Factors affecting the Utilization of Antenatal Care Services among Pregnant Women at St Paul's Health Center IV in Kasese District. A Descriptive Cross-sectional Study.

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Abstract

Background:
Utilization of Antenatal care services is a major milestone in improving maternal and child health in developing countries, therefore, enhancing the social-economic development of the community.
The specific objectives of the study were to assess the health facility factors, social-economic factors maternal related factors affecting the utilization of Antenatal care among pregnant women whereas by pregnant women at St Paul's health Center IV Kasese District.

Methodology:
The study design was a descriptive cross-sectional where data was collected using self-administered questionnaires from 100 respondents using simple random sampling and analysis carried out using Microsoft Excel 2010 version.

Results:
Out of 100 respondents, 54(54%) waited for 30-60 minutes, 87(87%) reported that no health worker had ever shouted at them, 71(71%) said the health workers were polite and welcoming, 51(51%) rated ANC services as of good quality, 91(91%), had ever been advised by the health workers to initiate ANC,74(74%) had 1-5 dependents. 57(57%) received support from their partners. 72(72%) afforded the required medical tests, 96 (96%) did not take alcohol, 77(77%) did not have any underlying chronic illness, and 69(69%) did not have a history of any complications in their previous pregnancies, Majority 54(54%) had attained a minimum of secondary level of education.

Conclusion:
Health facility factors that affected ANC utilization were waiting time, laboratory costs, and attitude of the health workers. Social-economic factors influencing ANC were the mother's income, financial support from partners, and several dependants.

Recommendation:
The administration of St Paul's health center IV in partnership with the Ministry of Health and Ministry of Public Services should consider recruiting more health workers and encourage men, families, and societies to support antenatal care without discrimination through awareness campaigns.

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1 Background of the study.

Antenatal care is the routine health control of presumed healthy pregnant women without symptoms to diagnose diseases or complicating obstetric conditions without symptoms and to provide information about lifestyle, pregnancy, and delivery. It includes risk identification, screening, prevention and management of pregnancy-related or concurrent diseases, health education, and promotion. Antenatal care is a means to identify high-risk pregnancies and educate women so that they may experience a healthier delivery and outcome(Claire R. McNellan, 2019).

Antenatal care provides monitoring and regular follow-up of maternal and fetal health during pregnancy. In 2017, approximately 810 women died every day due to preventable causes related to pregnancy and childbirth with 99% of these maternal deaths occurring in low-income and lower-middle-income countries. Sub-Saharan Africa alone accounts for roughly 66% (Zemenu Tadesse Tessema, 2021).

Inadequate utilization of Antenatal care is greatly contributing to persisting high rates of maternal and neonatal mortality in Uganda. Women in rural areas of Uganda are 2 times less likely to attend antenatal care than urban women. Most women in Uganda registered for late Antenatal care attendance, averagely at 5.5 months of pregnancy, and do not complete the required 4 visits out of the recommended 8 visits by WHO(Peter Chris Kawungezi, 2021).

2 Methodology

Study design

A descriptive cross-sectional study was conducted at St Paul's health Center IV where all pregnant mothers attending the antenatal clinic during the study period were recruited. This helped to describe the status of mothers attending antenatal care. Qualitative and Quantitative techniques of data collection and analysis were used.

Study area

This study was conducted at St Paul's Health Center IV located in Kasese District.

Study population

This study included all pregnant women attending antenatal care clinics at St Paul's Health Center IV.

Sample size determination

The sample size was determined using the formula of Kish and Leslie for the descriptive studies.

n = (Z2pq)

(e) 2

Where:

n = The desired sample size

Z = The standard normal deviation usually set at 1.96 which correspond to 95% confidence level

p = The proportion in the target population estimated to have a particular characteristics and in this study p is estimated to be 79

q = 1-p

e = the degree of accuracy desired, usually set at 0.1 level

n = (1.96)2 (0.79) (1-0.79)

(0.08)2

n = (3.8416) (0.79) (0.21) 0064

N= 99.5 which is approximately equal to 100

Therefore, the sample size was 100 respondents.

Sampling Technique

The study was conducted using a purposive sampling technique that allowed random selection of respondents based on their accessibility, this method was easy and convenient to use because it was cheap and saved time.

Sampling Procedure

A simple random sampling technique was used. The study was conducted at St Paul's Health Centre IV. The researcher wrote all the names of the clients attending the Antenatal care clinic on small pieces of paper, folded them, put them in a box, shuffled them well, and randomly picked only 10 papers from the box, the mothers whose names were found on the ten picked papers were chosen to participate in the study. This was done for mothers who arrived at the Antenatal care clinic before midnight each day. The activity continued for 10 days until the required 100 participants were obtained. Each day 10 participants were obtained and informed consent was sought from each of the participants.

Data collection methods

Semi-structured self-administered questionnaires were used to collect the data.

Data collection tool(s)

Interviews were conducted using Semi-structured self-administered questionnaires through which data was obtained. Closed-ended questions that respondents answered were used. Pens, Pencils, and Printed questioners were used to record and store the collected data.

Data collection procedure

Clients who were able to read and write answered printed self-administered questionnaires and the researcher shall be available to guide where needed. For those who were not able to read and write the Researcher will read and translate the information and help them fill in the information required.

Piloting the study

The semi-structured questionnaires were pretested randomly to some mothers who stayed in the Habitant cell of Kasese Municipality and voluntarily answered the questions since they consisted of people of similar characteristics to those who participated in St Paul's Health Centre IV. A total of 10 respondents were interviewed to pretest the tools. The purpose of pre-testing the tool was to ensure the accuracy of the data collected and to minimize the errors as these checked for the validity of the data.

Quality control

The tools especially the questionnaires were pretested among a few pregnant women in the neighboring community and errors were corrected before the final collection of Data. The questionnaires were printed in a convenient font size to allow easy reading and answering. The respondents were given enough time to answer the questionnaires to ensure the required data was collected. Every pregnant woman who came for ANC and took consent participated in the study and each pregnant woman was recruited once. All pregnant women who came to the health facility to seek other services other than Antenatal care were not included in the study.

3 Data Analysis and presentation

Data were entered into Microsoft Excel 2010 for data analysis and results were presented in form of graphs and tables.

Ethical considerations

Approval for the study was got from Medicare Health Professional College (MHPC), from the in charge of St Paul's Health Centre IV, and informed consent from all participants. Confidentiality of information, right to withdraw from the study, and privacy was maintained at all levels. The consent of the respondents was obtained after the purpose and objectives of the study had been identified and well explained to the respondents. The study was purely intended for academic purposes and all the information was given was handled with confidentiality and numbers instead of names were used to identify the respondents.

Study Findings

Social demographic characteristics

Results showed that 13(13%) were below 18 years, 35(35%) between 18 and 25 years, 43(43%) between 26 and 35 years, and only 9/(9%) were above 35 years. About residence, 59(59%) lived in town while 41(41%) lived in rural areas. 23(23%) were single mothers while 77(77%) were married. Concerning the mother's education level was as follows; the majority 54(54%) secondary level of education, 18(18%) primary level, 25(25%) vocational training whereas 3(3%) of the mothers had never attained any formal education. 33(33%) of the mothers were unemployed, 39(39%) were businesswomen and 28(28%) were civil servants. Regarding religion, 32(32%) were catholic, 38(38%) Anglican, 16(16%) Moslem, 11(11%) Seventh Day Adventists while 3 percent belonged to other denominations.

Health facility-related factors influencing the utilization of antenatal care at St Paul's health center IV.

The results showed that most respondents 54(54%) waited for 30-60 minutes, 37(37%) waited for less than 30minutes and only 9(9%) waited for more than 2 hours before being attended to at the antenatal care clinic.

(n=100).

Results showed that 13(13%) of the pregnant mothers reported that a health worker has ever shouted at them while at the antenatal care clinic whereas the majority 87(87%) of the mothers reported that no health worker had ever shouted at them.

Results showed that the majority 51(51%) rated them as of good quality, 29(29%) fair, 17(17%) very good, while 3(3%) said the services they received were poor.

Results showed that 91(91%) of the respondents had ever been advised by the health workers to initiate ANC early whereas 9(9%) of them had never been advised by the health workers.

Results showed that 67(67%) said the clinic provided privacy to mothers while 33(33%) said the setting did not provide privacy to pregnant mothers.

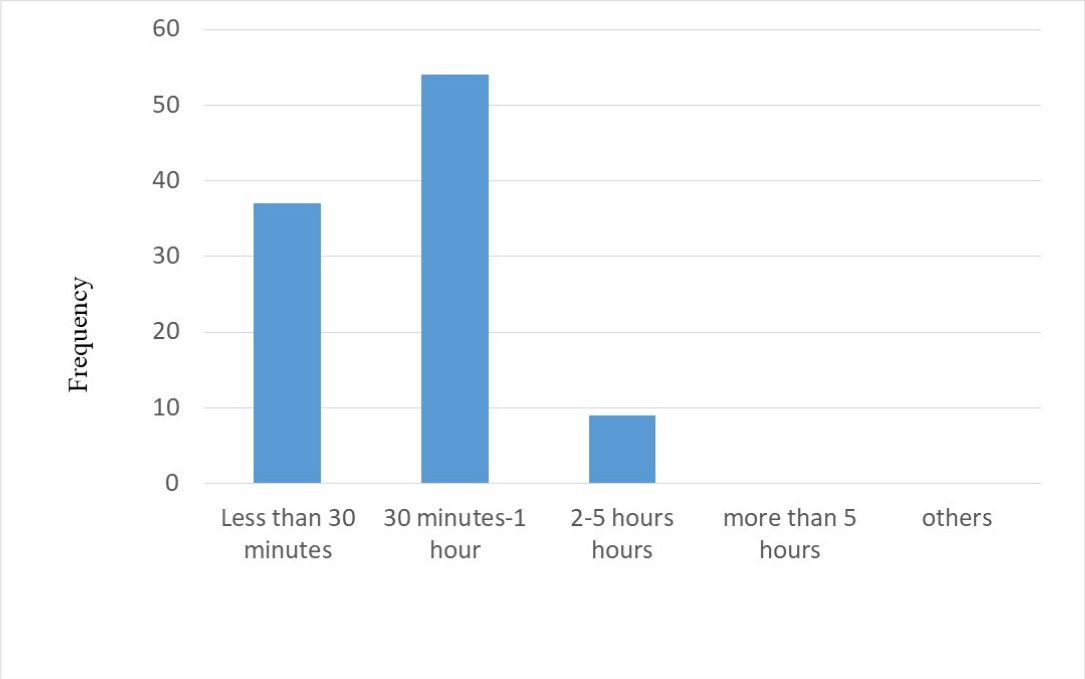

Figure 1. Respondents by how long they waited before receiving antenatal care services (n=100)

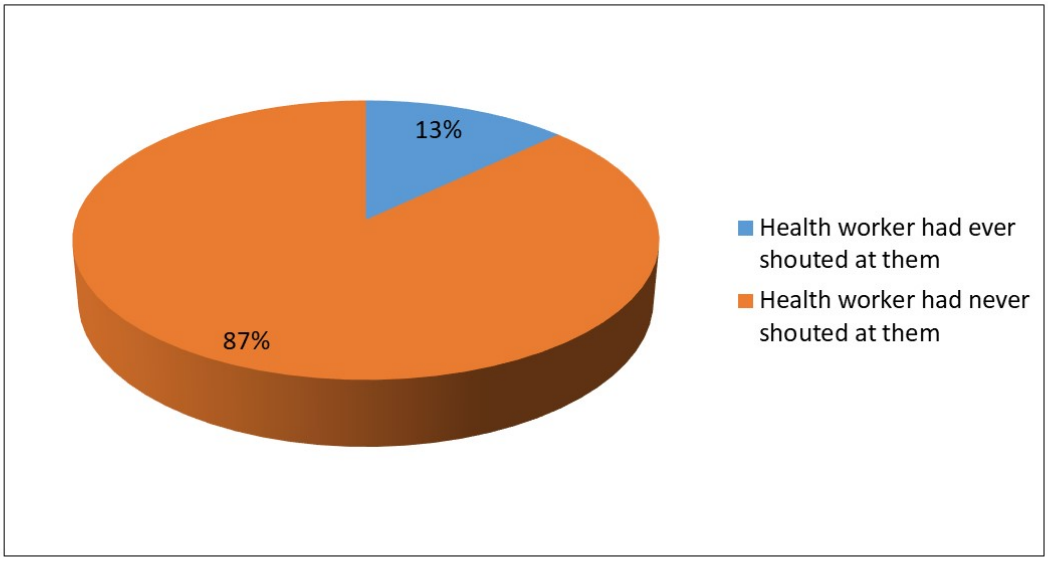

Figure 2. Respondents by the attitude showed to them by health workers

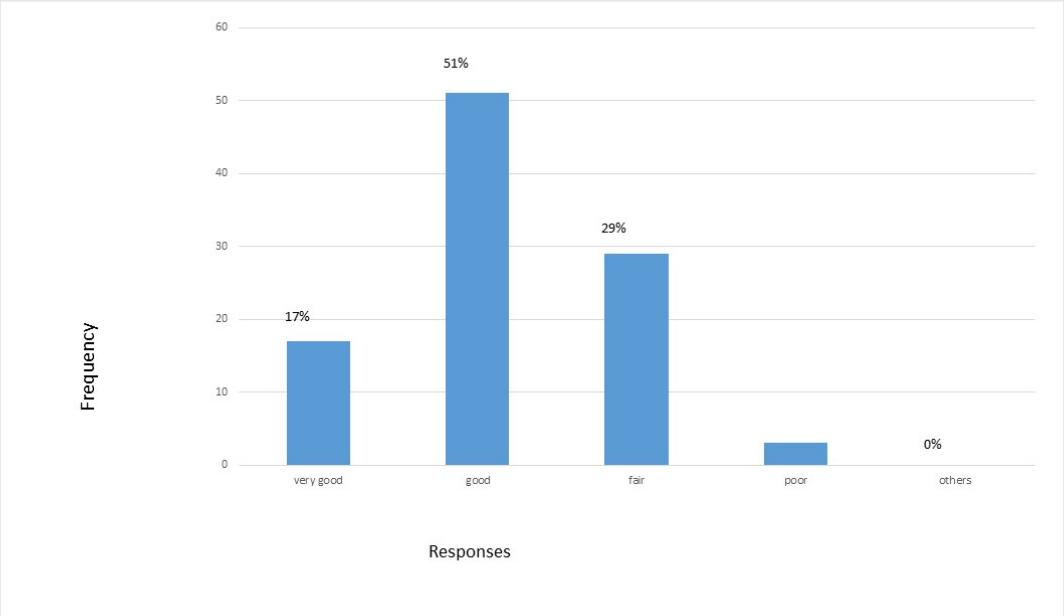

Figure 3. Respondents by their rating of the quality of antenatal care services (n=100).

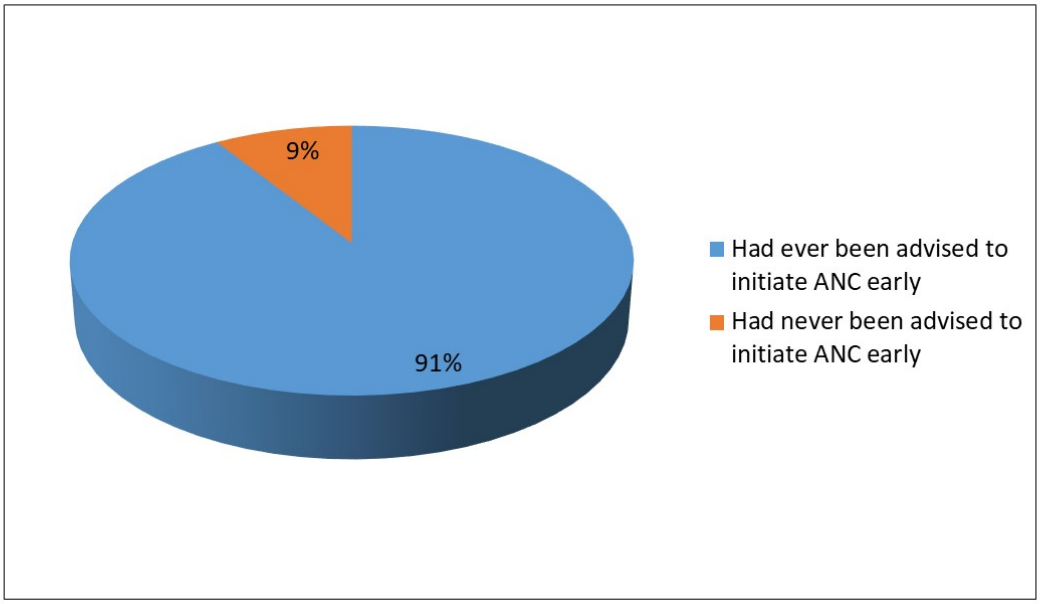

Figure 4. Respondents by whether they had ever been advised to initiate ANC early by health workers (n=100)

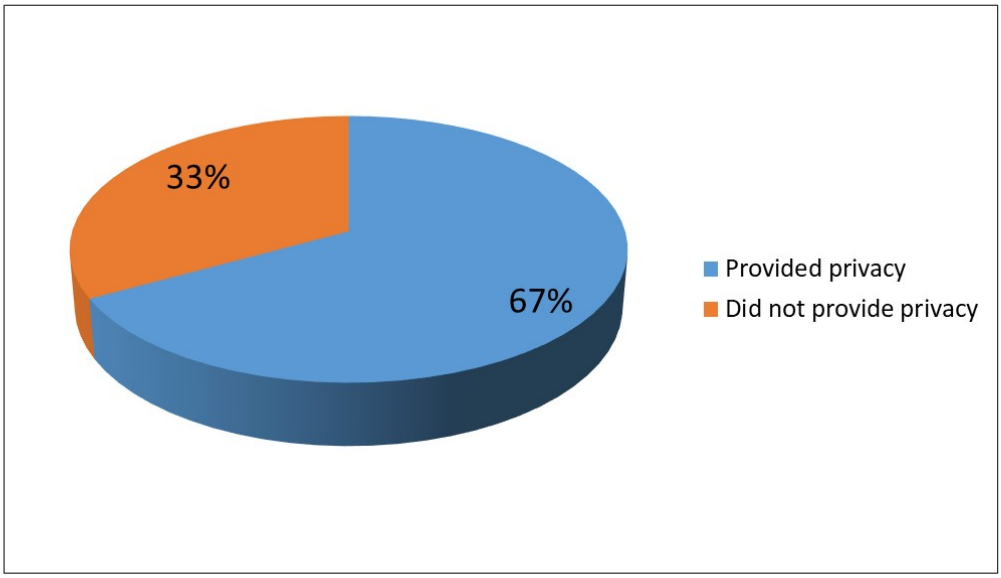

Figure 5. Respondents by whether the Setting of St Paul'shealth center IV Antenatal care clinic provided privacy (n=100).

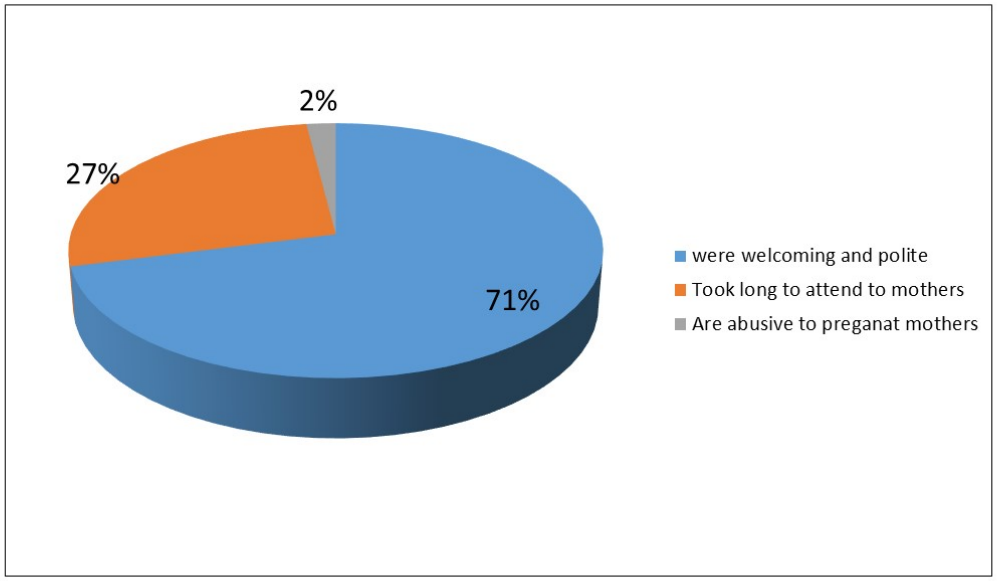

Figure 6. Respondents by attitude showed to them by the health workers (n=100)

Table 1. Respondents by social demographic characteristics (n=100)

Variables	Frequency	Percentage (%)
Age (years)		
12-18	13	13
18-25	35	35
26-35	43	43
Above 36	9	9
Residence		
Town	59	59
Village	41	41
Others	0	0
Religion		
Catholic	32	32
Anglican	38	38
Seventh day Adventists	11	11
Moslems	16	16
Others	3	3
Marital status		
Single living	23	23
Married	77	77
Mother's education level		
No formal education	3	3
Primary	18	18
Secondary	54	54
Others	25	25
Employment status		
Un employed(house wife)	33	33
Business women	39	39
Civil Servants	28	28

Results showed that 71(71%) said the health workers were polite and welcoming, 27 (27%) said they took long to attend to them while only 2(2%) said the health workers were abusive.

Socio-economic factors affecting utilization of antenatal care

Results showed that 74(74%) had 1-5 dependants, 16(16%) had no dependants and 10(10%) had more than 5 dependants.

Results showed that the majority of 57(57%) received support from their partners while 43(43%) did not receive support from their partners.

Results showed that on transport 45(45%) spent 1,000-2,000shs, 20(20%) spent 3,000 to 4,000 shs, 13(13%) spent 5,000-6,000shs while 22(22%) incured no costs of transport while coming to Hospital.

Results showed that the majority 60(60%) spent 6,000-10,000shs, 20(20%) more than 10,000shs, 18(18%) 5,000 shs while 2(2%) said they did not incur any costs on medical tests during Antenatal care.

Results showed that the majority 72(72%) afforded the required medical tests during antenatal care while 28(28%) did not always afford the required medical tests whenever required.

Maternal related factors affecting utilization of antenatal care among pregnant mothers.

Results showed that most 89(89%) had a good and 11(11%) rated their attitude as fair attitude towards attending antenatal care while none (0%) reported having bad attitude towards Antenatal care.

Results showed that 96 (96%) did not take alcohol while a small proportion of 4(4%) took alcohol.

Results showed that the majority 77(77%) did not have any underlying chronic illness while 23(23%) had an underlying chronic illness at the time of attending antenatal care.

Results showed that 69(69%) did not have a history of any complications in their previous pregnan-

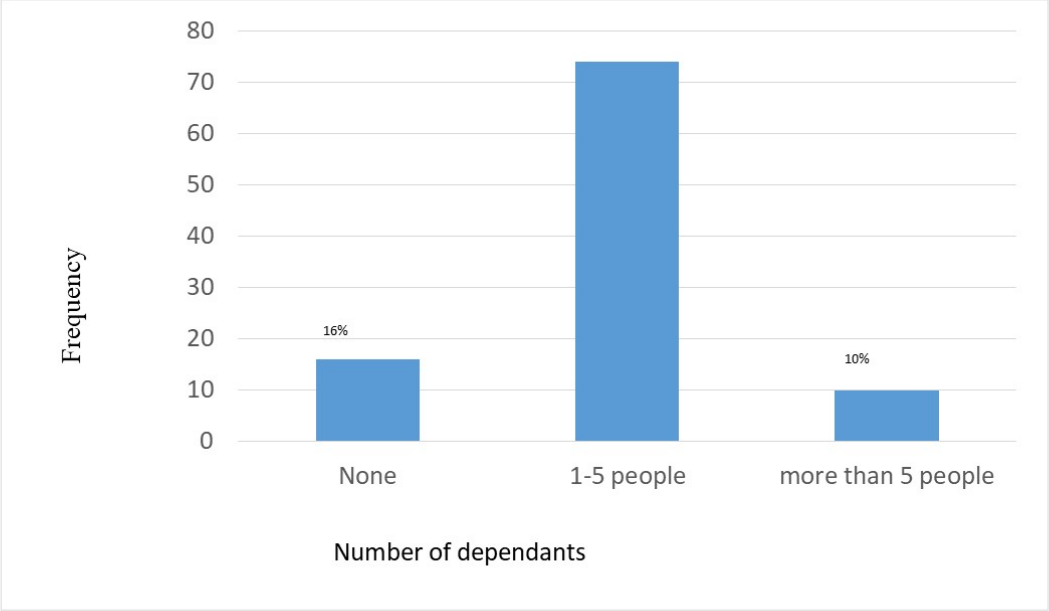

Figure 7. Respondents by number of dependents (n=100)

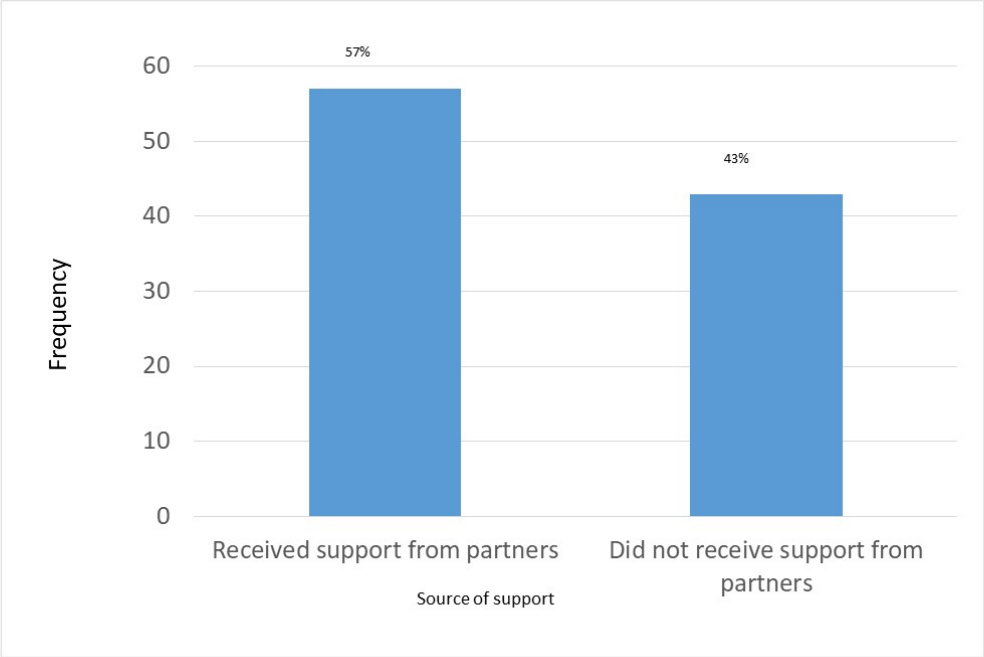

Figure 8. Respondents by whether they received support from their partners (n=100)

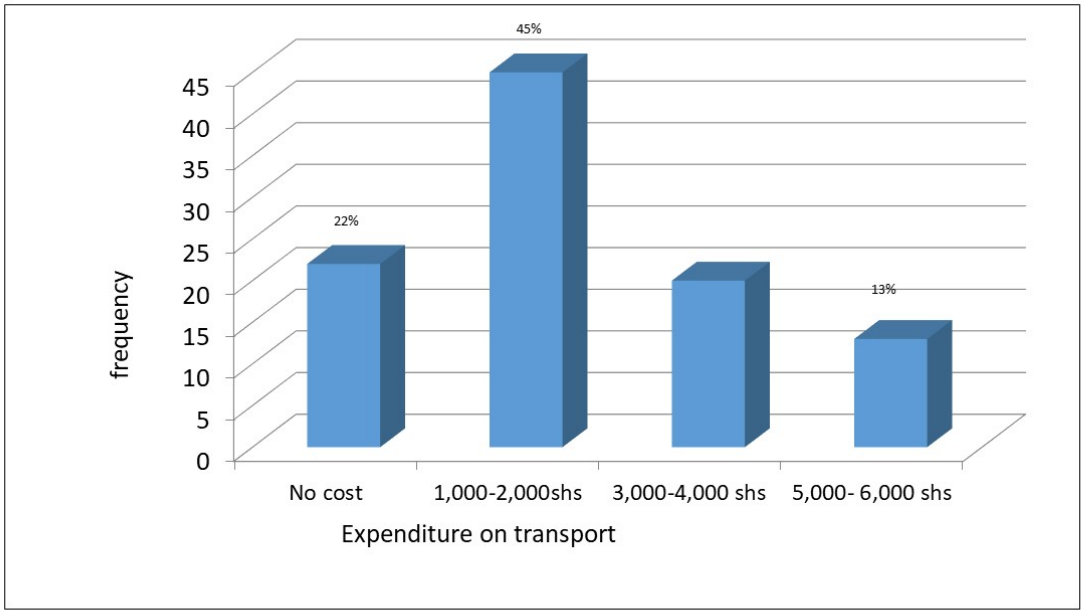

Figure 9. Respondents by Cost spent on transport when accessing antenatal care clinic (n=100)

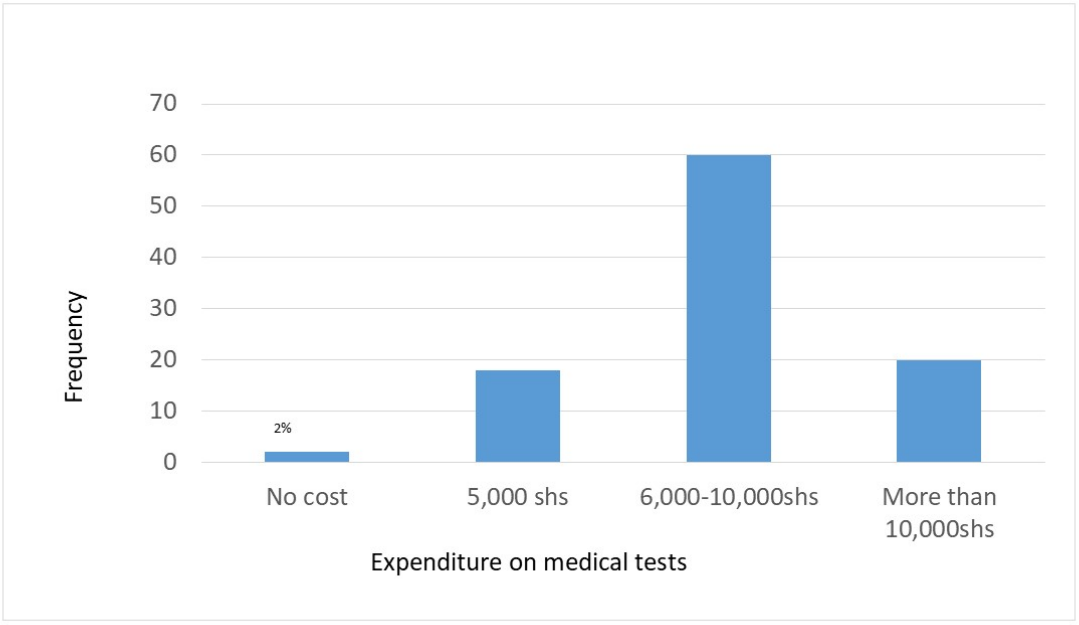

Figure 10. Respondent by how much they spent on medical tests during antenatal care visits (n=100)

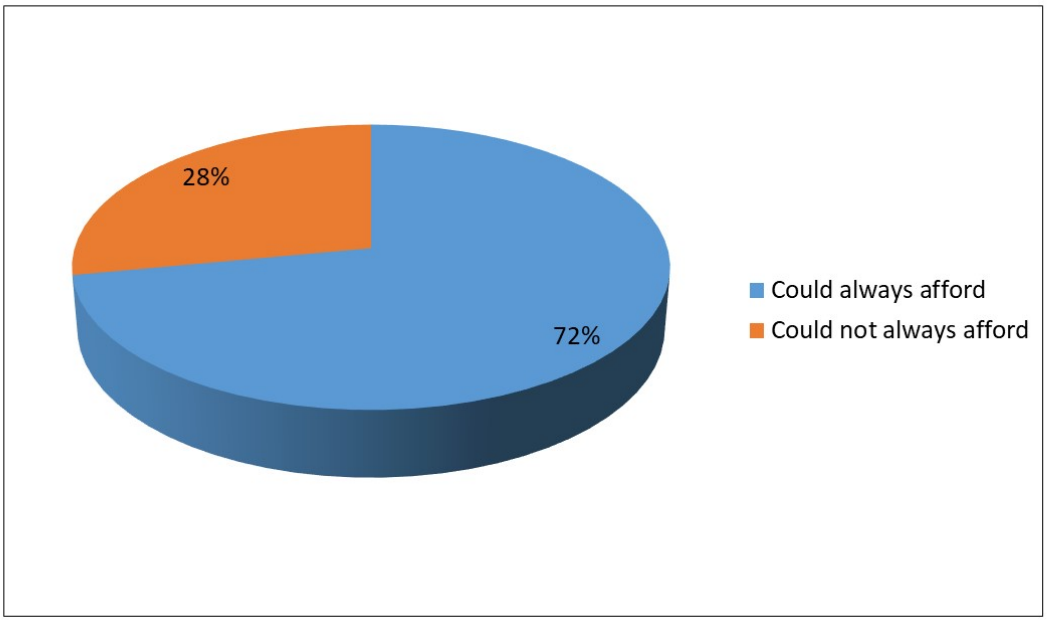

Figure 11. Respondents by whether they afforded the cost of antenatal care medical tests (n=100)

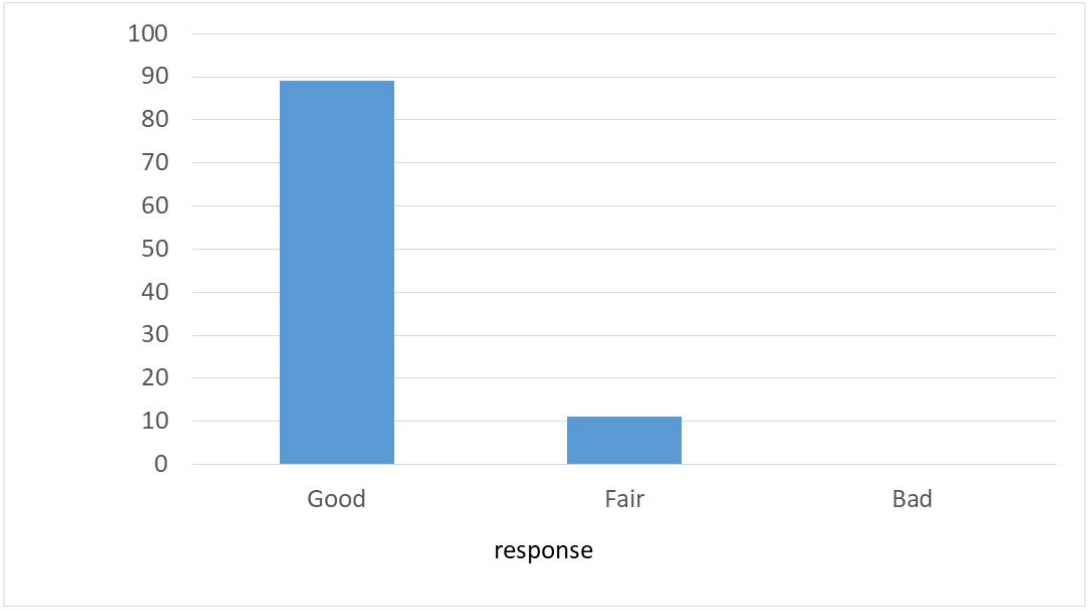

Figure 12. Respondents by their attitude toward Antenatal care (n=100).

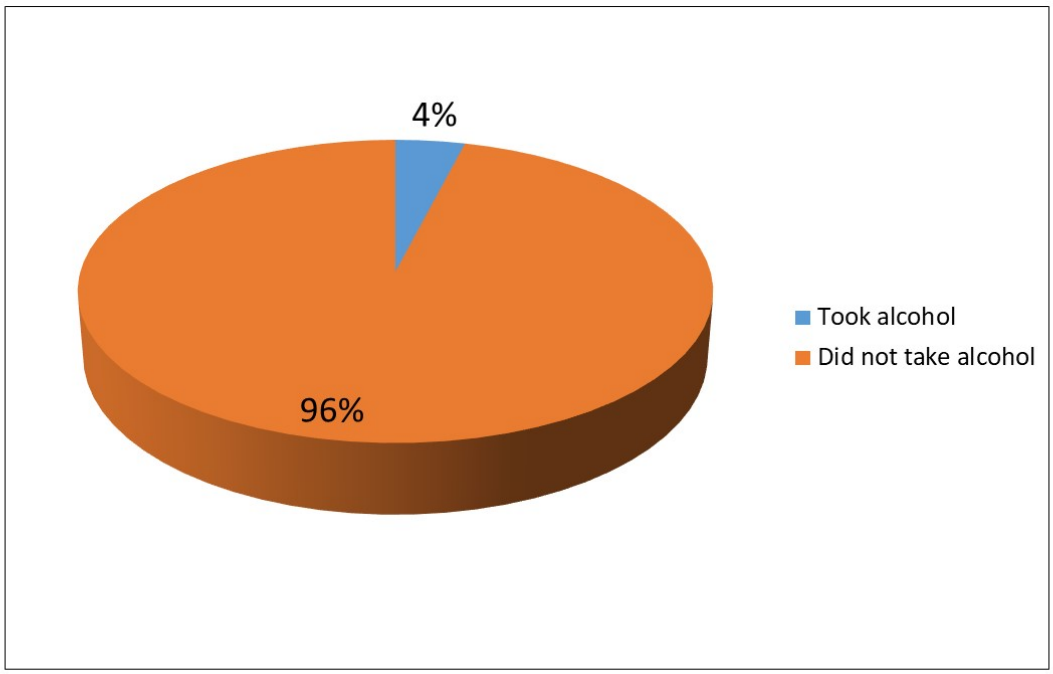

Figure 13. Respondents by whether they took alcohol (n=100)

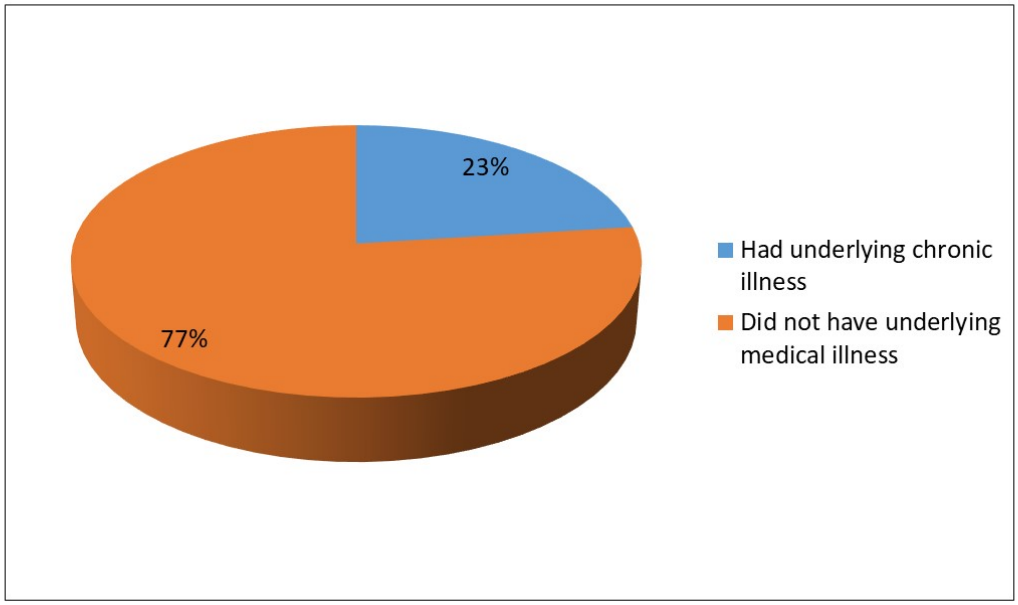

Figure 14. Respondents by whether they had any underlying medical conditions (n=100)

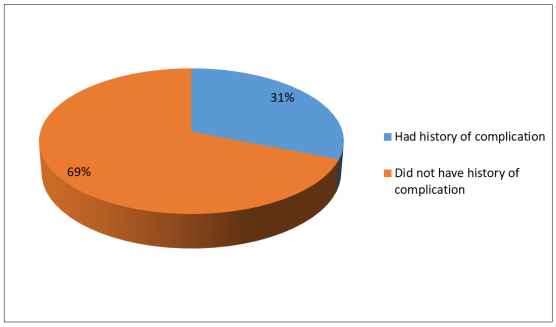

Figure 15. Respondents by whether they had any history of complications during and after delivery (n=100)

cies while 31(31%) had a history of complications during their previous complications.

4 Discussion of Results

5 Discussion of results

Health facility factors affecting the utilization of Antenatal care among pregnant women.

The majority 54(54%) of the respondents waited for 30-60 minutes at the antenatal care clinic before receiving antenatal care services. This was probably due to the large number of clients who visited the clinic each day probably because the facility being a church-founded institution attracted large numbers of clients who trust its services increasing the time required to attend to them. This is in line with a study conducted in Kenya where most (38.7%) said they wait for close to an hour before receiving the antenatal care services. (Dorah Chorongo *et al,* 2016).

The majority 87(87%) of the pregnant mothers reported that no health worker had ever shouted at them while attending antenatal care at St Paul's health center IV probably because they had received enough professional training and worked with motivation provided by the health facilities through allowances especially for the extra hours worked. This is in line with a study conducted in Jinja Referral Hospital where the majority of the respondents 138 (69%) revealed that no health worker had ever shouted at them while accessing antenatal care (Richard, 2018).

The majority 71(71%) said the health workers were polite and welcoming probably because of the continuous medical education sessions that had always been offered to health workers concerning the provision of Antenatal care by the ministry of health. These results a similar to those of a systemic review done in Uganda which revealed that the institutional factors including health workers' influence and attitude account for 72.04% of ANC attendance (Atuhaire *et al,* 2020).

The majority 51(51%) rated ANC services as of good quality probably because they had been handled well and their minimum expectations had been met in comparison to other government facilities in the area. This is in line with a study in Jinja Referral hospital which revealed that (56.5%) gave it a rating of very good concerning how the mothers were handled while attending antenatal care services (Richard, 2018).

The majority 91(91%) of the respondents had ever been advised by the health workers to initiate ANC early. This may have been through the daily health education sessions that were provided by the facility at the antenatal care clinic and using mass communication on the local radio stations.

Social-economic factors affecting the utilization of antenatal care services among pregnant women.

The majority 74(74%) had 1-5 dependants this was probably because they lived in a town setting associated with high costs of living minimizing the number of dependants. These results correspond to those of a population-based study conducted in Guinea which revealed that several factors like place of residence (0.29, 95% CI: 0.16, 0.50) had a significant association with the utilization of skilled ANC service (Gebretsadik Shibre, 2021).

The majority of 57(57%) received support from their partners. This was probably because of the cultural aspect which makes husbands responsible for the needs of their wives and children. This may have also been to the routine health talks on

the local radio stations organized by the district health departments throughout the year that kept encouraging husbands to support their partners throughout their antenatal care visits. These findings correspond to those of a study conducted in Sub Saharan Africa which revealed that the odds of recommended ANC utilization among women who can decide on health care services with their husbands increased by 26% to 32% (AOR = 1.32, 95% CI: 1.29, 1.35) (Tessema *et al,* 2021).

Majority 45(45%) spent 1,000-2,000shs. This was probably because St Paul's health center IV is located in the center of Kasese Municipality which is its catchment area making it easily accessible by motorcycles the commonest cheapest means of transport. This made accessibility much easier reducing the costs of Transport.

The majority 60(60%) spent 6,000-10,000shs on laboratory tests probably because they had to do more than one laboratory test on a single visit where the cheapest test was for 5,000 shs. These results correspond to those of a descriptive cross-sectional study conducted in Kenya which revealed that Approximately 60.3% of the respondents were reported to pay an amount between Kshs 100-200 (USD 1-2) for laboratory tests during first ANC visits, which was found to be affordable given the number of tests. (Dorah Chorongo *et al,* 2016).

The majority 72(72%) afforded the required medical tests during antenatal care. This was probably because most of the respondents had an individual source of income since most of them were business and civil servants respectively which made them afford to pay the necessary costs of laboratory tests. These findings were similar to those of a cross-sectional study in Delta State, Southern Nigeria, which revealed that the proportion of respondents who reported ≥ 4 antenatal contacts increases as household wealth quintiles improve (Sui *et al,* 2021).

Maternal related factors affecting utilization of antenatal care among pregnant mothers.

The majority 96 (96%) did not take alcohol probably because they were adhering to health education guidelines given to them at the facility aimed at maintaining a healthy body. Alcohol consumption is associated with irregularity in meeting schedules since alcohol alters the normal functioning of the brain and is associated with missed ANC appointments. (W. Alanazy, 2020).

The majority 77(77%) did not have any underlying chronic illness probably because of the low prevalence of chronic illness in the area and adherence to health education tips.

The majority 69(69%) did not have a history of any complications in their previous pregnancies probably because they always adhered to ANC precautions during their previous pregnancies These findings correspond with those of a cross-sectional study in the United Arab Emirates which revealed that Women worrying about childbirth were less likely to achieve appropriate ANC initiation (an OR: 0.54, 95% CI: 0.34–0.85) (Ali *et al.,* 2020).

The majority 43(43%) were between 26 to 35 years probably because they were married by that age, this contradicts with results of studies conducted in Ethiopia found that women aged less than or equal to 20 years at the time of first pregnancy were nearly three times more likely to use ANC services than whose age at first pregnancy was more than 20 years (Okedo *et al*, 2019).

6 Conclusion

According to the study findings, health facility factors affecting the utilization of antenatal care services by pregnant mothers were the quality of the ANC care services, waiting time, the attitude of the health workers, and laboratory costs at the Health facility.

Regarding the socio-economic factors; the mother's income, financial support from partners, and the number of dependants affected the utilization of antenatal care services by pregnant mothers,

The maternal factors that had a significant influence on the utilization of antenatal care services were marital status, the health status of the mother, education level, and place of residence.

Recommendations

The administration of St Paul's health center IV in partnership with the Ministry of Health and Ministry of Public Services should consider recruiting more health workers, especially those providing services to mothers and children due to the increasing number of clients.

There is a need for health workers and the government to encourage men, families, and societies to get involved in antenatal care without discrimination through awareness campaigns through all

media as a means of improving their knowledge about ANC and hence facilitate attitude Change.

7 Limitations of the study

Inadequate funds, bad weather; heavy rains, and very hot weather were challenges faced during the entire process.

Dissemination of findings

The findings were compiled in a report and a copy of the report was disseminated as follows:

- One copy was given to Medicare Health Professionals College.
- A copy was given to the In-charge St Paul's Health Center IV
- A copy was kept by the researcher
- A copy was submitted to UAHEB.

8 Acknowledgement

Greatest thanks to the Almighty God who led me and all those who I have interacted with throughout this Research process and for all His divine provisions.

I acknowledge and thank my research supervisor, Miss Negesa Justine, for her guidance all through the generation of this research report.

Special appreciation goes to the Staff and clients of St Paul's health Center IV for guiding, supporting, and cooperating with me during this Research process.

I extend my appreciation to all the Staff, Administration, and Students of Medicare Health professional's college for teaching and providing all necessary guidance and support for the success of this research project.

Abbreviations and acronyms

ANC: Antenatal care

MOH: Ministry of Health

UBOS: Uganda Bureau of Statistics

UNICEF: United Nations International Children's Fund

USAID: United States Agency for International Development

WHO: World Health Organization

Operational definitions

Antenatal care: Is the routine health control of presumed healthy pregnant women without symptoms to diagnose diseases or complicating obstetric conditions without symptoms and to provide information about lifestyle, pregnancy, and delivery.

Delayed booking: Seeking antenatal services after 28 weeks of gestation

Early booking: Seeking antenatal services before 20 weeks of gestation

Factors: These are circumstances, facts, or influences that contribute to a result that may vary with person, place, and time.

Health facility: A hospital, health center, or clinic where health services are provided

Maternal related: Relating to a mother, especially during pregnancy or shortly after childbirth.

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Table 2. References

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