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FACTORS INFLUENCING FIRST ANTENATAL CARE AMONG PREGNANT MOTHERS DURING THE FIRST TRIMESTER AT KAJJANSI HEALTH CENTRE IV, WAKISO DISTRICT. A CROSS-SECTIONAL STUDY.

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Abstract

Background

Antenatal care during pregnancy is a measure to reduce the maternal mortality rate. The study aims to determine the factors influencing first antenatal care among pregnant mothers during the first trimester at Kajjansi Health Centre IV, Wakiso district.

Methodology

A cross-sectional quantitative study design used a simple random sampling technique. Data from the questionnaires was entered into the computer using the Microsoft Excel program. Analysis was done, and data was presented in the form of tables, figures, and statistical texts
depicting respondents' responses in frequencies and percentages.

Results

Most 5(45%) of the respondents mentioned delay in detecting abnormalities, 12(40%) thought one should start antenatal care, 11(38%) mentioned that distance to the facility hindered them
Majority 21(70%) of the respondents lacked ultrasound machine at the facility, Majority 18(60%) of the respondents spent long time waiting for service, 63% of the respondents were unaware of delayed ANC attendance. 53.3% of respondents reported that their religion restricted access to antenatal services. The study revealed that most respondents (40%) were between 18 and 20 years.

Conclusion

Level of knowledge and awareness about the risks of delayed ANC attendance, religious beliefs, geographic challenges, Inadequate healthcare infrastructure were the significant factors that influenced the timing of first ANC visit.

Recommendations

The government should improve access to healthcare services by expanding healthcare infrastructure in rural and underserved areas.

Keywords: *First Antenatal Care, Pregnant Mothers, First Trimester, Kajjansi Health Centre Iv, Wakiso District.*
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Background

Antenatal care during pregnancy is a measure to reduce the maternal mortality rate (Laksono et al., 2020). Antenatal care is care provided to pregnant women by healthcare practitioners to identify maternal risks, prevent and manage complications, encourage positive health behaviors, and build a therapeutic patient-provider relationship (Ngxongo, 2018). Early initiation of antenatal care visits is an essential component of services to improve maternal and newborn health (Ali et al., 2018). The World Health Organization recommends that pregnant women in low and middle-income countries get at least four ANC visits and initiate early ANC follow-ups (Jihad et al., 2022). This early initiation of ANC is critical to aid in the early detection of pregnancy-related problems and adverse pregnancy outcomes, including low birth weight, stillbirth, intra-uterine fetal death, and other complications (Manyeh et al., 2020). Globally, many women do not attend antenatal care at all or start seeking antenatal care late during pregnancy, with a global prevalence of 58.6% (48.1% in developing regions and 84.8% in the developed region as well as 81.9% in high–income countries and 24.0% in low-income countries (Moller et al., 2017).

Antenatal care attendance is over 90% in developed countries, mainly in Canada and the United States of America, the United Kingdom, Germany, and some South American countries (Shaw et
al., 2016). In Asia, for example, in New Guinea, the prevalence of women who take up early initiation of antenatal care is 23.0%, and women from the island region have lower odds compared to those in the

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southern region (Seidu, 2021). In Africa, most women make their ANC visits very late, ranging from 53% to 89% (Gulema & Berhane, 2017). In Ethiopia, according to the Ethiopian Demographic and Health survey, only 11% of pregnant women start antenatal care in the first trimester; 38.9 % of them come late, and there is no evidence of the factors contributing to this low turnup (Muchie, 2017). The study aims to determine the factors influencing first antenatal care among pregnant mothers during the first trimester at Kajjansi Health Centre IV, Wakiso district.

Methodology

Study design and rationale

The study was a cross-sectional quantitative study design. This design was chosen because it allowed the researcher to collect and analyze data within a short period; thus, there were no follow-up respondents. A quantitative design enabled the researcher to collect quantitative or numerical data.

Study setting and rationale

The study was conducted at Kajjansi Health Centre IV, Wakiso district. Kajjansi Health Centre IV is a public health facility located off Kajjansi Trading Centre. The Health Centre is located 16.3km from Kampala, the capital city of Uganda. The health center offers preventive, promotive, and antenatal care services, outpatient, curative, maternity, in-patient, laboratory, ultrasound, emergency, blood transfusion, and mortuary services. It receives an average of 200 patients per day and has about 10 patient beds with several departments such as; the outpatient department, MCH, Inpatient Department, ART clinic, dental clinic, SMC department, laboratory, pharmacy, antenatal care clinic, YCC service delivery department, COVID-19 screening and vaccination, TB clinic, hypertensive and diabetic clinic. The facility also carries out several services as per departments as well as reaching out to the communities for different services. The study area was chosen because the required numbers of respondents were easy to get.

Study population

The study population was all pregnant mothers in the antenatal clinic at Kajjansi Health Centre IV,
Wakiso district who were available at the time of the study.

Sample size determination

The sample size was determined using the formula by Burton (1995), which was;
S=GR/O.
Where;
S= Sample size
G= Number of respondents to be interviewed per day.
O= Maximum time the interviewer will spend on each respondent, which will be one hour (1hr).
Therefore;

$$S = \frac{6*5}{1}$$

=30 respondents.
Therefore, the desired sample size was 30 respondents.

Sampling procedure

The study used a simple random sampling technique. This technique was chosen for this study because it ensured that the sample was a representative of the study population as well as reducing bias in the sample. To obtain the participants, the researcher made pieces of similar-sized papers labeled with Yes and No. Respondents were requested to pick papers from an enclosed box on each day of data collection, and those who picked papers labeled with Yes were considered to participate.

Inclusion and exclusion criteria

The study included all pregnant mothers attending the antenatal clinic at Kajjansi Health Centre IV, Wakiso district, who voluntarily consented to participate. Those who declined to consent and the very ill were excluded.

Independent variables

The independent variables were individual and health facility-related factors influencing first antenatal care among pregnant mothers during the first trimester.

Dependent variable:

The dependent variable was the uptake of first antenatal care.

Research instrument

Data was collected using a semi-structured questionnaire. It was written in English and contained open and closed-ended questions related to the study objectives. However, illiterate respondents were considered as the questions were verbally read to them as the researcher filled in their views. The questionnaire consisted of 3 sections, which included sections on demographic data and individual and social-cultural factors.

Data collection procedures

Data collection started after an introductory letter authorizing the researcher was presented to the person in charge of Kajjansi Health Centre IV, Wakiso district. The literate sampled respondents conversant in English were administered the questionnaire to fill in independently, while illiterate respondents were verbally assisted by the researcher. Data was collected from
10 respondents per day, and this procedure took 3 days to cover 30 respondents.

Data management

The filled questionnaires were retrieved, counted, checked for completeness, and edited after every data collection day to ensure that they were all returned,

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coded, and kept in a safe place as a backup. Raw data was locked in the cupboard for security purposes.

Data analysis

Data from the questionnaires was entered into the computer using Microsoft Excel program. Then, analysis was done, and data was presented in the form of tables, figures, and statistical texts depicting respondents' responses in frequencies and percentages.

Ethical considerations

After proposal approval, the researcher obtained an introductory letter from the Mildmay Uganda School of Nursing and Midwifery Research and Ethics Committee, which was presented to the administration of Kajjansi Health Centre IV, Wakiso district, showing the authenticity of the study. Consent was sought from the respondents before enrolling them to participate. Only questions that did not encroach on the rights and privacy of respondents were asked. They were assured of the confidentiality of their information and anonymity of their identity by not putting names on the questionnaire.

Informed consent

To enable participants to make an informed, voluntary, and logical decision to participate in a study, informed consent provides thorough information. The elements of informed consent that will be scrutinized in this study include knowing the study's goals, duration, methods, and who to contact with inquiries. To obtain informed consent, the research was open to the respondents about the purpose of the study as purely for academic use and requested participants' consent. This involved signing a consent form to prove that the participants had agreed to engage in the study without coercion.

Results

Table 1: Social demographic data of the respondents (n=30)

Variable	Category	Frequency (f)	Percentage (%)
Age	18-20 years	12	40
	21-25 years	9	30
	26-30 years	6	20
	31 and above	3	10
Number of children	1-2	6	20
	3-4	16	53.3
	5 and above	5	16.7
	I don't have	3	10
Whether married	Yes	16	53.3
	No	14	46.7
Level of education	Primary	13	43.3
	Secondary	6	20
	Tertiary	7	23.3
	Never been to school	4	13.3
Whether employed	Yes	13	43.3
	No	17	56.7

Table 1, most 12(40%) of the respondents were between 18 and 20 years while the least 3 (10%) were between 31 and above years of age. Regarding the number of children, the majority 16(53.3%) of the respondents had 3-4 children while the minority 3(10%) had no child. Regarding marriage, more than half 16, 53.3%) of the respondents were married, while only 14(46.7%) were not married. Concerning level of education, most 13(43.3%) of the respondents had primary level while the least 4 (13.3%) had never been to school. About employment, the majority, 17(56.7%) of the respondents were not employed while the minority, 13(43.3%) were employed.

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Figure 1: Showing when respondents started antenatal services. (n=30)

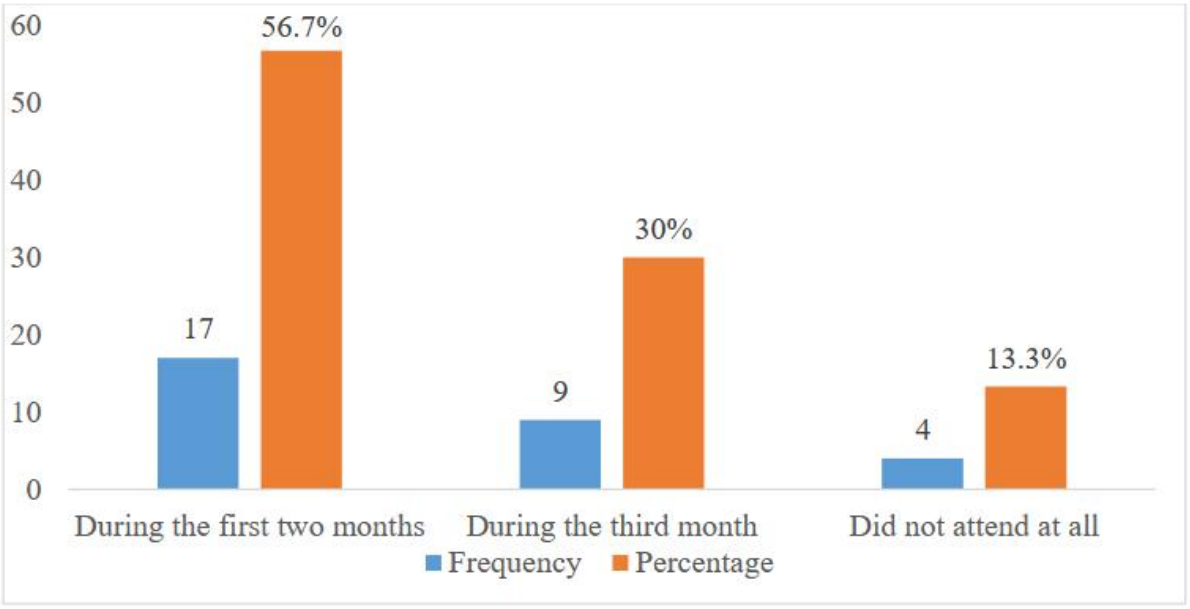

Figure 1, more than half 17 (56.7%) of the respondents started antenatal services during the first two months while only 4(13.3%) did not attend at all.

Figure 2: Whether respondents knew the dangers of not attending antenatal during the first three months of pregnancy. n=30

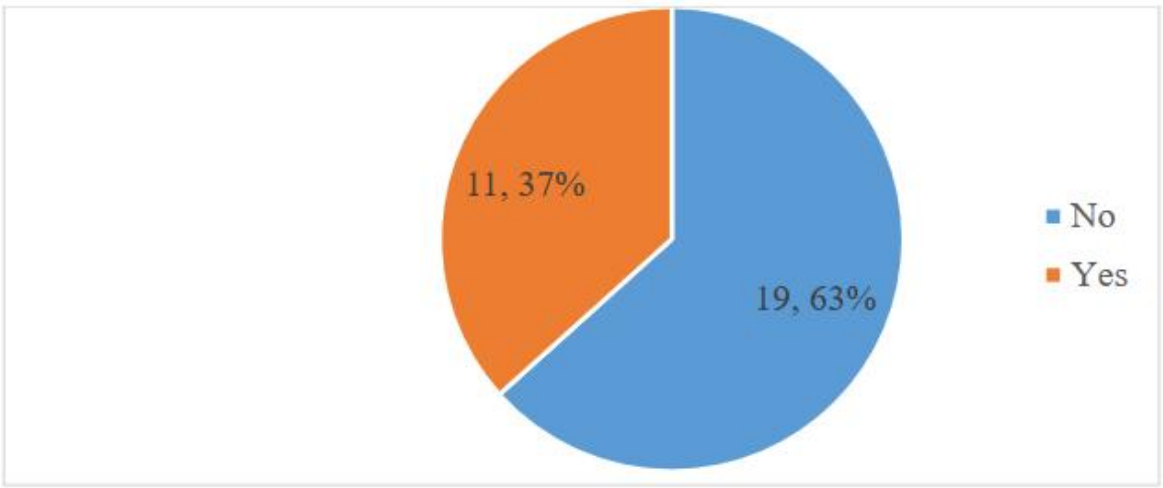

Figure 2, the majority 19(63%) of the respondents did not know the dangers of not attending antenatal during the first three months of pregnancy while the minority 11(37%) knew the dangers of not attending antenatal during the first three months of pregnancy.

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Table 2: Showing possible dangers. n=11

Variable	Frequency (f)	Percentage (%)
Delay in detecting abnormalities.	5	45
Delay to detect medical conditions of mothers, i.e., High blood pressure, diabetes, and sickle cells	3	27
Delay in starting medication	1	9
All the above	2	18
Total	**11**	**100**

Table 2, most 5(45%) of the respondents mentioned a delay in detecting abnormalities while the least 1(9%) mentioned a delay in starting medication.

Figure 3: Showing when respondents thought one should start antenatal care service. n=30

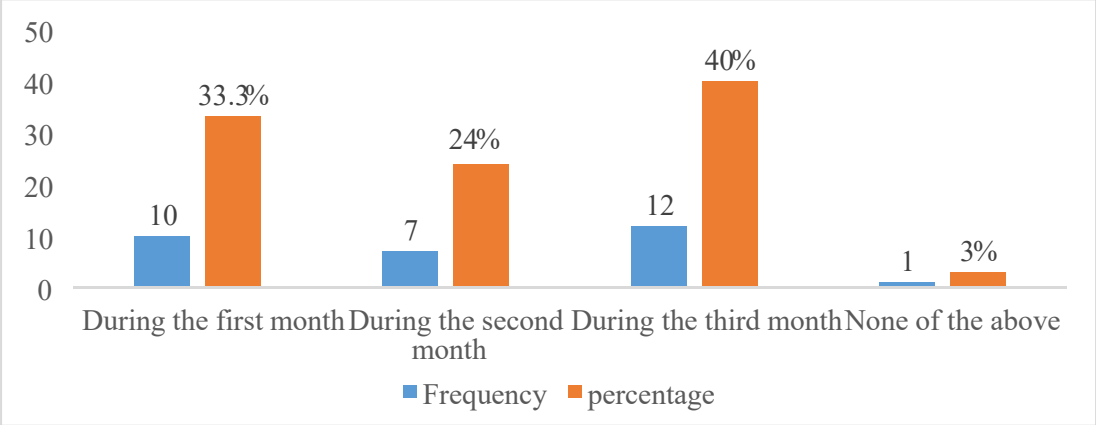

Figure 3, the majority 12(40%) of the respondents thought one should start antenatal care services during the third month, while the minority 1(3%) mentioned none of the above options one should start antenatal care services.

Figure 4: Showing respondents' religion. n=30

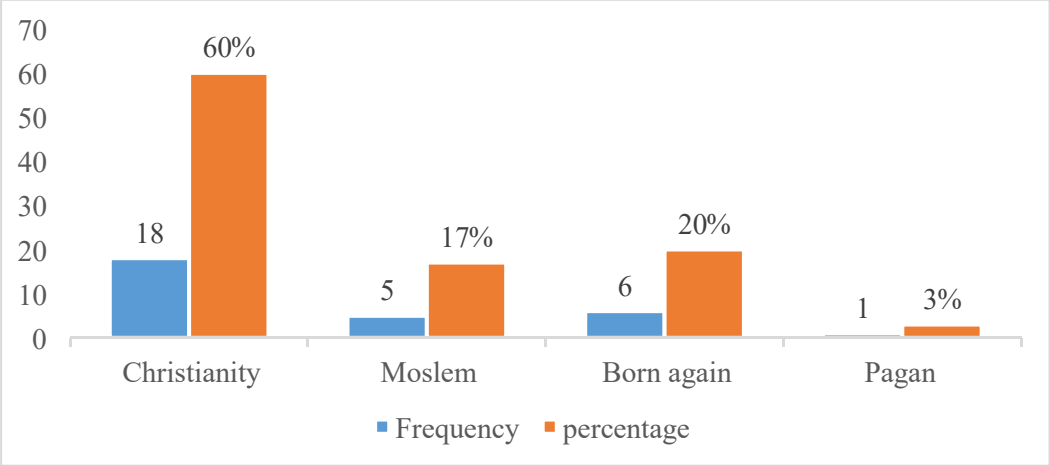

Figure 4, the majority 10(33.3%) of the respondents were Christians while the minority 1(3%) were pagan.

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Figure 5: Showing whether religion allowed respondents to access antenatal services.

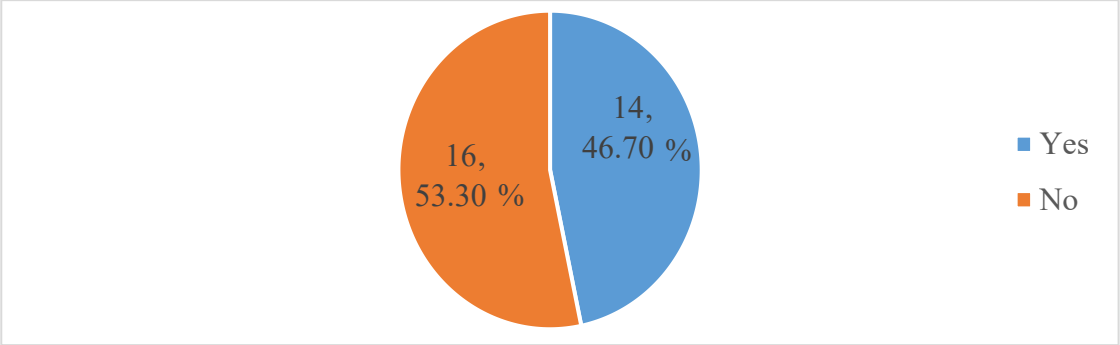

Figure 5, more than a half 16(53.3%) of the respondents were not allowed by their religion to access antenatal services, whereas only 14(46.7%) were allowed by their religion to access antenatal services.

Figure 6: showing what hinders respondents to take up the first ANC. n=30

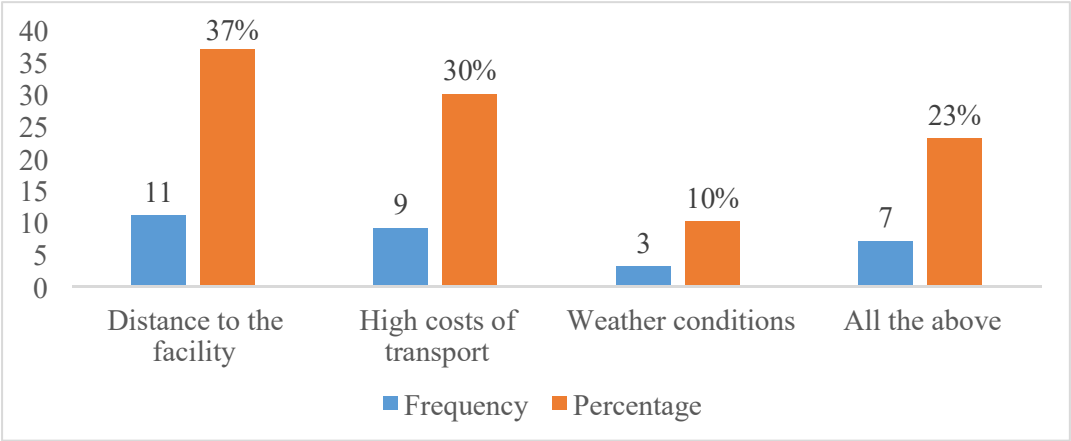

Figure 6 shows that 11(38%) of the respondents mentioned that distance to the facility hindered them from taking up the first ANC, while only 3(10%) mentioned that weather conditions hindered them from taking up the first ANC.

Figure 7: Showing how work affected respondents from taking up the first ANC. n=30

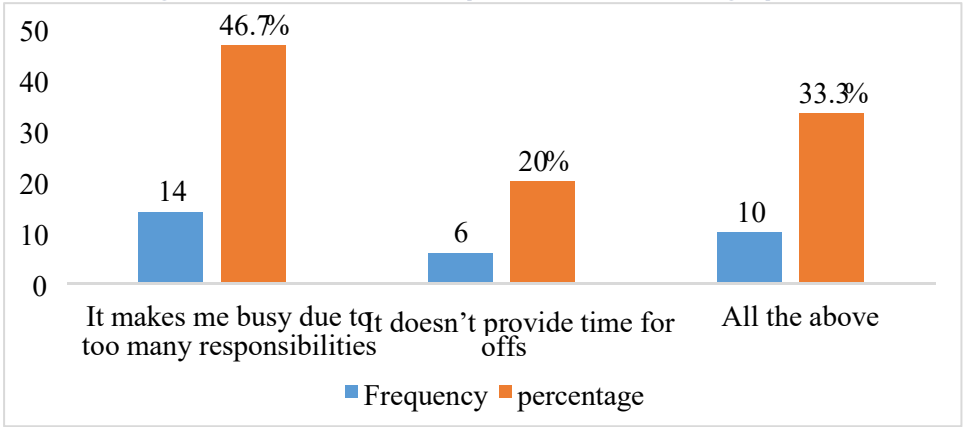

Figure 7, most 14(46.7%) of the respondents mentioned that work made them busy due to too many responsibilities while the least 6(20%) mentioned that work doesn't provide time for offs.

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Table 3: Showing respondents of various income groups. n=30

Variable	Frequency (N)	Percentage (%)
Rich house hold	4	13
Poor house hold	21	70
Middle house hold	5	17

Table 3, the majority 21(70%) of the respondents were categorized in poorhouse hold income group while the minority 4 (13%) were categorized in rich household income group.

Health facility factors that influenced first antenatal care among pregnant mothers during first trimester.

Figure 8: Showing how respondents rated the quality of ANC received. N=30

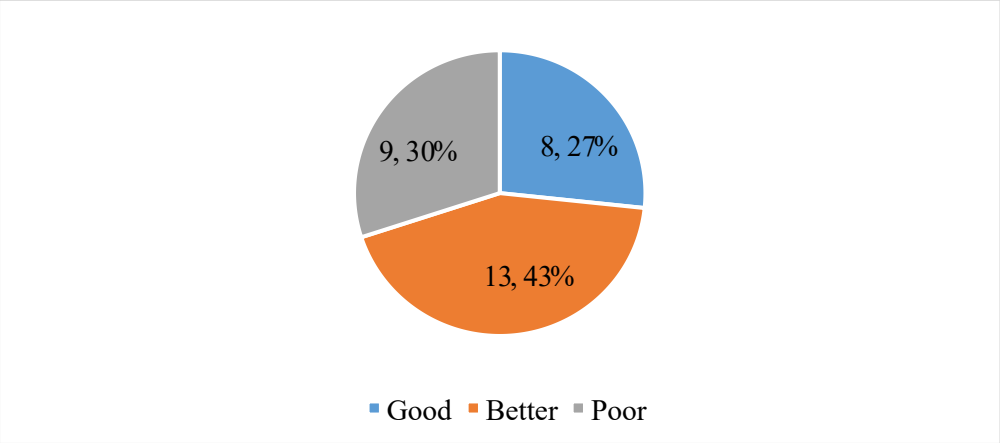

Figure 8, the majority 13 (43%) of the respondents received better quality of ANC while the minority 8(27%) received poor quality of ANC.

Table 4: Showing resources respondents lacked at the facility that hindered them to take up first ANC visit N=30

Variable	Frequency (N)	Percentage (%)
Ultrasound machine	21	70
Health providers	3	10
Drugs	6	20

Table 4, the majority 21(70%) of the respondents lacked an ultrasound machine at the facility that hindered them from taking up the first ANC while the minority 3(10%) mentioned health providers.

Figure 9: Showing whether respondents spent a long time waiting for service at their first ANC booking visits. N=30.

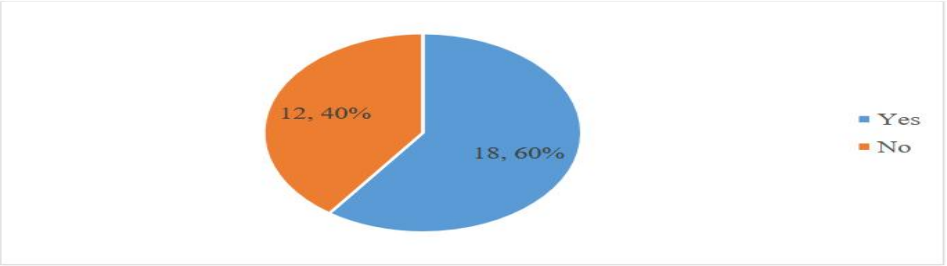

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Figure 9, the majority 18(60%) of the respondents spent a long time waiting for service at their first ANC booking visit while the minority 12(40%) did not spend a long time waiting for services at their first ANC visit.

Figure 10: Showing whether respondents received many services during their first ANC booking visit.

N=30

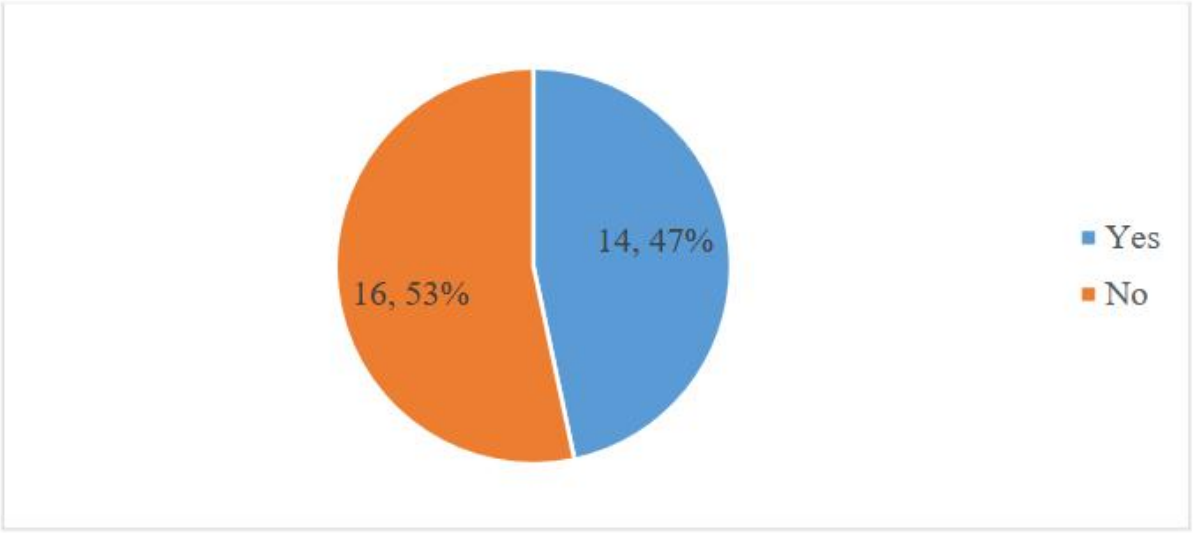

Figure 10, the majority 16 (53%) of the respondents did not receive many services during their first ANC booking visit while the minority 14 (47%) received many services during their first ANC visit.

Discussion

Social demographic characteristics of respondents.

Findings from the study revealed that 12(40%) of the respondents were between 18 and 20 years old. This could be due to the targeting of young adults in the survey sample, potentially reflecting the demographic characteristics of the local population. This implies that the findings may be more relevant to younger adults and have implications for healthcare services catering to this age group. These findings disagree with a study done in New Guinea by Seidu (2021), which found that 24.8% of the women aged 20-24 years were coming for ANC booking
visits.

A study showed that the majority, 16 (53.3%) of the respondents had 3-4 children. This could be attributed to cultural or socioeconomic factors influencing family size in the region. This implies that healthcare services should be prepared to address the needs of families with multiple children. These findings are in line with a study done by Seidu (2021), which found that women with parity 3 had 0.64 lower odds of early ANC attendance compared to those without parity. Regarding married, more than half 16, 53.3%) of the respondents were married. This could indicate a relatively stable family structure among the respondents. This implies that healthcare services can leverage the support of spouses and family members in promoting antenatal care.

This finding agrees with a study done in Congo by Hajizadeh et al. (2016), which showed that, in general, married women were more likely to use ANC as recommended compared to single women.

Education findings showed that 13 (43.3%) of the respondents had primary level. This could reflect limited access to education or socioeconomic disparities within the community. This implies that healthcare services should consider the literacy level and health education needs of their patients. This finding agrees with a study done in Pakistan by Noh et al. (2019), which showed that women with no level or lower level of education had decreased awareness and utilization of ANC during the first trimester.

Study results revealed that 17 (56.7%) of the respondents were not employed. This could be related to high unemployment rates or economic challenges in the area. This also implied that healthcare services may need to address financial barriers to accessing the first ANC service among pregnant mothers during the first trimester. This finding agrees with a study conducted in Nigeria by Tekelab et al. (2019), which showed that an individual's employment status was
reported to be both a facilitator and a barrier to ANC uptake during their first trimester.

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Individual factors that influenced first antenatal care among pregnant mothers during the first trimester

Findings showed that more than half of 17 (56.7%) of the respondents started antenatal services during the first two months. This could be attributed to increased awareness campaigns promoting early antenatal care. This implies that efforts to promote early antenatal care are yielding positive results. This finding agrees with a study results done in New Guinea by Seidu, (2021)which revealed that 24.8% of the women had initiated ANC attendance within the first trimester.

More so, the results of the study found that the majority, 19 (63%), of the respondents did not know the dangers of not attending antenatal during the first three months of pregnancy. This could indicate a knowledge gap among pregnant women regarding the importance of early antenatal care. This implies that targeted health education is necessary to improve awareness. This finding disagrees with a study done in Pakistan by Noh et al. (2019), which revealed that 58% of educated women knew the dangers of not attending antenatal during the first 3 months. From those who knew the dangers of not attending ANC, 5 (45%) of the respondents mentioned a delay in detecting abnormalities. This could reflect a lack of understanding about the risks associated with delayed prenatal care. This implies that healthcare providers should emphasize the importance of early detection and prevention. This finding agrees with a study done in Pakistan by Noh et al. (2019), which showed that 58% of the women knew the dangers of not attending antenatal as a result there was a delay in detecting abnormalities.

Furthermore, results found that the majority of 12 (40%) of the respondents thought one should start antenatal care services during the third month. This could indicate a general lack of awareness about optimal timing for antenatal care initiation. This implies that public health campaigns should focus on educating women about the importance of early antenatal care. This finding disagrees with a study done in Congo by Hajizadeh et al. (2016), which reported that women in polygamous marriages were more likely to utilize ANC services right away from
their first trimester.

Furthermore, study findings showed that the majority 10 (33.3%) were Christians. This could be due to the dominant religious affiliations in the region. This implies that healthcare services should consider cultural sensitivity and potential faith-based barriers to care.

This finding agrees with a study report done in Yemen by Alosaimi et al. (2019), which revealed that 62% of the women were Christians.

Study findings showed that more than half 16, 53.3%) of the respondents were not allowed by their religion to access antenatal services. This could indicate that religious beliefs may hinder access to antenatal services for some women. This implies that healthcare providers should engage with community leaders to address these concerns. This finding disagrees with a study done in Yemen by Alosaimi et al. (2019), which revealed that 62% of the women reported that their religion allows them to access antenatal services.

In addition, studies revealed that 11(38%) of the respondents mentioned that distance to the facility hindered them from taking up the first ANC. This could be attributed to geographical barriers or inadequate healthcare infrastructure. This implies that policymakers should prioritize improving access to healthcare facilities. Results found that 14 (46.7%) of the respondents mentioned that work made them busy due to too many responsibilities. This could reflect the challenges faced by working women in balancing professional and personal responsibilities. This implies that healthcare services should offer flexible scheduling and support for working mothers. This finding disagrees with a study conducted in Malawi by Ng'ambi et al., (2022) showed that 35% of the women from rich households had less responsibility at home since house workers worked on most of their tasks.

According to the study findings, the majority of 21 (70%) of the respondents were categorized in the poorhouse hold income group. This could indicate significant economic disparities within the community. This implies that healthcare services should consider offering financial assistance or subsidized care. This finding disagrees with a study done in Malawi by Ng'ambi et al. (2022), which showed that 35% of the women from rich households had the highest coverage of early initiation of ANC compared to 25% from poor households.

Health facility factors that influenced first antenatal care among pregnant mothers during the first trimester at Kajjansi Health Centre IV, Wakiso district.

Study findings showed that the majority, 13 (43%), of the respondents received a better quality of ANC. This could be due to adequate training of healthcare providers or quality improvement initiatives. This implies that ongoing quality improvement efforts are essential to maintaining high standards. This finding disagrees with a study done in Somalia by Alibhai et al. (2022), which reported that barriers to first antenatal care were women who believed that they received low-quality care. Results revealed that the majority of 21 (70%) of the respondents lacked ultrasound machines at the facility, which hindered them from taking up the first ANC. This could indicate inadequate resource allocation or infrastructure limitations. This implies that policymakers should prioritize investing in essential medical equipment to ensure easy detection of health issues, provide baseline data, and allow healthcare providers to establish individualized plans, providing maternal and fetal outcomes. This finding agrees with a study done in Nigeria by Udenigwe et al. (2022), which showed that pregnant women cited a lack of resources, including ultrasound machines, health providers, and drugs, which influenced the utilization of ANC.

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Additionally, findings found that the majority 18(60%), of the respondents spent a long time waiting for service at their first ANC visit. This could reflect inefficient service delivery or staffing shortages. This implies that healthcare facilities should optimize their service delivery processes. This finding agrees with a study done in Zimbabwe, which showed that long waiting times also led to poor utilization of first antenatal care during the first trimester (Mutowo et al., 2021). From the study conducted, the majority of 16 (53%) of the respondents did not receive many services during their first ANC visit. This could indicate a limited scope of services or inadequate staffing. This implies that healthcare facilities should expand their services and staffing to meet patient needs. This finding agrees with a study done in Malawi by Konlan et al. (2020), which showed that women who received many services at the facility had a bigger influence in utilizing the antenatal visit during their first trimester.

Conclusion

The level of knowledge and awareness about the risks of delayed ANC attendance, religious beliefs, geographic challenges, and Inadequate healthcare infrastructure were the significant factors that influenced the timing of first ANC visit.

Recommendations

The government should improve access to healthcare services by expanding healthcare infrastructure in rural and underserved areas.

The government should invest in training healthcare providers to deliver quality antenatal care, particularly focusing on early ANC attendance and risk awareness.

The government should ensure that healthcare facilities are equipped with essential resources like ultrasound machines and adequate staffing to reduce waiting times.

Acknowledgment

I humbly give thanks to Allah for my life and the gift of perseverance he bestowed upon me during my academic career. I would also like to thank my close friends for their assistance with this report. I want to thank Ms. Namubiru Rebecca, my supervisor, for her assistance and cooperation in helping me produce this report. I give Mildmay Uganda School of Nursing and Midwifery Principal, Dean, teaching staff, and entire administration my sincere thanks for their dedication to imparting knowledge and skills in me as well as for their unflagging support and prayers as I put this study report together.

List Abbreviations

ANC : Antenatal care
EDH : Ethiopian Demographic and Health Survey
Et al: And others
FANC : First Antenatal care
HMIS : Health management and information system
MOH : Ministry of Health.
UK : United Kingdom
UNMEB : Uganda Nurses and Midwives Examinations Board.
USA : United States of America
WHO : World Health Organization.

Source of funding

There was no source of funding

Conflict of interest

The author did not declare any conflict of interest

Author contribution

Nakalanzi Aisha collected the data, analyzed the data, and drafted the manuscript of the study.

Namubiru Rebecca supervised all the stages of the study, from data collection to the drafting of the manuscript.

Author Biography

Nakalanzi Aisha is a student with a Diploma in midwifery at Mildmay Uganda School of Nursing and Midwifery.

Namubiru Rebecca is a tutor at Mildmay Uganda School of Nursing and Midwifery.

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