

Individual factors influencing the completion of antenatal care visits among pregnant mothers attending the ANC Clinic at Jinja Regional Referral Hospital. A cross-sectional study.

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Page | 1 **ABSTRACT****Background:**

The study aimed to assess the individual factors influencing the completion of antenatal care visits among pregnant mothers attending the ANC Clinic at Jinja Regional Referral Hospital.

Methodology:

A descriptive cross-sectional study was conducted at Jinja Regional Referral Hospital among pregnant mothers attending the antenatal clinic. A sample of 77 participants, derived from the Kish and Leslie formula, was selected using simple random sampling. Data were collected using semi-structured questionnaires, with assistance for illiterate respondents. Data were analyzed using Microsoft Excel and presented in tables and charts. Quality control included pretesting and piloting tools. Ethical approval, informed consent, confidentiality, and voluntary participation were ensured throughout the study. Standard procedures were followed for data collection.

Results:

Most respondents (96%, n=74) had attended school, mainly up to secondary level (47.3%, n=35), while 25.7% (n=19) reached tertiary education. The majority (74%, n=57) were currently employed, with farming being the most common occupation (40.5%, n=23), while fewer worked as professionals such as nurses and teachers (25.7%, n=15). Most participants (68%, n=52) initiated antenatal care within the first trimester, whereas 32% (n=25) started later. Decision-making on seeking health care was limited, as 60% (n=46) reported not making their own decisions, compared to 40% (n=31) who did. Regarding alcohol use, 55% (n=42) had never consumed alcohol, while 45% (n=35) reported prior consumption.

Conclusion:

Education, employment, decision-making ability, and alcohol use influenced ANC completion.

Recommendation:

The government of Uganda should ensure antenatal care services are provided free of charge to improve access and utilization.

Keywords: Individual factors, antenatal care visits, pregnant mothers, ANC Clinic, ANC completion.

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BACKGROUND OF THE STUDY

Antenatal care (ANC) is a critical component of maternal health services, yet its utilization remains suboptimal in many low- and middle-income countries, particularly in sub-Saharan Africa. Evidence from various studies highlights the influence of individual factors on the adequacy and completion of ANC visits.

A secondary data analysis of the 2019 Mini-Demographic and Health Survey in Ethiopia found that 78.5% of pregnant women had inadequate ANC visits, with low educational attainment being a major contributing factor. Women with higher levels of education were significantly less likely to have inadequate ANC attendance compared to those with no formal education (Gebeyehu et al., 2024).

Similarly, a multi-country analysis in sub-Saharan Africa reported a pooled prevalence of 35.81% for completion of the maternity continuum of care. Limited decision-making

power among women was identified as a key barrier, while early initiation of ANC, particularly in the second trimester, significantly increased the likelihood of completing the continuum of care (Hunie Asratie & Belay, 2022).

In Rwanda, a cross-sectional study conducted at Ruli District Hospital revealed that 57.5% of women completed the fourth recommended ANC visit. This was associated with behavioral factors such as abstinence from alcohol by both the mother and her partner. (Mbarushimana & Nsanzabera, 2024).

In northern Uganda, a study found that 61.72% of pregnant women completed at least four ANC visits, a rate higher than that observed in many high maternal mortality settings. This was associated with individual factors such as professional employment and attainment of secondary education (Okwany et al., 2024).

Further evidence from a multi-country study across 15 African countries showed that only 13.0% of women achieved eight or more ANC contacts. Early birth order was associated with higher utilization, possibly due to increased motivation and adherence to healthcare recommendations among first-time mothers (Ekholuenetale, 2021).

Additionally, a study examining individual and community-level factors in sub-Saharan Africa reported a pooled prevalence of adequate ANC utilization of 55.48%. Financial constraints, particularly the inability to afford treatment, were identified as a significant barrier to accessing adequate ANC services (Fenta et al., 2024).

Overall, these findings demonstrate that individual-level factors such as education, economic status, decision-making autonomy, behavioral practices, and reproductive characteristics play a crucial role in influencing the utilization and completion of antenatal care services.

The study aimed to assess the individual factors influencing the completion of antenatal care visits among pregnant mothers attending the ANC Clinic at Jinja Regional Referral Hospital.

METHODOLOGY

Study Design

A descriptive cross-sectional study design was used. The design was appropriate for capturing data at a single point in time, providing insight into the burden and contributing to the completion of antenatal care services in the study population.

Study Area

The study was conducted at Jinja Regional Referral Hospital. The study was carried out at Jinja Regional Referral Hospital, which is a public general and teaching hospital under the Uganda Ministry of Health, with a bed capacity of 260; it offers a range of services including preventive, promotive, curative, rehabilitative, and palliative care through various departments such as outpatient, inpatient, maternity, paediatrics, surgery, mental health, and a newly established intensive care unit.

Study Population

The population for this study consisted of all pregnant mothers attending the antenatal clinic at Jinja Regional Referral Hospital during the time of data collection.

Sample Size Determination

The sample size was calculated using the Kish and Leslie formulae

$$n = z^2pq/d^2 \text{ Where;}$$

n = Sample size.

Z = standard deviation at 1.96 at a confidence interval 95%

P = prevalence of completion of antenatal care visits 27.6% (0.276) Q = (1-P)

D= margin of error (0.05) $n = (1.96^2)(0.276)(0.724) / (0.05^2)$

n = 307 respondents

Due to the large number of respondents, resources, and time constraints. $n = 307/4$

n = 77 respondents

Sampling Technique

A simple random method was employed to select the study participants at Jinja Regional Referral Hospital. During data collection, only those currently attending the clinic for antenatal services are to be included.

Sampling Procedure

Enrolment of participants was done by employing a simple sampling method in which clients attending the antenatal clinic who met the inclusion criteria had numbers from 1-20 written on small pieces of paper placed in a box. Five pieces of paper were picked at random by participants corresponding to numbers given until a required sample size of 77 was reached.

Data Collection Method

Data was collected using Semi-structured questionnaires to collect data about the factors influencing completion of antenatal services among mothers attending the antenatal clinic at Jinja Regional Referral Hospital. The questionnaires were used because it ensures a high response rate and it requires less time and energy to administer.

Data Collection Tool(s)

The data collection process involved the use of semi-structured self-administered questionnaires with closed-ended questions that were specifically designed to meet the objectives of the study. These questionnaires were written in simple and straightforward language to ensure that they are easily understood by both literate and illiterate patients who participated in the study. For those individuals who were unable to read and write, they were assisted by the researcher.

Data Collection Procedure

The questionnaires were distributed in person to the respondents who had agreed and consented to be part of the research study. Clear guidelines and instructions were given to participants on how to fill out these questionnaires. After filling out the questionnaires, the responses were collected to monitor.

Study Variables

Independent variable

The independent variables included individual factors

Dependent variable

The dependent variable was completion of antenatal care visits among pregnant mothers attending Jinja Regional Referral Hospital.

Quality Control

The researcher ensured quality by;

Piloting the study.

The researcher conducted a pilot study in Jinja Regional Referral Hospital, visiting the study area a week before the actual research to seek and obtain permission from the hospital administration. This visit aimed to ensure that the conditions within the hospital are not in the facility.

Pre-testing of the study tool.

The researcher pre-tested the questionnaire using a small number as compared to the estimated study population, and it was 20 patients before actual data collection, so that if modifications are to be made are made before the actual date, so as to determine if the information collected was reliable and valid.

Ample time for data collection.

During the study, illiterate participants were given 40 minutes, and the literate were given 20 minutes to fill out the questionnaires.

Observation of SOPs.

This involved social distancing, hand hygiene, and hand rub so as to avoid cross-infection, and making sure not to break the hospital operating procedures and avoid hindering the normal running of the health center activities because of research.

Selection criteria

Inclusion criteria.

The study included all pregnant mothers who were available at the hospital and consented to participate in the study during the time of data collection.

Data Analysis and Presentation

The data was manually analyzed using statistical tally sheets and then entered into a computer using Microsoft Excel software. The findings were presented quantitatively through frequency distribution tables, pie charts, and bar

graphs, accompanied by narratives to facilitate easy interpretation.

Data management.

After collecting the questionnaire forms, the respondents were checked for completeness and the occurrence of the filled information. All those questionnaires that were inaccurately filled or incompletely filled were corrected before the respondents left. After data analysis, the questionnaires were kept under lock and key for the safety and confidentiality of the respondents' data.

Ethical Consideration

On approval by the Mildmay Institute of Health Sciences Research Committee, written permission to conduct the research study was obtained from the Principal of the School of Clinical Medicine, introducing me to the medical superintendent of Jinja Regional Referral Hospital, who, in turn, authorized me by authenticating my introductory letter from the Principal of School Clinical Medicine from Mild may **Institute of Health Sciences.**

The consent of the participants was sought with informed written consent before the study was conducted. I gave a full explanation of the research procedures to the participants, who understood it. Consent forms made was used to seek written consent before interviewing. The information given was to be kept confidential. The names of the participants were not included in the report. The participation was voluntary, and one will be free to withdraw from the research at any time without any punishment or loss of benefit.

RESULTS

Individual factors influencing the completion of antenatal care visits among pregnant mothers attending the antenatal clinic.

Table 1: Shows individual factors influencing the completion of antenatal care visits among pregnant mothers attending the antenatal clinic. n= 77

Variables	Category	Frequency (n)	Percentage (%)
Respondent's response on whether they have ever gone to school.	a) Yes	74	96
	b) No	3	4
Total		77	100
If yes, the respondent's response is on the highest level achieved.	Primary education	20	27
	Secondary education	35	47.3
	Tertiary education	19	25.7
Total		74	100
Respondent's response on whether they are currently working.	a) Yes	57	74
	b) No	20	26
Total		77	100
If yes, the respondent's response to their occupation.	Farmer	23	40.5
	Businesswoman	19	33.8
	Employee	15	25.7
Total		57	100
Respondent's response on whether they make their own decisions about seeking health care.	a) Yes	31	40
	b) No	46	60
Total		77	100
Respondent's response on whether they had their first antenatal visits during the first three months of pregnancy.	a) Yes	52	68
	b) No	25	32
Total		77	100
Respondent's response on whether they have ever consumed alcohol.	a) Yes	35	45
	b) No	42	55
Total		77	100

Regarding respondents' responses on whether they have ever gone to school, the majority of the respondents, 74(96%) of them, reported that they have ever, while a minority, 3(4%) of them, reported having never gone to school. Out of the 74 respondents who have ever gone to school, most of them, 35(47.3%), went to secondary school, whereas the least, 19(25.7%), went to tertiary school. Regarding respondents' responses on whether they were currently working, 57(74%) of the respondents reported that they were, while at least 20(26%) of them reported that they were not currently employed. Out of the 57 respondents who reported that they were currently working, most of them, 23(40.5%), were farmers, whereas the least of them, 15(25.7%), were just working as nurses or teachers. Most of the respondents, 52(68%), reported that they had their first antenatal visit during the first three months of pregnancy, while the least of them, 25(32%), reported that they did not have it during the first three months of pregnancy. Regarding respondents' responses on whether they make their own decisions about seeking health care, most of them, 46(60%), reported that they were not making their own decisions, whereas the least of them, 31(40%), were not the ones making their own decisions. From the respondents' responses on whether they have ever consumed alcohol, more than half of the respondents, 42(55%), reported having never consumed alcohol, whereas less than half of them, 35(45%), reported having ever consumed alcohol.

DISCUSSION

Regarding their response on whether they have ever gone to school, the majority (96%) of the respondents reported that they have ever gone to school, and of these, most (47.3%) of them went to secondary school. This indicates that the majority of them have ever gone to school, and most attended secondary school due to the presence of government schools that provide free education services. These results are not in line with the findings by Gebeyehu et al., (2024) about inadequacy of antenatal care attendance and its determinants among pregnant women in Ethiopia that found out that, 69% of women who had higher education were less likely to have inadequacy of ANC visits than women who had no education implying that most pregnant mothers with higher education had adequate antenatal care visits. Creating more awareness among pregnant mothers through radio and television can help improve antenatal care attendance.

Regarding whether respondents were currently working, most 74% of them were working, and of them, most (40.5%) were farmers. This implies that most of the respondents were currently working and were practicing farming as a source of income. This is because most of the respondents stay in rural areas, and farming is the most practiced source of income and food. These results are in line with the study findings according to (Fenta et al., 2024) about Individual and community-level factors associated

with adequate antenatal care service utilization in sub-Saharan Africa, which identified that most 59.9% of the women were working in any sector, and rich women had 1.26 times higher odds of receiving adequate ANC services than poor women. This indicates that women who were currently working were able to afford antenatal care services at the facilities. Putting up free antenatal services for the poor can help curb the failure to attend antenatal services.

From the study findings regarding decision-making to seek health care, less than half (40%) reported that they made their own decisions about seeking healthcare. This implies that less than half of them make their own decisions about seeking health care because most of them are married and their husbands make the decisions for them. These findings are not in agreement with the study findings by Hunie Asratie & Belay (2022) about pooled prevalence and determinants of completing the maternity continuum of care in Sub-Saharan Africa, which found that only 12.18% women were the primary decision-makers to attend the maternity continuum of care. This indicates that very few of the pregnant mothers have decision-making powers towards their maternal continuum of care. Involving the male partners in matters related to antenatal care can improve antenatal care attendance among them.

Regarding the response on whether respondents had their first antenatal visits during the first three months of pregnancy, most (68%) reported that they did. This implies that most of the respondents had their first antenatal visit during the first three months due to the proximity to the health facilities and supportive partners. These results are not in line with the study findings by (Hunie Asratie & Belay, 2022) about pooled prevalence and determinants of completing the maternity continuum of care in Sub-Saharan Africa which identified most 74.96% women who had started ANC within the second trimester and were 2.76 times more likely to complete the maternity continuum of care compared with those who started above the second trimester of gestational age. This implies that those who completed their antenatal care visits were those who started having antenatal services in the second trimester. Health education by conducting community sensitization on the importance of early antenatal care can be done to solve the issue.

Regarding alcohol consumption, less than half (45%) of the respondents have ever consumed alcohol. This implies that less than half of them have ever consumed alcohol due to peer influence and at social gatherings, celebrations, or traditional ceremonies. These results are in agreement with the study findings by Mbarushimana & Nsanzabera (2024) about Prevalence and Factors Associated with the Fourth Standard Antenatal Care Utilization among Pregnant Women Attending Ruli District Hospital in Rwanda, which found that at least 33% of them had ever consumed alcohol. This implies that the least of them had ever consumed alcohol. Creating awareness of the possible dangers of alcohol consumption among partners to both the wife and husband

can help reduce alcohol consumption among married couples.

CONCLUSION

Individual factors influencing completion of antenatal care visits included level of education, employment status, decision-making ability in seeking health care, and alcohol consumption.

Limitations

The study relied on self-reported data, which may be affected by recall bias, and was conducted in a single facility, limiting generalizability.

RECOMMENDATION

The government of Uganda should ensure antenatal care services are provided free of charge to improve access and utilization.

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List of abbreviations

ANC	Antenatal Care
n	Number of respondents
%	Percentage
SSA	Sub-Saharan Africa
TBA	Traditional Birth Attendant
MOH	Ministry of Health
SOPs	Standard Operating Procedures
CI	Confidence Interval
P	Prevalence
Q	Complement of prevalence (1-P)

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The study received no external funding.

Conflict of interest

The authors declare no conflict of interest.

Data availability

Data is available upon request from the author.

Author biography

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Author contributions

NN: collected the data.

MO: supervised the study.

HN: supervised the study.

FS: supervised the study.

JFN: supervised the study

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