An Analytical study to determine the Prevalence and factors associated with Late first Antenatal Care Visit among Pregnant Women at Mukono General Hospital, Mukono District.

Musitwa Moses*

Health Tutor's College - Mulago, Makerere University

Keywords: Late first Antenatal, Pregnant Women, Prevalence, Date Submitted: 2022-08-15 Date Accepted: 2022-09-11

Abstract:

Background:

A study was carried out to determine the prevalence and factors associated with late first antenatal care visits among pregnant women at Mukono General Hospital, Mukono District.

Methodology:

The study design was descriptive and cross-sectional and it employed both quantitative and qualitative data collection methods. A sample of 60 respondents was selected using a purposive sampling procedure and an interview guide was used to collect data.

Results:

The proportion of pregnant mothers who timely initiated ANC visits was 40 (66.7%) attended the first ANC visit between 4 – 6 months of pregnancy, 40 (66.7%) had attended ANC once during the current transition, 24 (40%) reported lack of awareness/knowledge as a reason for failing to timely initiate ANC visits, followed by 16 (26.7%) who reported lack of support, 12 (20%) reported that they did not feel the need to attend early.

Respondents also faced various maternal factors as 40 (66.7%) respondents reported that they did not attend ANC in the last pregnancy, 50 (83.3%) did not receive advice before starting ANC visits, 60 (100%) did not have other means of testing current pregnancy, 40 (66.7%) reported not having adequate knowledge about ANC services, 40 (66.7%) reported that they sometimes had to get their husband's approval to start ANC visits, 42 (70%) rated the previous experiences of services utilization as good.

Conclusion:

Respondents faced various socio-demographic and maternal factors which have led to a low proportion of mothers attending the 1st ANC visit in the first semester as recommended.

Recommendations:

Include improving efficiency and reducing waiting time, improving customer care, more support, and health education about ANC among others.

1. Background of the study

Antenatal Care (ANC) is a complex set of activities aimed at reducing maternal and fetal morbidity and mortality which is achieved by decreasing the likelihood that a pregnant woman will experience serious complications during pregnancy labor and peurperium by improving the maternal death and pre-labor fetal outcomes of women with complications (Bariagaber, Towongo, and Ayiga, 2016).

ANC is an essential component of the Safe Motherhood Initiative promulgated by the United Nations Population Fund (UNFPA), the

*Corresponding author.

Email address: mmorsley90@gmail.com (Musitwa Moses)

World Bank, and the World Health Organization (WHO) found that it is during antenatal that risks associated with pregnancies like antepartum hemorrhage (APH) and post-partum hemorrhage (PPH) are identified and overcome (Acharya, Khanal, Singh, Adhikari and Gautam, 2015).

Globally, the utilization of ANC services varies in developed countries like Germany nearly 99% of mothers attend ANC services unlike in developing countries where closely 48% seek ANC services (Mezmur, Navaneetham, Letamo and Bariagaber, 2017) which are attributed to various factors such as low socio-economic status of the family, poverty, lack of support and long distance to health services among other factors (Adhikari, 2016).

In Sub-Saharan Africa, research on the utilization of ANC among pregnant women has shown that attendance to these services remains very low with current estimates for countries such as Ivory Coast at 45%, Cameroon at 41%, Ghana at 44%, Mali at 39%, Senegal and Nigeria at 38 and 35% respectively and this low attendance was often a result of poor and inadequate provision of services and unavailability of health workers, socio-economic factors and location of services among other factors (Zamawe, Banda and Dube, 2016).

Similarly, East African countries where PMTCT programs were being implemented as part of the ANC services reported attendance at between 25 and 60% respectively at different hospitals in Nairobi, Kenya (Gitonga, 2017). The lack of adequate attendance and utilization of ANC services was attributed to lack of provision of services, poor socio-economic status of the family, low level of education attainment by the woman, rural residence, and poverty among others (Rurangirwa, Mogren, Nyirazinyoye, Ntaganira and Krantz, 2017).

Attendance of ANC in Uganda was relatively high at 92%, however, the timing of the first ANC visit remains very poor as only 33% of pregnant women attended the first ANC visit in the first trimester as recommended (Bande, Shehu, and Garba, 2018). In Mukono district, where Mukono General Hospital was located, antenatal care attendance was reported to be 86%, however, 1st ANC visit was only attended by 15% of pregnant mothers in the first trimester, which puts mothers at risk of missing out on important screening and management of infections including HIV, syphilis and other Sexually Transmitted Infections (STIs) and commencement on ARVs if found positive as well as other recommended nutritional measures such as folic and iron tablets, intermittent preventive treatment for malaria during pregnancy (IPTp), as well as general health education on how to care for themselves during pregnancy among others (District Health Information System).

2. METHODOLOGY

Study Design

The study adopted an analytical study design to collect data on the timely initiation of ANC visits and associated factors simultaneously at a point in time.

Study setting

The study was conducted at Mukono General Hospital, Mukono District which is located in Central Uganda. The hospital is one of several health facilities in the district and it offers many health care services including immunization, child health services, HIV/AIDS management services, general patient management, laboratory services, nutrition services, antenatal, maternity, and postnatal services, EMTCT program as well as RCT services among many others. The ANC clinic operates throughout the week and on every clinic day, an average of 50 mothers are received at the ANC clinic during the recommended time for the first visit. The study area was selected because of the outstanding problem of delayed attendance at the first ANC visit to the facility. Recruitment was carried out on 15/05/2022. The data was collected between June to September 2022.

Study Population

This study targeted all pregnant mothers in the Mukono district who were accessed at Mukono General Hospital and only those who met the eligibility criteria were considered as the study population.

Sample Size determination

The sample size of pregnant mothers attending ANC services to participate in this study was determined by the statistical formula of Keish and Leslie (1965).

d^2

Where n is the sample size

Is the standard normal deviation at 95% confidence level (i e 1 96)

Is the proportion of target population (which is 50% or 0 5

Is the acceptable degree of error (in this case 5% or 0 05

n= $(1.96)^2$ x 0.5 x $0.5/0.05^2$ = 750

Since the total population of respondents involved is less than 10,000 (150), the following formulae applied.

Sample size estimation (nf) is calculated as follows;

nf = the desired sample size (when the population is less than 10,000)

n = the desired sample size (when the population is more than 10,000)

N = the estimate of the population size

nf = n

N = 750 (Average number of pregnant mothers attending ANC services every month at Mukono General Hospital)nf = n = 750 7501 + n1 + 11.6

N 33

12.6 =59.5 ≈60

Therefore, the sample size was 60 respondents.

Therefore, the study consisted of a sample of 60 respondents and all were pregnant women attending ANC services at Mukono General Hospital, Mukono District.

Inclusion and exclusion criteria

The study included all pregnant mothers in Mukono District, attending ANC services at Mukono General Hospital, available at the ANC clinic, with the age of 18 years and above and were willing to voluntarily consent to participate in the study. The study excluded those pregnant mothers who met the inclusion criteria but were very sick or had any mental disorders and therefore incapable of being involved in the study

Sampling procedure

The researcher used a purposive sampling method to select the required number of pregnant mothers for the study at Mukono General Hospital. In this procedure, the researcher approached and talked to potential respondents, and those who met the study criteria were invited to participate in the study after voluntary consent.

Definition of Variables

The independent variable for the study included:

The proportion of mothers who timely attended ANC visits included those who timely attended and those who did not timely attend ANC

Socio-demographic factors such as

- Age
- Employment status
- Woman‘s education level
- Woman‘s occupation
- Marital status
- Religion
- Husband‘s education level
- Husband‘s occupation
- Residence of the woman
- Family monthly income

Maternal factors which included

- History of ANC attendance with last pregnancy
- Planned current pregnancy
- Husband‘s involvement in planning pregnancy
- Spouse‘s approval of pregnancy
- Got advice before starting ANC visits
- Means of testing current pregnancy
- Knowledge on ANC
- Husband‘s approval to start ANC visits
- Parity of the mother
- Last pregnancy outcome
- Experience in service utilization

The dependent variables for the study included:

Timely initiation of ANC visits among pregnant mothers

Research Instruments

Data was collected using an approved semi-structured questionnaire comprising open and closed-ended questions. This tool was selected

because the study involved both literate and illiterate respondents who were thus unable to read, write and understand English used to develop the questionnaire in which case the researcher read out the question and then wrote down the responses for them on the tool.

Data Collection Procedure

The primary source of data was pregnant mothers at Mukono General Hospital

The questionnaire was first pretested among 10 – 15 pregnant mothers attending ANC services at Ggwatiro Hospital to determine its accuracy and reliability before using it for data collection.

Before approaching and collecting data from respondents at the ANC clinic, the researcher was accompanied and introduced to the respondents by the in-charge of the ANC clinic who first introduced herself to the respondents and explained the purpose of the study.

The researcher was assisted during data collection by 5 research assistants who were Enrolled and Registered Midwives. These were first trained in how to use the tool to collect data as well as how to approach respondents

The researcher supervised the research assistants to ensure the correct filling of the tool

The researcher sampled 15 pregnant women per ANC day for 4 days by consecutive random sampling to prevent issues of bias

The researcher administered questionnaires to respondents at the ANC clinic. This improved efficiency and confidentiality during data collection.

Data management

Data management included:

• Data editing before leaving the area of study to ensure that there were no mistakes or areas left blank, and any found were corrected before leaving the area of study.

• Storage of the collected data was under lock and key and it was only accessible by the researcher

• The questionnaires were coded by giving each a serial number for easy identification.

• The researcher supervised the research assistants during data collection as well as went through each questionnaire to confirm completeness before losing contact with the respondents.

3. Data analysis and presentation

The collected data were descriptively analyzed, coded, and entered into epi data software after which it was exported to SPSS version 25 which presented the data in the bivariate form at a significance level of 0.5.

Quality control

Quality assurance was achieved by:

• Selecting and training competent research assistants

• pretesting the tool

• Coding of the questionnaires.

4. Ethical Considerations

A letter of introduction was obtained from Health Tutor's College - Mulago introducing the researcher to the administration of Mukono General Hospital and seeking permission to carry out the study. After permission was granted, the medical director introduced the researcher to the in charge of the ANC clinic who hence introduced the researcher to the respondents. Respondents were assured of maximum confidentiality and only numbers instead of names were used to identify the respondents. The study only commenced after the objectives of the study had been well explained to participants and they had consented to participate in the study.

5. Data Analysis and Presentation

6. Social demographic factors

• The interview guide included questions on demographic characteristics such as age, marital status, level of education, occupation, religion, level of education of spouse, occupation of the spouse, family monthly income, and area of residence. This information was assessed to find out its relationship with the prevalence and factors associated with late first antenatal care visits among pregnant women at Mukono General Hospital, Mukono District. The results were presented as follows:

Half of the respondents 30 (50%) were in the age range of 26 – 35 years, followed by 20 (33%)

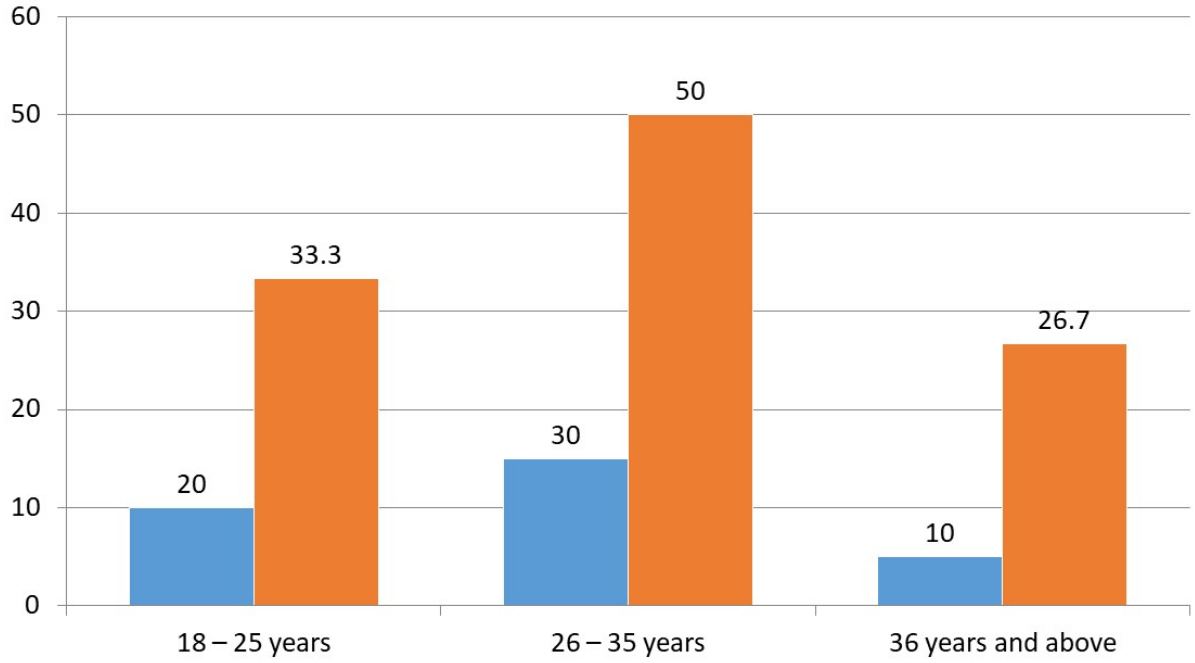

Figure 1: **Distribution of respondents by age (n=60)**

who were 18 – 25 years while the least 10 (27%) were 36 years and above.

Majority of respondents 50 (83%) were married, followed by 6 (10%) who were single while the least 4 (7%) were widowed.

Results showed that 22 (37%) respondents attained primary level education, followed by 14 (23%) who attained secondary level, 14 (23%) attained tertiary level education while the least 10 (17%) did not attain formal education.

A total of 24 (40%) respondents were self-employed, followed by 16 (26.7%) who were house wives, 12 (20%) were peasants while the least 8 (13.3%) were professionals.

Half of the respondents 30 (50%) were Catholic, followed by 20 (33.3%) who were protestants while the least 10 (16.7%) were Moslems.

A total of 24 (40%) respondents' spouses attained primary level education, followed by 18 (30%) who attained secondary level education, 12 (20%) attained tertiary level education while the least 6 (10%) did not attain any formal education.

Majority of respondents' spouses, 36 (60%) were self-employed, followed by 14 (23.3%) who were peasants while the least 10 (16.7%) were unemployed.

Majority of respondents 35 (58.3%) reported having a family monthly income of 300,000 – 400,000shs while the least 3 (5%) reported less than 100,000shs.

Majority of respondents 40 (66.7%) resided in rural areas while the least 20 (33.3%) resided in urban areas.

Proportion of pregnant of pregnant mothers who timely initiated ANC visits

Most 40 (66.7%) of the respondents attended the first ANC visit between 4 – 6 months of pregnancy, followed by 12 (20%) who started attending ANC at between 1 – 3 months of pregnancy while the least 8 (13.3%) started at 7 – 9 months of pregnancy.

Most 40 (66.7%) of the respondents had attended ANC once during the current transition, followed by 12 (20%) had attended twice while the least 8 (13.3%) had attended more than twice.

Most 24 (40%) respondents reported lack of

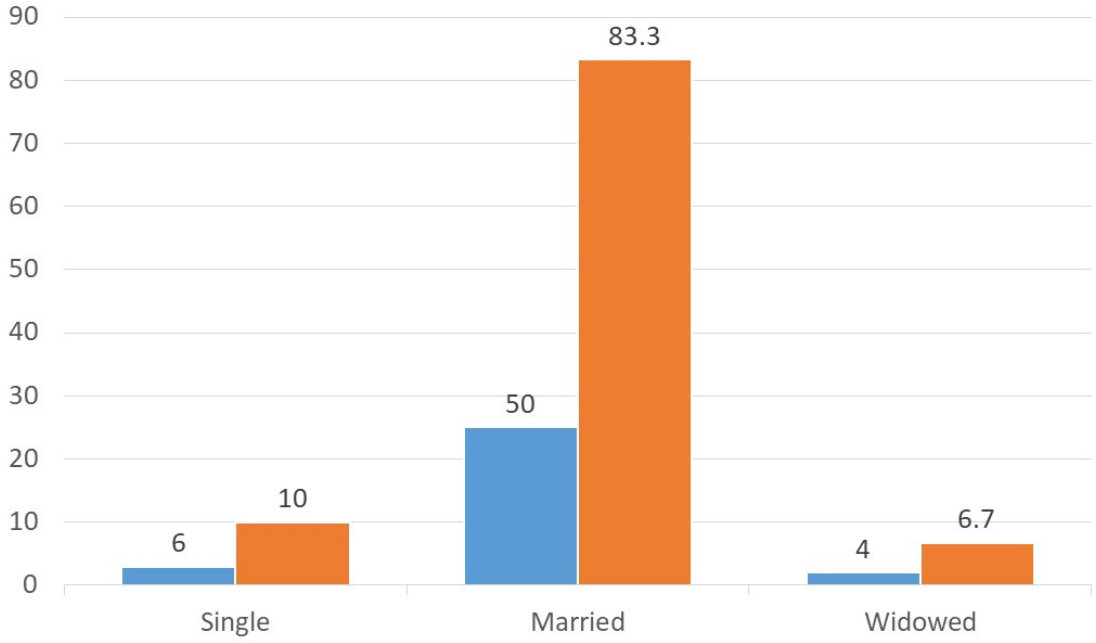

Figure 2: **Distribution of respondents by marital status (n=60)**

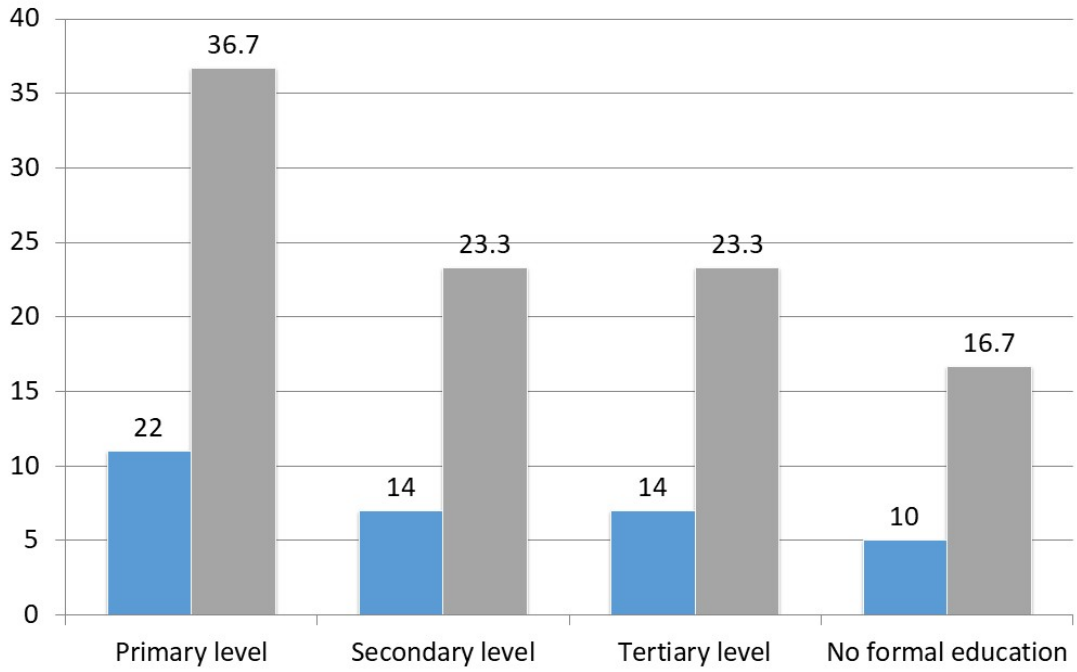

Figure 3: **Distribution of respondents by level of education (n=60)**

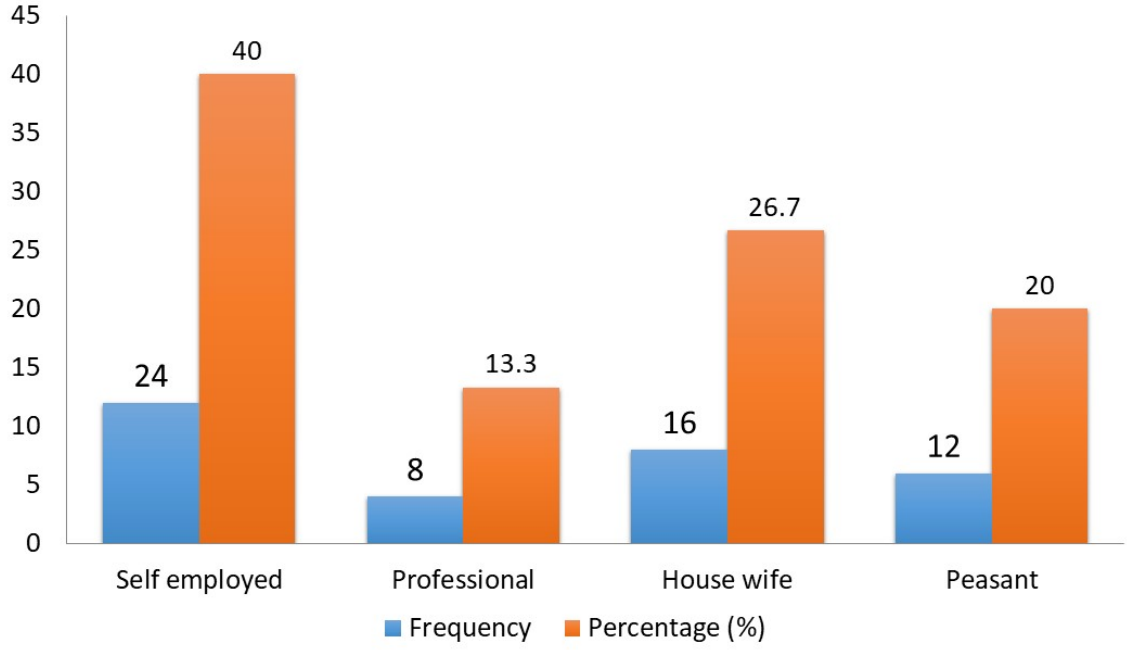

Figure 4: **Distribution of respondents by occupation (n=60)**

Table 1: **Distribution of respondents by religion (n=60)**

Religion	**Frequency**	**Percentage (%)**
Catholic	30	50
Protestant	20	33.3
Moslem	10	16.7
Total	**60**	**100**

Table 2: **Distribution of respondents by occupation of spouse (n=60)**

Occupation	**Frequency**	**Percentage (%)**
Unemployed	10	16.7
Self employed	36	60
Peasants	14	23.3
Total	**60**	**100**

Table 3: Distribution of respondents by family monthly income (n=60)

Family monthly income	**Frequency**	**Percentage (%)**
Less than 100,000shs	3	5
100,000 – 200,000shs	12	20
300,000 – 400,000shs	35	58.3
More than 400,000shs	10	16.7
Total	**60**	**100**

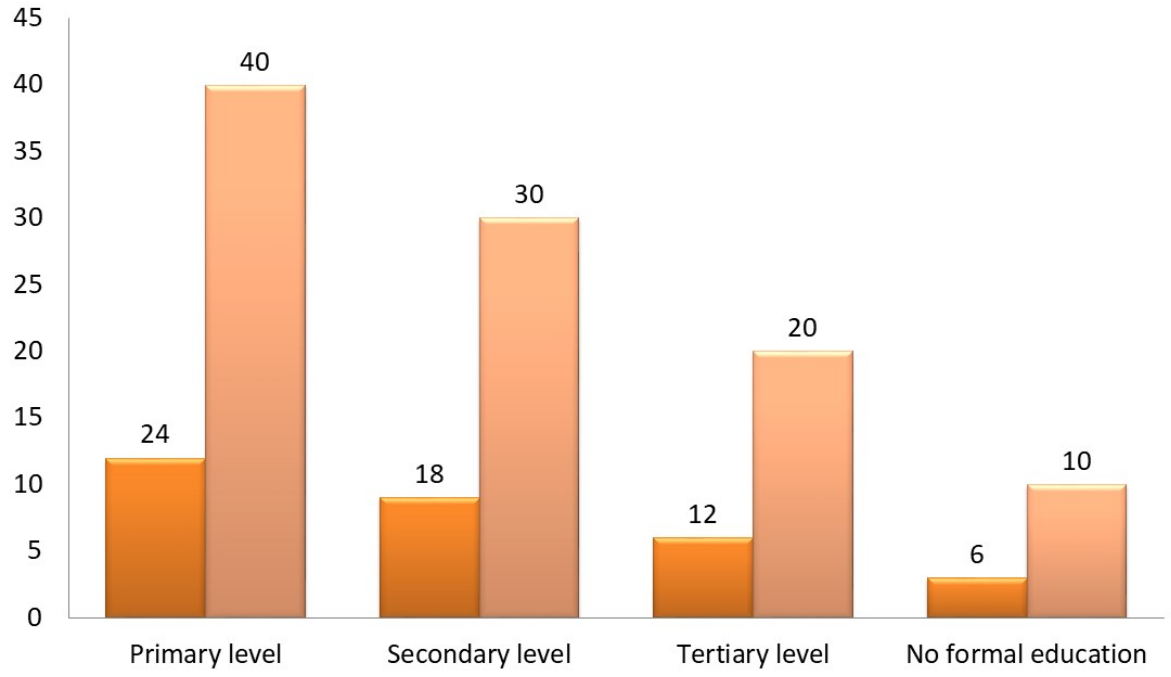

Figure 5: **Distribution of respondents by level of education of spouse (n=60)**

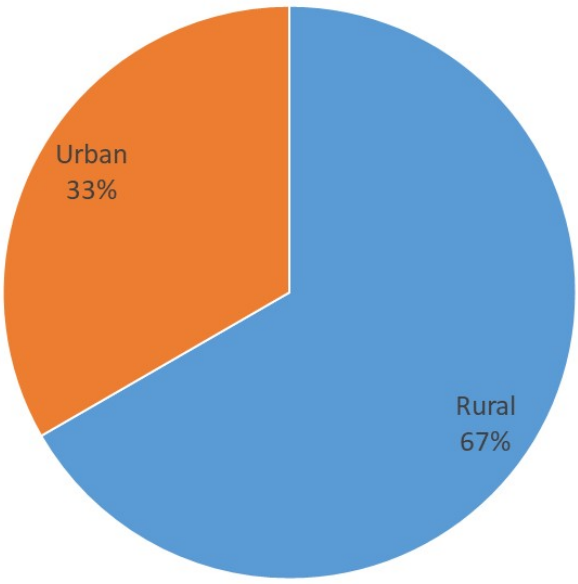

Figure 6: Distribution of respondents by area of residence (n=60)

Table 4: Age of pregnancy respondents attended the first ANC visit (n=60)

Age of pregnancy	**Frequency**	**Percentage (%)**
1 – 3 months	12	20
4 – 6 months	40	66.7
7 – 9 months	8	13.3
Total	**60**	**100**

Table 5: Number of times respondents attended ANC during the current pregnancy (n=60)

Number of times	**Frequency**	**Percentage (%)**
Once	40	66.7
Twice	12	20
More than twice	8	13.3
Total	**60**	**100**

Table 6: Reasons why respondents failed to timely initiate ANC visits (n=60)

Reasons	**Frequency**	**Percentage (%)**
Lack of awareness/knowledge	24	40
Lack of support	16	26.7
Did not feel the need to attend early	12	20
They were not feeling ill	8	13.3
Total	**60**	**100**

awareness/knowledge as a reason for failing to timely initiate ANC visits, followed by 16 (26.7%) who reported lack of support, 12 (20%) reported that they did not feel the need to attend early while the least 8 (13.3%) reported that they were not feeling ill. (n=60)

6.1. Maternal factors

Most 40 (66.7%) respondents reported that they did not attend ANC in the last pregnancy while the least 20 (33.3%) reported that they attended ANC.

Most respondents 40 (67%) reported that their current pregnancy is planned while the least 20 (33%) reported that their current pregnancy is not planned.

Majority 40 (66.7%) of the respondents reported that their husbands/partners were involved in planning the pregnancy while the least 20 (33.3%) reported that they were not involved.

Most 40 (66.7%) of the respondents reported that their husbands/partners approved of the pregnancy while the least 20 (33.3%) reported that they did not approve of the pregnancy.

Most 50 (83.3%) of the respondents did not receive advice before starting ANC visits while the least 10 (16.7%) received it.

All 60 (100%) of the respondents reported not have other means of testing current pregnancy.

Most 40 (66.7%) of the respondents reported not having adequate knowledge about ANC services while the least 20 (33.3%) reported having adequate knowledge about ANC services.

Most 40 (66.7%) of the respondents reported that they sometimes had to get their husband‘s approval to start ANC visits, followed by 12 (20%) who always had to get approval while the least 8 (13.3%) never had to get approval.

Most 26 (43.3%) respondents reported having 2 – 3 children, followed by 14 (23.3%) who had 4 children and above while the least 4 (6.7%) did

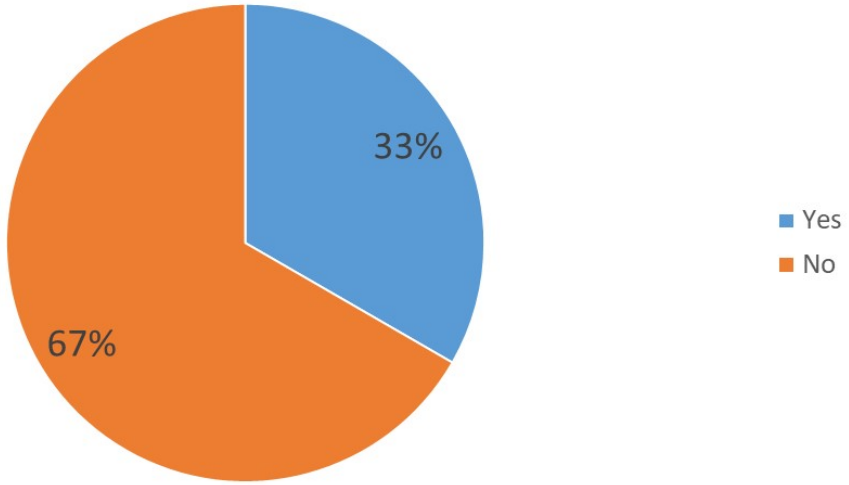

Figure 7: Whether respondents attended ANC in the last pregnancy (n=60)

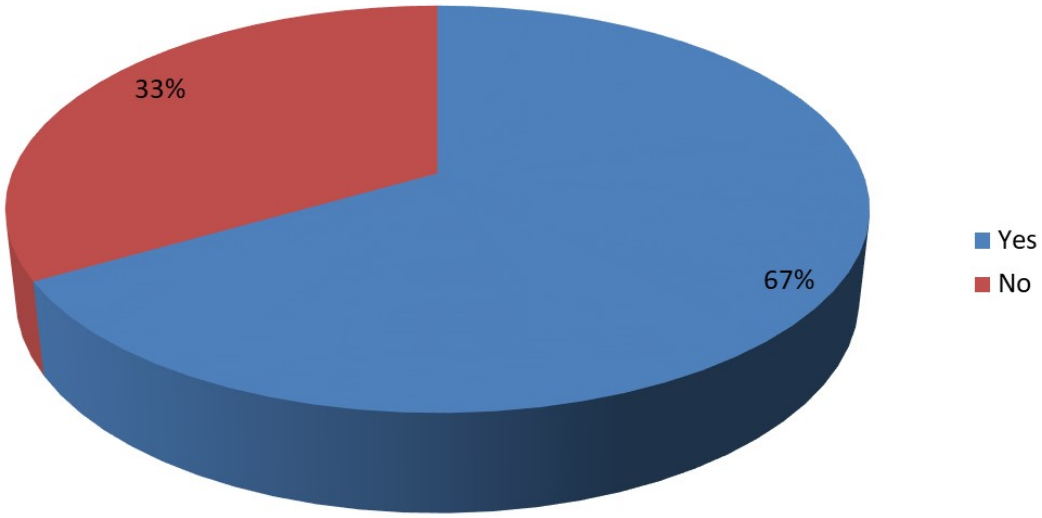

Figure 8: Whether respondents' current pregnancy is planned (n=60)

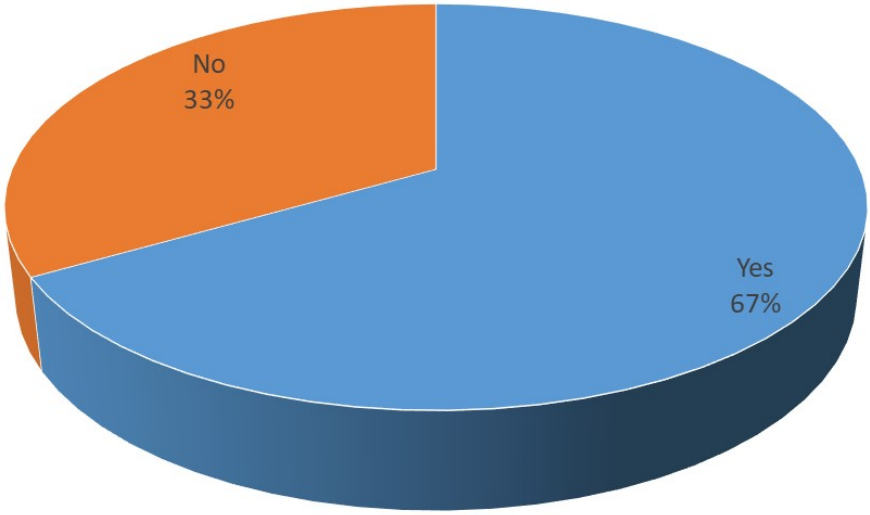

Figure 9: Whether respondents' husband was involved in planning the pregnancy (n=60)

Table 7: **Whether spouse/husband approved of the pregnancy (n=60)**

Responses	**Frequency**	**Percentage (%)**
Yes	40	66.7
No	20	33.3
Total	**60**	**100**

Table 8: **Availability of other means of testing current pregnancy (n=60)**

Responses	**Frequency**	**Percentage (%)**
Yes	0	0
No	60	100
Total	**60**	**100**

Table 9: **Whether respondents had adequate knowledge about ANC services (n=60)**

Responses	**Frequency**	**Percentage (%)**
Yes	20	33.3
No	40	66.7
Total	**60**	**100**

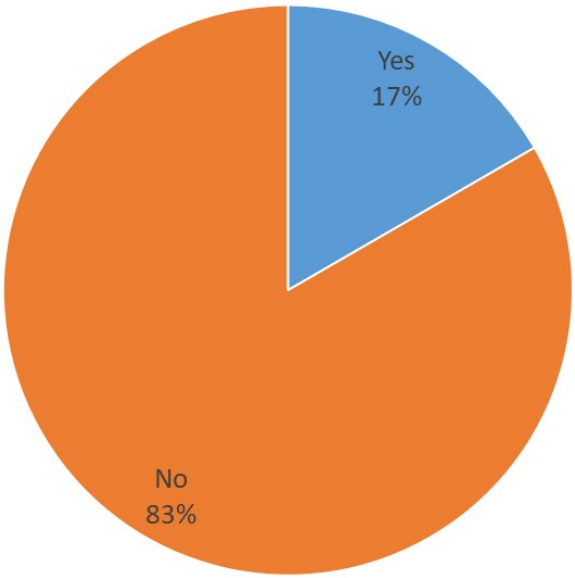

Figure 10: Whether respondents received advice before starting ANC visits (n=60)

Table 10: Whether respondents had to get their husband's approval to start ANC visits (n=60)

Responses	**Frequency**	**Percentage (%)**
Sometimes	40	66.7
Always	12	20
Never	8	13.3
Total	**60**	**100**

not have children.

Majority 42 (70%) of respondents reported that the baby survived while the least 18 (30%) reported that the baby passed away.

Most respondents 42 (70%) rated the previous experiences of services utilization as good while the least 18 (30%) rated the previous experiences as bad.

7. Discussion:

8. Social demographic factors

Half of the respondents 30 (50%) were in the age range of 26 – 35 years. This showed that respondents were mature enough to understand and appreciate the importance of ANC services to ensure their good utilization. This study finding was in line with a retrospective study by Teshale and Tesema (2020) with a total weighted sample size of 4,741 about the prevalence and factors associated with late first antenatal care visits among pregnant women of reproductive age women in Ethiopia; a multilevel analysis of EDHS 2016 data, after multi-level logistic regression revealed that socio-demographic factors associated with late first antenatal care visit among pregnant women included maternal age.

The majority of respondents 50 (83%) were married which implied that since they were married, they would be able to receive support and

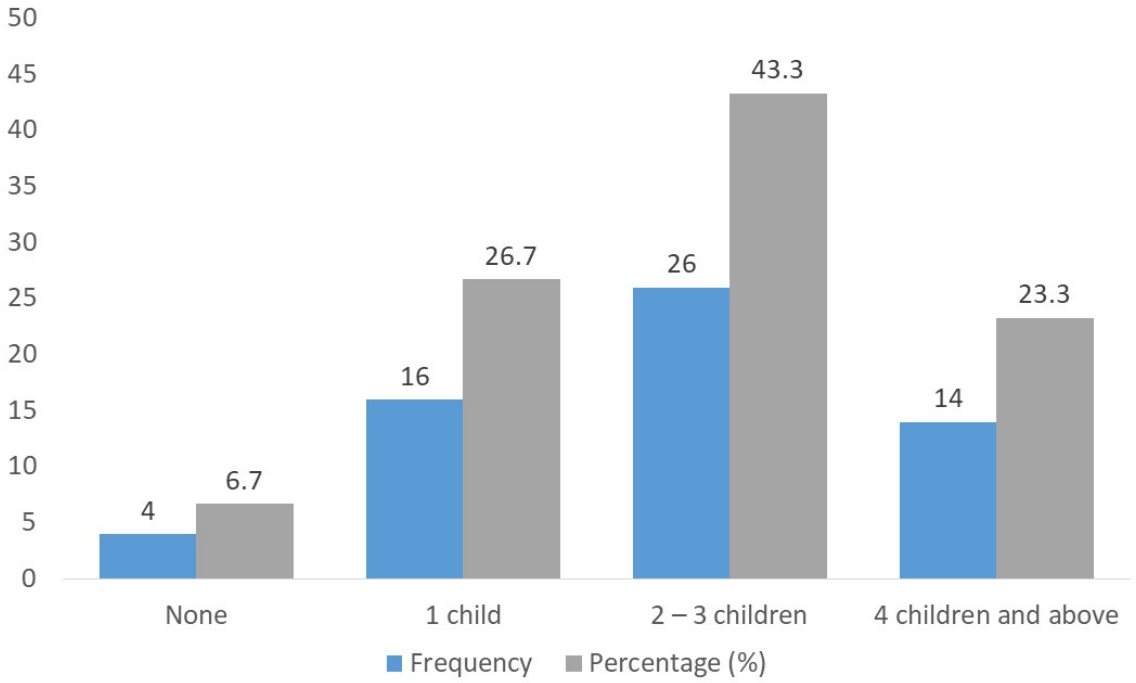

Figure 11: Number of children (n=60)

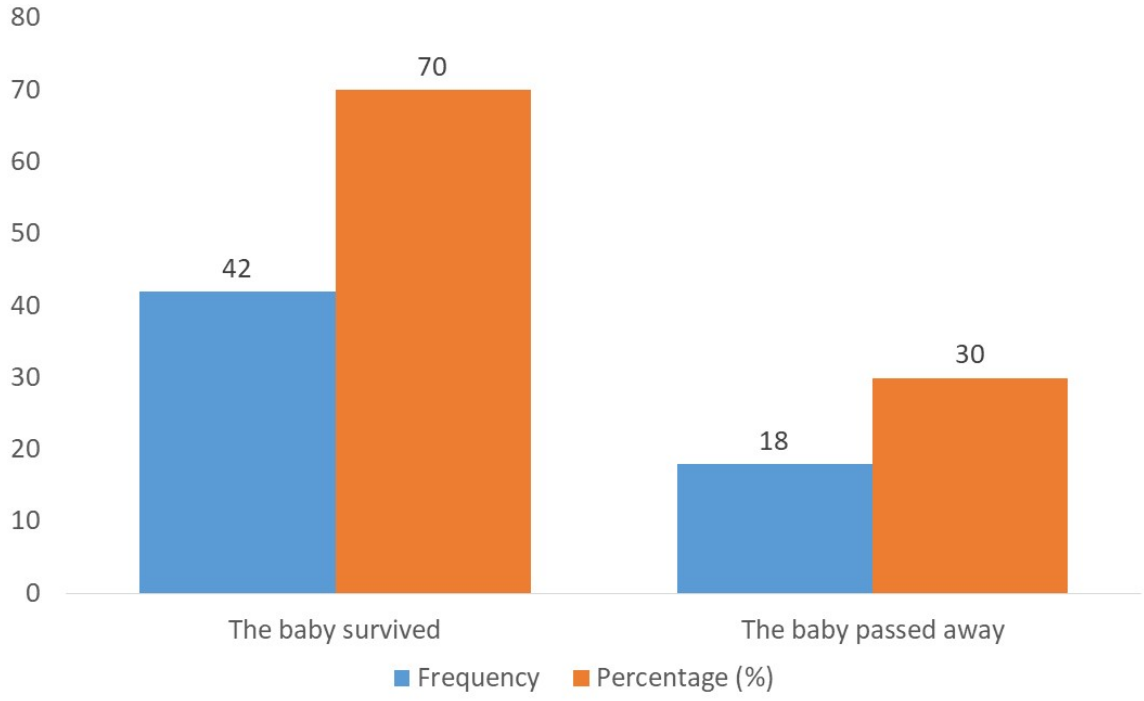

Figure 12: Outcome of the last pregnancy (n=60)

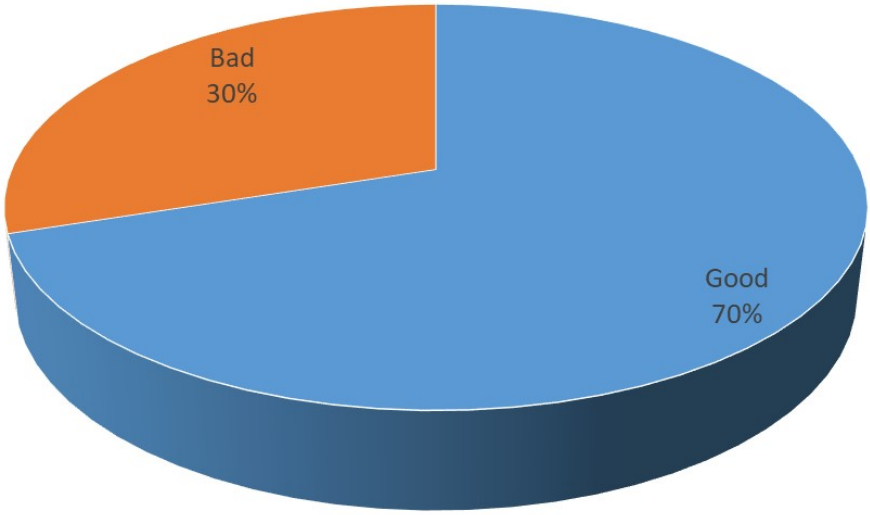

Figure 13: Rating of the previous experiences of service utilization (n=60)

encouragement from their partners to ensure the use of ANC services. However, this was not entirely the case in the study. This study finding was in line with a retrospective study by Teshale and Tesema (2020) with a total weighted sample size of 4,741 about the prevalence and factors associated with late first antenatal care visits among pregnant women of reproductive age women in Ethiopia; a multilevel analysis of EDHS 2016 data, after multi-level logistic regression revealed that socio-demographic factors associated with late first antenatal care visit among pregnant women included marital status.

Results showed that 22 (37%) respondents attained primary level education. This demonstrated that most respondents and their spouses attained a low level of education and this could greatly affect their awareness of the importance and benefits of ensuring early utilization of ANC. This study finding was in agreement with Lerebo, Kidanu, and Mache's (2015) prospective study about the magnitude and associated factors of late booking for antenatal care in public clinics in mother and child health in Botswana among 250 pregnant mothers reported that socio-demographic factors associated with late first antenatal care visit among pregnant women included women‘s education level and occupation.

A total of 24 (40%) respondents' spouses attained primary level education. This demonstrated that most respondents' spouses attained a low level of education and this could greatly affect their awareness of the importance and benefits of ensuring early utilization of ANC. This study finding was in agreement with Tufa, Tsegaye, and Seyoum (2021) institutional-based cross-sectional study about the factors associated with timely antenatal care booking among pregnant women in a remote area of Bule Hora District public health facilities, in Southern Ethiopia among 377 pregnant women revealed that socio-demographic factors associated with late first antenatal care visit among pregnant women were husband's education as well as knowledge on antenatal care service.

A total of 24 (40%) respondents were self-employed, the majority of respondents' spouses,

and 36 (60%) were self-employed. This implied that since most respondents and their spouses were self-employed and gainfully involved in income-generating activity, they would be better placed to ensure adequate access to and utilization of ANC services. This study finding was in agreement with Lerebo, Kidanu, and Mache (2015) prospective study about the magnitude and associated factors of late booking for antenatal care in public clinics in mother and child health in Botswana among 250 pregnant mothers reported that socio-demographic factors associated with late first antenatal care visit among pregnant women included women's education level and occupation.

Half of the respondents 30 (50%) were Catholic, followed by 20 (33.3%) who were protestants, majority of respondents 40 (66.7%) resided in rural areas while the least 20 (33.3%) resided in urban areas. This study finding was in agreement with another cross-sectional study by Mable, Chewe, and Muleya (2016) about the factors associated with late antenatal care booking among pregnant women in Ndola District, Zambia among 520 pregnant mothers revealed that socio-demographic factors associated with late first antenatal care visit among pregnant women included religion and residence of the woman which sometimes limited access to health facilities.

The majority of respondents 35 (58.3%) reported having a family monthly income of 300,000 – 400,000shs while the least 3 (5%) reported less than 100,000shs. This study finding was in line with Sinyange, Lungowe, Choolwe, and Musonda (2016) retrospective study about the factors associated with late antenatal care booking: population-based observations from the 2007 Zambia demographic and health survey among a weighted sample size of 6200 pregnant women reported that socio-demographic factors associated with late first antenatal care visit among pregnant women included family monthly income.

9. The proportion of pregnant mothers who timely initiated ANC visits

Most 40 (66.7%) of the respondents attended the first ANC visit between 4 – 6 months of pregnancy, followed by 12 (20%) who started attending ANC between 1 – 3 months of pregnancy while the least 8 (13.3%) started at 7 – 9 months of pregnancy. This study finding was in line with another study by Teshale and Tesema (2020) retrospective study about the prevalence and associated factors of delayed first antenatal care booking among 4200 reproductive age women in Ethiopia; a multilevel analysis of EDHS 2016 data using systematic sampling methods, after multi-level logistic regression revealed that the proportion of delayed first ANC booking was 67.31%.

Most 40 (66.7%) of the respondents had attended ANC once during the current transition, followed by 12 (20%) had attended twice. This study finding was in agreement with Tufa, Tsegaye, and Seyoum (2021) cross-sectional study about factors associated with timely antenatal care booking among 420 pregnant women in a remote area of Bule Hora District, Southern Ethiopia that the proportion of early antenatal care booking among pregnant women attending antenatal care in the study area was 57.8%.

Most 24 (40%) respondents reported lack of awareness/knowledge as a reason for failing to timely initiate ANC visits, followed by 16 (26.7%) who reported lack of support, 12 (20%) reported that they did not feel the need to attend early while the least 8 (13.3%) reported that they were not feeling ill. This showed that there were various issues affecting timely ANC attendance.

10. Maternal factors

Most 40 (66.7%) respondents reported that they did not attend ANC in the last pregnancy while the least 20 (33.3%) reported that they attended ANC.

Most respondents 40 (67%) reported that their current pregnancy is planned, and 40 (66.7%) of the respondents reported that their husbands/partners were involved in planning the

pregnancy. This study finding was in agreement with Ntambue, Malonga, Dramaix-Wilmet, and Donnen (2016) cross-sectional study about the determinants of maternal health services utilization in urban settings of the Democratic Republic of Congo—a case study of Lubumbashi City among 600 pregnant mothers revealed that maternal factors associated with late first antenatal care visit among pregnant women included husband‘s involvement in planning pregnancy as well as planned current pregnancy.

The majority of 40 (66.7%) of the respondents reported that their husbands/partners approved of the pregnancy. This study finding was in agreement with a cross-sectional study by Atuhaire and Kaberuka (2016) about the factors contributing to maternal mortality in Uganda among 280 pregnant mothers revealed that maternal factors associated with late first antenatal care visits among pregnant women included spouse‘s approval of pregnancy.

Most 50 (83.3%) of the respondents did not receive advice before starting ANC visits which were supported by Bande, Shehu, and Garba (2018) cross-sectional study about the effects of socio-demographic and institutional factors on the utilization of antenatal care services among pregnant women in Damaturu, Yobe State, Nigeria revealed that maternal factors associated with late first antenatal care visit among pregnant women included getting advise before starting ANC visits, having means of testing current pregnancy as well as having knowledge on ANC.

All 60 (100%) of the respondents reported not having other means of testing current pregnancy, and 40 (66.7%) of the respondents reported not having adequate knowledge about ANC services which was supported by Bande, Shehu, and Garba (2018) cross sectional study about the effects of socio-demographic and institutional factors on utilization of antenatal care services among pregnant women in Damaturu, Yobe State, Nigeria revealed that maternal factors associated with late first antenatal care visit among pregnant women included getting advise before starting ANC visits, having means of testing current pregnancy as well as having knowledge on ANC.

Most 40 (66.7%) of the respondents reported that they sometimes had to get their husband‘s approval to start ANC visits which were in line with Ebonwu, Mumbauer, and Uys (2018) whose study about the determinants of late antenatal care presentation in rural and peri-urban communities in South Africa: a cross-sectional study among 400 pregnant mothers revealed that maternal factors associated with late first antenatal care visit among pregnant women included husband‘s approval to start ANC visits.

Most 26 (43.3%) respondents reported having 2 – 3 children, 42 (70%) of respondents reported that the baby survived while the least 18 (30%) reported that the baby passed away which was in agreement with Afulani (2015) cross-sectional study about rural/urban and socioeconomic differentials in quality of antenatal care in Ghana among 400 pregnant mothers revealed that maternal factors associated with late first antenatal care visit among pregnant women included parity as well as the outcome of last pregnancy.

Most respondents 42 (70%) rated their previous experiences of service utilization as good. This study finding was in line with another cross-sectional study by Rutaremwa, Wandera, and Jhamba (2015) about the determinants of maternal health services utilization in Uganda among 500 pregnant mothers revealed that maternal factors associated with late first antenatal care visits among

11. Conclusion

The study found out that respondents faced various social demographic factors as 30 (50%) were in the age range of 26 – 35 years, 50 (83%) were married, 22 (37%) attained primary level education, 24 (40%) respondents' spouses attained primary level education, 24 (40%) respondents were self-employed, 36 (60%) were self-employed, 30 (50%) were Catholic, 40 (66.7%) resided in rural areas and 35 (58.3%) reported having a family monthly income of 300,000 – 400,000shs.

Results showed that the proportion of pregnant mothers who timely initiated ANC visits was 40 (66.7%) attended the first ANC visit between 4 –

6 months of pregnancy, 40 (66.7%) had attended ANC once during the current transition, 24 (40%) reported lack of awareness/knowledge as a reason for failing to timely initiate ANC visits, followed by 16 (26.7%) who reported lack of support, 12 (20%) reported that they did not feel the need to attend early.

Respondents also faced various maternal factors as 40 (66.7%) respondents reported that they did not attend ANC in the last pregnancy, 50 (83.3%) did not receive advice before starting ANC visits, 60 (100%) did not have other means of testing current pregnancy, 40 (66.7%) reported not having adequate knowledge about ANC services, 40 (66.7%) reported that they sometimes had to get their husband‘s approval to start ANC visits, 42 (70%) rated the previous experiences of service utilization as good.

12. Social demographic factors

Half of the respondents 30 (50%) were in the age range of 26 – 35 years. This showed that respondents were mature enough to understand and appreciate the importance of ANC services to ensure their good utilization. This study finding was in line with a retrospective study by Teshale and Tesema (2020) with a total weighted sample size of 4,741 about the prevalence and factors associated with late first antenatal care visits among pregnant women of reproductive age women in Ethiopia; a multilevel analysis of EDHS 2016 data, after multi-level logistic regression revealed that socio-demographic factors associated with late first antenatal care visit among pregnant women included maternal age.

The majority of respondents 50 (83%) were married which implied that since they were married, they would be able to receive support and encouragement from their partners to ensure the use of ANC services. However, this was not entirely the case in the study. This study finding was in line with a retrospective study by Teshale and Tesema (2020) with a total weighted sample size of 4,741 about the prevalence and factors associated with late first antenatal care visits among pregnant women of reproductive age women in Ethiopia; a multilevel analysis of EDHS 2016 data, after multi-level logistic regression revealed that socio-demographic factors associated with late first antenatal care visit among pregnant women included marital status.

Results showed that 22 (37%) respondents attained primary level education. This demonstrated that most respondents and their spouses attained a low level of education and this could greatly affect their awareness of the importance and benefits of ensuring early utilization of ANC. This study finding was in agreement with Lerebo, Kidanu, and Mache's (2015) prospective study about the magnitude and associated factors of late booking for antenatal care in public clinics in mother and child health in Botswana among 250 pregnant mothers reported that socio-demographic factors associated with late first antenatal care visit among pregnant women included women‘s education level and occupation.

A total of 24 (40%) respondents' spouses attained primary level education. This demonstrated that most respondents' spouses attained a low level of education and this could greatly affect their awareness of the importance and benefits of ensuring early utilization of ANC. This study finding was in agreement with Tufa, Tsegaye, and Seyoum (2021) institutional-based cross-sectional study about the factors associated with timely antenatal care booking among pregnant women in a remote area of Bule Hora District public health facilities, in Southern Ethiopia among 377 pregnant women revealed that socio-demographic factors associated with late first antenatal care visit among pregnant women were husband's education as well as knowledge on antenatal care service.

A total of 24 (40%) respondents were self-employed, the majority of respondents' spouses, and 36 (60%) were self-employed. This implied that since most respondents and their spouses were self-employed and gainfully involved in income-generating activity, they would be better placed to ensure adequate access to and utilization of ANC services. This study finding was in agreement with Lerebo, Kidanu, and Mache (2015) prospective study about the magnitude and associated factors of late booking

for antenatal care in public clinics in mother and child health in Botswana among 250 pregnant mothers reported that socio-demographic factors associated with late first antenatal care visit among pregnant women included women's education level and occupation.

Half of the respondents 30 (50%) were Catholic, followed by 20 (33.3%) who were protestants, majority of respondents 40 (66.7%) resided in rural areas while the least 20 (33.3%) resided in urban areas. This study finding was in agreement with another cross-sectional study by Mable, Chewe, and Muleya (2016) about the factors associated with late antenatal care booking among pregnant women in Ndola District, Zambia among 520 pregnant mothers revealed that socio-demographic factors associated with late first antenatal care visit among pregnant women included religion and residence of the woman which sometimes limited access to health facilities.

The majority of respondents 35 (58.3%) reported having a family monthly income of 300,000 – 400,000shs while the least 3 (5%) reported less than 100,000shs. This study finding was in line with Sinyange, Lungowe, Choolwe, and Musonda (2016) retrospective study about the factors associated with late antenatal care booking: population-based observations from the 2007 Zambia demographic and health survey among a weighted sample size of 6200 pregnant women reported that socio-demographic factors associated with late first antenatal care visit among pregnant women included family monthly income.

13. The proportion of pregnant mothers who timely initiated ANC visits

Most 40 (66.7%) of the respondents attended the first ANC visit between 4 – 6 months of pregnancy, followed by 12 (20%) who started attending ANC between 1 – 3 months of pregnancy while the least 8 (13.3%) started at 7 – 9 months of pregnancy. This study finding was in line with another study by Teshale and Tesema (2020) retrospective study about the prevalence and associated factors of delayed first antenatal care booking among 4200 reproductive age women in Ethiopia; a multilevel analysis of EDHS 2016 data using systematic sampling methods, after multi-level logistic regression revealed that the proportion of delayed first ANC booking was 67.31%.

Most 40 (66.7%) of the respondents had attended ANC once during the current transition, followed by 12 (20%) had attended twice. This study finding was in agreement with Tufa, Tsegaye, and Seyoum (2021) cross-sectional study about factors associated with timely antenatal care booking among 420 pregnant women in a remote area of Bule Hora District, Southern Ethiopia that the proportion of early antenatal care booking among pregnant women attending antenatal care in the study area was 57.8%.

Most 24 (40%) respondents reported lack of awareness/knowledge as a reason for failing to timely initiate ANC visits, followed by 16 (26.7%) who reported lack of support, 12 (20%) reported that they did not feel the need to attend early while the least 8 (13.3%) reported that they were not feeling ill. This showed that there were various issues affecting timely ANC attendance.

14. Maternal factors

Most 40 (66.7%) respondents reported that they did not attend ANC in the last pregnancy while the least 20 (33.3%) reported that they attended ANC.

Most respondents 40 (67%) reported that their current pregnancy is planned, and 40 (66.7%) of the respondents reported that their husbands/partners were involved in planning the pregnancy. This study finding was in agreement with Ntambue, Malonga, Dramaix-Wilmet, and Donnen (2016) cross-sectional study about the determinants of maternal health services utilization in urban settings of the Democratic Republic of Congo—a case study of Lubumbashi City among 600 pregnant mothers revealed that maternal factors associated with late first antenatal care visit among pregnant women included husband's involvement in planning pregnancy as well as planned current pregnancy.

The majority of 40 (66.7%) of the respondents reported that their husbands/partners approved

of the pregnancy. This study finding was in agreement with a cross-sectional study by Atuhaire and Kaberuka (2016) about the factors contributing to maternal mortality in Uganda among 280 pregnant mothers revealed that maternal factors associated with late first antenatal care visits among pregnant women included spouse‘s approval of pregnancy.

Most 50 (83.3%) of the respondents did not receive advice before starting ANC visits which were supported by Bande, Shehu, and Garba (2018) cross-sectional study about the effects of socio-demographic and institutional factors on the utilization of antenatal care services among pregnant women in Damaturu, Yobe State, Nigeria revealed that maternal factors associated with late first antenatal care visit among pregnant women included getting advise before starting ANC visits, having means of testing current pregnancy as well as having knowledge on ANC.

All 60 (100%) of the respondents reported not having other means of testing current pregnancy, and 40 (66.7%) of the respondents reported not having adequate knowledge about ANC services which was supported by Bande, Shehu, and Garba (2018) cross sectional study about the effects of socio-demographic and institutional factors on utilization of antenatal care services among pregnant women in Damaturu, Yobe State, Nigeria revealed that maternal factors associated with late first antenatal care visit among pregnant women included getting advise before starting ANC visits, having means of testing current pregnancy as well as having knowledge on ANC.

Most 40 (66.7%) of the respondents reported that they sometimes had to get their husband‘s approval to start ANC visits which were in line with Ebonwu, Mumbauer, and Uys (2018) whose study about the determinants of late antenatal care presentation in rural and peri-urban communities in South Africa: a cross-sectional study among 400 pregnant mothers revealed that maternal factors associated with late first antenatal care visit among pregnant women included husband‘s approval to start ANC visits.

Most 26 (43.3%) respondents reported having 2 – 3 children, 42 (70%) of respondents reported that the baby survived while the least 18 (30%) reported that the baby passed away which was in agreement with Afulani (2015) cross-sectional study about rural/urban and socioeconomic differentials in quality of antenatal care in Ghana among 400 pregnant mothers revealed that maternal factors associated with late first antenatal care visit among pregnant women included parity as well as the outcome of last pregnancy.

Most respondents 42 (70%) rated their previous experiences of service utilization as good. This study finding was in line with another cross-sectional study by Rutaremwa, Wandera, and Jhamba (2015) about the determinants of maternal health services utilization in Uganda among 500 pregnant mothers revealed that maternal factors associated with late first antenatal care visits among

15. Conclusion

The study found out that respondents faced various social demographic factors as 30 (50%) were in the age range of 26 – 35 years, 50 (83%) were married, 22 (37%) attained primary level education, 24 (40%) respondents' spouses attained primary level education, 24 (40%) respondents were self-employed, 36 (60%) were self-employed, 30 (50%) were Catholic, 40 (66.7%) resided in rural areas and 35 (58.3%) reported having a family monthly income of 300,000 – 400,000shs.

Results showed that the proportion of pregnant mothers who timely initiated ANC visits was 40 (66.7%) attended the first ANC visit between 4 – 6 months of pregnancy, 40 (66.7%) had attended ANC once during the current transition, 24 (40%) reported lack of awareness/knowledge as a reason for failing to timely initiate ANC visits, followed by 16 (26.7%) who reported lack of support, 12 (20%) reported that they did not feel the need to attend early.

Respondents also faced various maternal factors as 40 (66.7%) respondents reported that they did not attend ANC in the last pregnancy, 50 (83.3%) did not receive advice before starting ANC visits, 60 (100%) did not have other means of testing current pregnancy, 40 (66.7%) reported

not having adequate knowledge about ANC services, 40 (66.7%) reported that they sometimes had to get their husband's approval to start ANC visits, 42 (70%) rated the previous experiences of service utilization as good.

Recommendations

The Ministry of Health

The Ministry of Health should endeavor to create nationwide guidelines for pregnant women about the importance of early booking for the first ANC.

Mukono General Hospital

The administration of Mukono General Hospital should work together with development partners to improve the infrastructure of the health facility to enable it to handle a large number of mothers.

The administration needs to ensure the effective provision of all required resources, equipment, and drugs to improve efficiency during the provision of ANC services.

The administration needs to improve monitoring and supervision of health staff during the provision of ANC services to ensure good customer care skills when handling mothers.

Health workers at Mukono General Hospital should endeavor to have good communication and customer care skills which will improve efficiency and reduce delays during the provision of ANC services to pregnant mothers.

Health workers, especially those at Mukono General Hospital can play a vital role in improving timely access and utilization of ANC services. This can be done through continuous and regular health education of mothers about the importance of early attending ANC services, having good customer care skills, and providing efficient services which reduce waiting time to receive services among others.

Acknowledgment

Abbreviations

ANC : Antenatal Care
APH : Ante Partum Hemorrhage
EMTCT : Elimination of Mother to Child Transmission
FANC : Focused Antenatal Care
HMIS : Health Management Information System
HTC Health Tutors College
IPTp : Intermittent Preventive Treatment for malaria
PPH : Post-Partum Hemorrhage
STIs : Sexually Transmitted Infections
TBAs : Traditional Birth Attendants
UNFPA : United Nations Population Fund
WHO : World Health Organization

Definition of Terms

Timely attendance of ANC Attendance of the first antenatal visit which should happen during the first trimester of pregnancy

First trimester The first three months of pregnancy.

Antenatal care is a complex set of activities aimed at reducing maternal and fetal morbidity and mortality which is achieved by decreasing the likelihood that a pregnant woman will experience serious complications during pregnancy.

Safe motherhood is defined as a means of ensuring that all women receive the care they need to be safe and healthy through pregnancy and childbirth.

Factors These are pre disposing issues, conditions which make it very hard for an individual to utilize something.

Conclusion

In conclusion, respondents faced various socio demographic and maternal factors which have led to low proportion of mothers attending the 1^{st} ANC visit in the first semester as recommended.

Acknowledgement:

Firstly, I am deeply grateful to my supervisor Mr.Okoth Ogenda Constantine for the invaluable advice, continuous support and patience during my study, his immense knowledge and plentiful experience has encouraged me in all the time of my academic research career and daily life.

I would like to thank Mr. Kakooza Sulaiman. M and Dr. Serunjogi David for their technical support on my study.

I would also like to express my gratitude to the participants colleagues and research team- Dr. Alikaya immelda (Uganda cancer institute), Mr.

Mwesigwa Edward (Children's surgical hospital-Entebbe) for the cherished time during the study.

Lastly, Appreciation goes out to my family and friends, with their support, all went on smoothly as planned.

Bias

The only major bias in this study was due to the use of purposive sampling procedure. In order to alleviate the bias or reduce on the effects, the researcher endeavored to streamline the selection respondents as they arrived to avoid favoritism during the selection process and to ensure all potential respondents had an equal chance to be selected to participate in the study.

Funding:

This study was funded by a sponsorship from Kirunda Investment Club.

References:

1) Adhikari R. (2016). Effect of Women's autonomy on maternal health service utilization in Nepal:https://doi.org/10.1186/s12905-016-0305-7PMid:27177683 PMCid:PMC4867085 a. a cross sectional study. BMC Womens Health. 16(1):1.

2) Afulani PA. (2015). Rural/Urban and socioeconomic differentials in quality of antenatal care in Ghana. PloS one. 10(2):e0117996.https://doi.org/10.1371/journal.pone.0117996PMid:25695737 PMCid:PMC4335004

3) Atuhaire R, Kaberuka W. (2016). Factors contributing to maternal mortality in Uganda. Afr J Econ a. Rev. 2016;4:43-57.https://doi.org/10.1002/rwm3.20350

4) Bande IM, C M Shehu U, Garba SM. (2018). Effects of Socio Demographic and Institutional a. factors on Utilization of Antenatal Care Services among Pregnant Women in Damaturu, Yobe State, Nigeria JTDH. 29(2):1-9.https://doi.org/10.9734/IJTDH/2018/39726

5) Bariagaber H, Towongo MF, Ayiga N. (2016). Determinants of the Disparities in Antenatal Care a. and Delivery Care Services in Uganda. Studies on Ethno-Medicine. 10(4):411-24.

6) Ebonwu J, Mumbauer A, Uys M. (2018). Determinants of late antenatal care presentation in rural a. and peri-urban communities in South Africa: a cross-sectional study. PloS One. 2018;13:e0191903.https://doi.org/10.1371/journal.pone.0191903PMid:29518082 PMCid:PMC5843210

7) Gitonga E. (2017). Determinants of Focused Antenatal Care Uptake among Women in Tharak ahttps://doi.org/10.1155/2017/3685401 a. Nithi County, Kenya. Advances in Public Health. 2017.

8) Lerebo W, Kidanu Aand, Mache T. Magnitude and Associated Factors of Late Booking for a. Antenatal Care in Public Clinics in Mother and Child Health. 2015; 12(1):1-8.

9) Mable B, Chewe M, Muleya MC. Factors associated with late antenatal care booking among a. pregnant women in Ndola District, Zambia. 2016; 10(4):169-78.https://doi.org/10.12968/ajmw.2016.10.4.169

10) Mezmur M, Navaneetham K, Letamo G, Bariagaber H. (2017). Individual, household and a. contextual factors associated with skilled delivery care in Ethiopia: Evidence from Ethiopian demographic and health surveys. PLoS One. 12(9):e0184688.https://doi.org/10.1371/journal.pone.0184688PMid:28910341 PMCid:PMC5598994

11) Ntambue, A., Malonga, F., Dramaix-Wilmet, M., Donnen, P. (2016). Determinants of maternal a. health services utilization in urban settings of the Democratic Republic of Congo-a case study of Lubumbashi City. BMC Pregnancy Childbirth. 12:66.

12) Rurangirwa AA, Mogren I, Nyirazinyoye L, Ntaganira J, Krantz G. (2017). Determinants of poor a. utilization of antenatal care services among recently delivered women in Rwanda; a population based study. BMC Pregnancy Childbirth. 17(1):142.

13) Sinyange Nyambe, Sitali Lungowe, Jacobs Choolwe, Patrick Musonda CM. Factors associated a. with late antenatal care booking: population based observations from the 2007 Zambia demographic and health survey. 2016; 8688:1-11.

14) Teshale AB, Tesema GA (2020) Prevalence and associated factors of delayed first antenatal care a. booking among reproductive age women in Ethiopia; a multilevel analysis of EDHS 2016 data. PLoS ONE 15(7): e0235538.https://doi.org/10.1371/journal.pone.0235538PMid:32628700 PMCid:PMC7337309

15) Tufa, G., Tsegaye, R., Seyoum, D. (2021). Factors Associated with Timely Antenatal Care a. Booking Among Pregnant Women in Remote Area of Bule Hora District, Southern Ethiopia. International Journal of Women's Health.

16) Zamawe CO, Banda M, Dube AN. (2016). The impact of a community driven mass media a. campaign on the utilization of maternal health care services in rural Malawi. BMC Pregnancy Childbirth. 16:21.

Publisher details:

Publisher: Student's Journal of Health Research (SJHR)
(ISSN 2709-9997) Online
Category: Non-Governmental & Non-profit Organization
Email: studentsjournal2020@gmail.com
WhatsApp: +256775434261
Location: Wisdom Centre, P.O.BOX. 148, Uganda, East Africa.