most of the mothers said it was time to start ANC (50.3%, n=193), those who came because of sickness were, (17.7%, n=68) and others; see table .8 below;

n=384

Reason	Frequency	Percentage
It is time to start ANC	193	50.3
Sickness	68	17.7
Previous pregnancy complications	54	14.0
Told by others	46	12.0
Previous fetal loss	23	6.0
Total	**384**	**100**

What mothers miss by not attending ANC

To find out whether those mothers who don't come for ANC miss anything. Most mothers singled out HIV testing (90%, n=346) as the most crucial service those mothers miss, treatment of infections and prophylaxis of disease (75%, n=288), missing regular check-ups (68%, n=263), missing fetal wellbeing monitoring (61%, n=236).

Problems which may arise if one does not attend ANC

To see whether there are any problems which arise if a mother does not attend ANC. Bleeding during and after delivery, infections like malaria, complications of pregnancy like miscarriages and abortions, death of the mother. To the fetus; mother to child transmission of HIV, syphilis and gonorrhea, low birth weight, birth injuries, fetal distress and fetal death. All of which have kept maternal and fetal mortality high.

DISCUSSION

Demographic data

With age, it was found out that mothers between the ages of 20 to 29 years attended ANC more than any other age bracket. Attendance went on decreasing with increasing age and reasons could be due to; these mothers think that they have encountered most of the challenges in pregnancy and so, no need of them attending ANC. Married women attended more than other groups in marital status because they have support from their husbands and the attendance of single mothers was low because of lack of support like transport costs, company from partner and decision making also is difficulty. Mothers who reached primary and secondary school attended more than

those who never went to school and those who went to tertiary institutions. This is because mothers who want to tertiary institutions think that they have enough information about pregnancy and those who never went to school attend more to TBAs (Traditional Birth Attendants) than coming to health units.

Antenatal care attendance

Gestational age at time of ANC booking for current pregnancy

DHIS data for 2014 and 2015 indicated that less than 42% of pregnant women attended ANC services before 20 weeks of gestation in KIUTH, and similar results are documented nationally. In this study, more pregnant women (56.8) attended ANC in first trimester of gestation and 39% Started ANC in second trimester which is still a very big number. Those that start ANC in third trimester (4.2%) did not benefit much from both ANC and PMTCT programmes. These findings are in line with Peter Chris Kawungezi's findings that many women still start ANC in second trimester and this was attributed more to women in rural areas. Many women are not decision makers as they depend on their partners, parents and in laws on when to start ANC.

Primary reasons for starting antenatal care at stated trimester

The study done in KIUTH indicated that most women's primary reason for seeking ANC was to receive an ANC attendance card that is required to deliver at a health facility. In this study most of the women attended ANC to get an antenatal card for delivery usage (29.2%; n=112). These findings correspond with the earlier study of [10] which had almost similar findings because 31.3% came for ANC to get an antenatal card for delivery purpose. This is because most women do not perceive significant health threats during pregnancy but perceive labor and delivery as time of significant health risk that require medical attention.

Perceived general reasons for antenatal care attendance

On the generalized reasons for ANC attendance, 45.8% of the respondents indicated HCT as one of the main reasons for pregnant women to start ANC early. This was noble as it is a key component to the PMTCT programme implementation, however the use of ARV prophylaxis was not perceived to be very important as it was only specified by 9% of the participants. These were the same results with [11] who also mentioned HCT testing, treatment and prevention of diseases, among others.

Perception of the best time to start antenatal care

Majority (n=329; 85.7%) of the respondents indicated first trimester as the best time to start ANC which is in line with the WHO and PMTCT guidelines. The prioritization of their reasons for ANC during the perceived best time is different from the reasons why they started ANC with their current pregnancy, as well as different from the generalized reasons. This was in line with Uganda Reproductive Health policy guidelines of 2000 where, a woman with an uncomplicated pregnancy was expected to make the first visit before the end of first trimester.

Antenatal care information accessed before pregnancy

Just above half of the women accessed ANC information before pregnancy (57%, n=219) and 43% (n=165) did not. One of the major sources was health centers 31.3% (n=120). There are lessons to be learnt. Family members and friends played a major role as they provided ANC information to 18.5% (n=71) of the participants. The most common content was on HIV screening and treatment (n=176, 45.8%). Simkhada, [12] mentioned that, majority of the respondents sensitization was by health workers which supports my findings.

Perceived barriers to utilization of antenatal care services

In this setting, the findings have revealed that 66.9% (n=257) are fearful of HIV positive results which, 32.3% (n=124) perceived long waiting hours as a barrier and 29.2% (n=112), health workers' attitude as a barrier supporting Ugandan daily monitor (2014) report. Literature has revealed barriers to utilization of ANC and PMTCT services. Ugandan daily monitor

(2014) reported that a study done by future health systems RPC found that the main factors affecting utilization were transport costs, fear of HIV positive results, long waiting hours, distance, informal fees, demands for requirements such as gloves and poor attitude of the providers. Another study done by [13] revealed that although 85% expressed willingness to HCT, more were concerned about confidentiality and disclosing their HIV status because of fear of negative reactions from their partners, parents, family members and their community.

CONCLUSION

Most of the mothers who attended ANC at KIUTH, attend four visits but the main factors affecting utilization were; transport costs, fear of HIV positive results, costs required to get some of the services, demands for requirements, all these are in line with Uganda daily monitor (2014). Others include; long waiting hours and confidentiality was a barrier to some of them, lack of money, limited resources and clinic availability hours, some are satisfied by first and second visits, preoccupied by garden work.

Strengths and weaknesses

Sample size was limited to the targeted and this might affect generalizability findings to other similar setting however the dependent variable was captured using sensitive tests and discussing with my supervisor from time to time so, they are valid. Trainings for research assistants and pre-testing conducted before data collection ensured a standardized way of collecting information. Frequent communication between the principal researcher and the assistants helped to deal with some problems that arose in the process of collecting data. Hospital, there were many senior staffs. They had experience in clinical medicine and in doing research. That also ensured quality of collected data as well as recruitment of subjects that conformed to inclusion criteria. The study would have made more meaning if it was carried out in villages because that's where the right people are but time was a limiting factor. According to a number of studies done, majority of the respondents' sensitization was by health workers so, if health workers are encouraged and motivated, this would make ANC utilization better.

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