

SOCIO-ECONOMIC FACTORS AND HEALTH FACILITY-RELATED FACTORS AFFECTING THE UTILIZATION OF ANC SERVICES AMONG WOMEN AGED 18-40 ATTENDING ANC AT KYANKWANZI HEALTH CENTER III. A CROSS-SECTIONAL STUDY.

Moreen Owembabazi, Habert Mpanize, Immaculate Prosperia Naggulu, Jane Frank Nalubega*
School of Nursing and Midwifery, Mildmay Institute of Health Sciences.

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Abstract Background

The study aims to identify the Socioeconomic factors and health facility-related factors affecting the utilization of ANC services among women aged 18-40 attending ANC at Kyankwanzi Health Center III.

Methodology

A descriptive quantitative cross-sectional study design was used. The study targeted all pregnant mothers who attend ANC at Kyankwanzi Health Centre III aged between 18-40 years of age, with a sample size of 32 participants.

Results

The majority 14(43.7%) of the respondents were aged 18-24 years, while the least 2(6.3%) were 35-40 years. 14(43.7%) were self-employed and 6(18.8%) were formally employed.

The majority 21(65.6%) mentioned receiving advice on pregnancy management as the most important reason for attending ANC. 28(87.5%) reported that financial constraints prevent them from attending ANC visits. 21(65.6%) reported that their cultural norms or traditions in the community do not affect their decision to seek ANC services. 18(56%) said their spouse or other family members play a role in deciding whether or not to attend ANC. 17(53.1%) said the distance to the health facility greatly affects the respondents' ability to attend ANC visits regularly. 20(62.5%) have experienced mistreatment or disrespect from healthcare staff during an ANC visit. 22(68.7%) said that the availability of skilled healthcare providers at the facility impacted the decision to seek ANC.

Conclusion

Financial barriers, medical supply costs, inadequate support from partners and families, mistreatment, or perceived lack of respect from healthcare staff contribute to delays and missed ANC visits. Factors like perceived quality of care and interactions with healthcare providers also influenced ANC attendance.

Recommendation

Enhancing healthcare staff training to promote respectful, culturally sensitive care, focusing on improving patient-provider interactions and reducing instances of mistreatment.

Keywords: Socio-economic and health facility-related factors, Utilization of ANC services, Women aged 18-40, Kyankwanzi Health Center III.

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Corresponding Author: Jane Frank Nalubega

Email: janecl.nalubega@gmail.com

Mildmay Uganda School of Nursing and Midwifery.

Background of the study

Antenatal care (ANC) refers to the care provided by skilled healthcare professionals to pregnant women to ensure the best possible health conditions for both mother and baby throughout pregnancy (Ngxongo, 2018). Antenatal care is a critical component of maternal and child health, offering pregnant women essential health services. These services encompass health education, monitoring of pregnancy progress, early detection and management of pregnancy-related complications, and health promotion activities like nutritional counseling, immunization, and family planning education (Kuhnt & Vollmer, 2017).

Globally, the utilization of ANC services has been recognized as a key strategy in reducing maternal and neonatal morbidity and mortality, as it facilitates early

detection and management of potential health risks, and there has been considerable progress in improving the service utilization and developed countries, the ANC coverage is generally high, with over 80% of pregnant women attending at least four ANC visits (Aranda et al., 2017). Sub-Saharan Africa and South Asia face significant challenges in accessing ANC services, with fewer than 60% of pregnant women meeting the recommended number of visits believed to be due to socioeconomic inequalities, cultural beliefs, distance to health facilities, and the attitude of healthcare providers (Johnson et al., 2024). Although many African countries have made progress in increasing the access and utilization of ANC, the proportion of women who are obtaining the recommended minimum visits is still very low (Sarker et al., 2020).

Other records show that 60% of pregnant women attended at least four ANC visits, with significant regional variations (UDHS, 2016). For instance, rural areas tend to experience lower rates of ANC utilization compared to urban areas, primarily due to barriers such as distance to health facilities, lack of financial resources, and limited knowledge about the importance of regular ANC attendance (Adewuyi et al., 2024). The study aims to identify the Socio-economic factors and health facility-related factors affecting the utilization of ANC services among women aged 18-40 attending ANC at Kyankwanzi Health Center III.

Methodology

Study design and rationale.

A descriptive quantitative cross-sectional study design was used. The study design was chosen because it gives the researcher the ability to easily gather information without bias. The design was chosen because it offers the researcher an opportunity to probe for more information through explanations of otherwise unclear responses from respondents.

Study setting and rationale.

The study was conducted in Kyankwanzi Health Center III, a public health center in Kyankwanzi district. Kyankwanzi District is located in the western part of Uganda, approximately 180 km from Kampala city. The biggest population of the occupants is Banyankole, Banyarwanda. However, the other ethnicities in the district include the Baganda, Basoga, the Banyoro, and the Luo, to mention but a few. The district is bordered by the Nakaseke district in the East, the Kiboga district in the South, the Hoima district in the northwest, the Kakumiro district in the northeast, and the Masindi district in the north. The health facility offers ANC services, OPD services, Laboratory services, and ART services. Kyankwanzi Health Center III was used for this study because it's the most active Health unit in the region and, therefore, receives a great number of patients, particularly mothers seeking to deliver and enabled the researcher to get the required number of respondents without bias. The research was also to help draw measures for any shortcomings in the delay of mothers to take up ANC services.

Study population.

The study targeted all the mothers who attend ANC at Kyankwanzi Health Centre III aged between 18-40 years of age.

Sample Size Determination.

The study employed 32 pregnant mothers to provide better information about the study.

According to Kish and Leslie (survey sampling, 1965), statistical formulae for surveys:

$$N_0 = (z^2pq)/d^2$$

No representative sample for proportions

z = standard normal deviation (1.96) at 95% confidence interval

p = proportion of the target population 50 % (0.5)

q = 1- p

d = degree of occurrence desired (0.05)

Therefore $N_0 = (1.96^2 * 0.5 * 0.5) / 0.05^2$

$N_0 = 384$ People

Following the above, the study sample was calculated using the following formula;

$n = N_0 / (1 + N_0/N)$; where

n = sample size

N_0 =the representative sample for proportions

N = population size

Hence, the study sample size is;

$$n = 384 / (1 + 384/35)$$

$n = 32$

Therefore, the desired sample size was 32 pregnant mothers as the study participants.

Sampling Procedure.

A simple random sampling procedure was used. On each day of data collection, papers labeled "YES" or "NO" were put in a box and shaken. The eligible respondents were mothers who attended ANC and picked the paper with the label "YES" and consented to be enrolled in the study. This procedure was considered because of its ease and accuracy of representation, selecting subjects completely at random from the larger population and producing a sample that is representative of the group being studied. Every day, a minimum of 10 mothers were interviewed. This was repeated until the desired sample size of 32 mothers was reached during the three days of data collection.

Inclusion Criteria.

Mothers who attended ANC at Kyankwanzi Health Centre III aged between 18-40 years who had given informed consent to participate in the study. Mothers who chose papers labeled Yes

Exclusion Criteria

Mothers who had not consented to participate in the study. Mothers who, by probability, picked a paper labeled "No"

Definition of Variables.

Dependent Variable;

Utilization of ANC services.

Independent Variables;

Socio-economic factors affecting the Utilization of ANC services and Health facility-related factors affecting the Utilization of ANC services.

Research Instruments.

The researcher used a self-administered semi-structured questionnaire to collect data from the mothers. This provided the researcher with adequate information in a short time and eliminated bias during data collection. The

questionnaire was also first pre-tested on 20 pregnant mothers from Kyankwanzi doctor's clinic to measure the strength of the questionnaire.

Data Collection Procedure.

The researcher was introduced to the pregnant mothers by the in-charge of the facility, who then thoroughly explained to them the purpose of the study and the possible risks that may be involved. Consent was sought from the respondents, and then a questionnaire was issued to the participants. The time to answer the questionnaire was 15-20 minutes to avoid losing the respondents' concentration. Filled questionnaires were checked and edited before being considered for final use. Further, the researcher ensured that the respondents who were unable to read English were helped to translate the questionnaire into the local language.

Data Management.

Data from the study were thoroughly checked and validated for completeness and then were stored in a database established using Microsoft Excel. A password was used to prevent unauthorized access to the database. The data was also backed up on a flash and hard disk before and after analysis. Data on the questionnaire was kept under lock and key while electronically stored data was password protected.

Data Analysis.

The data was first cleaned, organized, and checked for any gaps, after which it was changed into codes and later transferred to Microsoft Excel 2017 and SPSS computer programs for the presentation of tables and figures. Responses for open-ended questions were summarized and given themes before tallying them for analysis.

Ethical Considerations.

The proposal was approved; an introductory letter was obtained from Principal Mildmay. School of Nursing and Midwifery, which was presented to the Charge of Kyankwanzi Health Center III to grant the researcher permission to conduct the research at the unit. The researcher obtained consent from the respondents every day, and the respondents were assured of absolute confidentiality.

Informed consent

The researcher was introduced to the pregnant mothers by the in-charge of the facility, who then thoroughly explained to them the purpose of the study and the possible risks that may be involved. Consent was sought from the respondents, and then a questionnaire was issued to the participants.

Results

Table 1: Shows the Demographic Characteristics of the Respondents n=32

VARIABLES	RESPONSE	FREQUENCY (f)	PERCENTAGE (100%)
Age Group	18-24 years	14	43.7
	25-30 years	10	31.2
	31-34 years	06	18.8
	35-40 years	02	6.3
Marital status	Cohabiting	16	50
	Married	10	31.2
	Divorced	06	18.8
Level of education	Secondary	20	62.5
	Tertiary	08	25
	Primary	04	12.5
Occupation	Self-employed	14	43.7
	Un employed	12	37.5
	Formally employed	06	18.8
	Total	32	100%

Table 1 shows the majority of 14(43.7%) of the respondents were aged 18-24 years, while the least 2(6.3%) were 35-40 years. 16(50%) were cohabiting, the least 6(18.8%) divorced. 20(62.5%) had secondary level

while the least 4(12.5%) were primary level. 14(43.7%) were self-employed and 6(18.8%) were formally employed.

Socio-economic Factors Affecting the Utilization of ANC

Figure 1: Shows the most important reason for attending ANC n=32

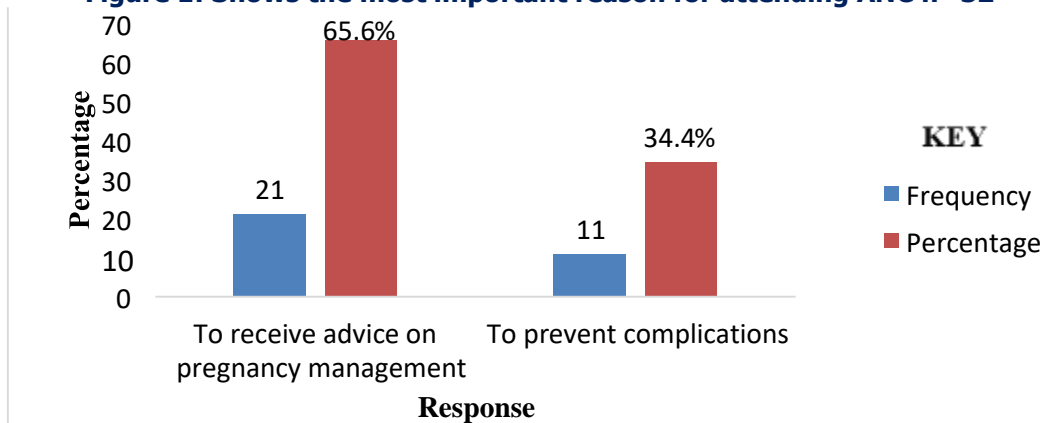


Figure 1 shows a majority, 21(65.6%), mentioned receiving advice on pregnancy management as the most important reason for attending ANC, then 11(34.4%) mentioned prevention of complications.

Figure 2 Shows whether financial constraints prevent respondents from attending ANC visits

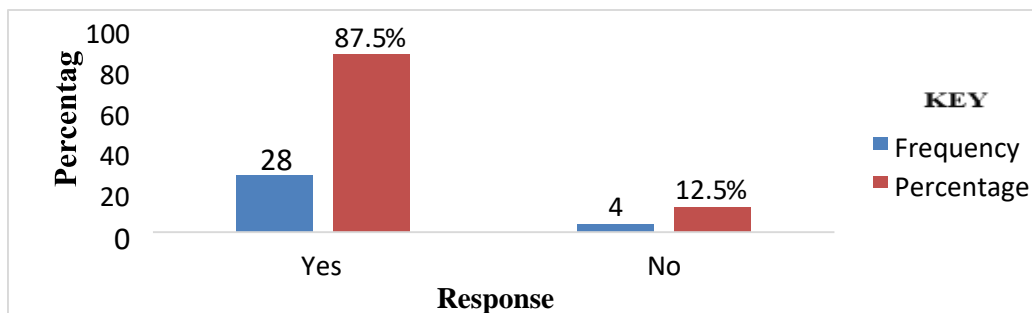


Figure 2 majority, 28(87.5%), reported that financial constraints prevent them from attending ANC visits, while 4(12.5%) said no.

Figure 3: Showing whether the partners provide financial support for ANC-related expenses

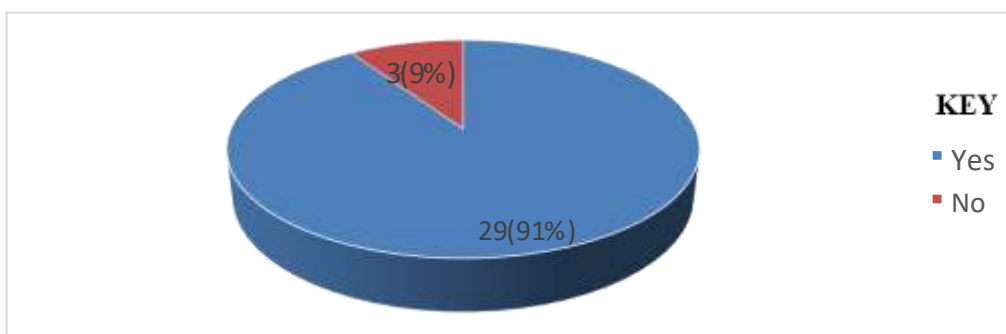


Figure 3 shows that 29(91%) said that their partners provide financial support for ANC-related expenses, while the rest 3(9%) said they do not.

Table 2: Showing how much influence respondents feel education level has on your decision to attend ANC n=32

Response	Frequency (F)	Percentage (%)
A significant influence	15	46.9
Some influence	12	37.5
No influence	05	15.6
Total	32	100

Table 2 shows that 15(46.9%) said that a significant influence the respondent's education level had on their decision to attend ANC, while the least 5(15.6%) reported no influence.

Table 3: Showing whether cultural norms or traditions in the community affect their decision to seek ANC services n=32

Response	Frequency (F)	Percentage (%)
No	21	65.6
Yes	11	34.4
Total	32	100

Table 3 shows that 21(65.6%) reported that their cultural norms or traditions in the community do not affect their decision to seek ANC services, while the least 11(34.4%) said it does.

Figure 4: Showing whether spouse or other family members play a role in deciding whether or not to attend ANC

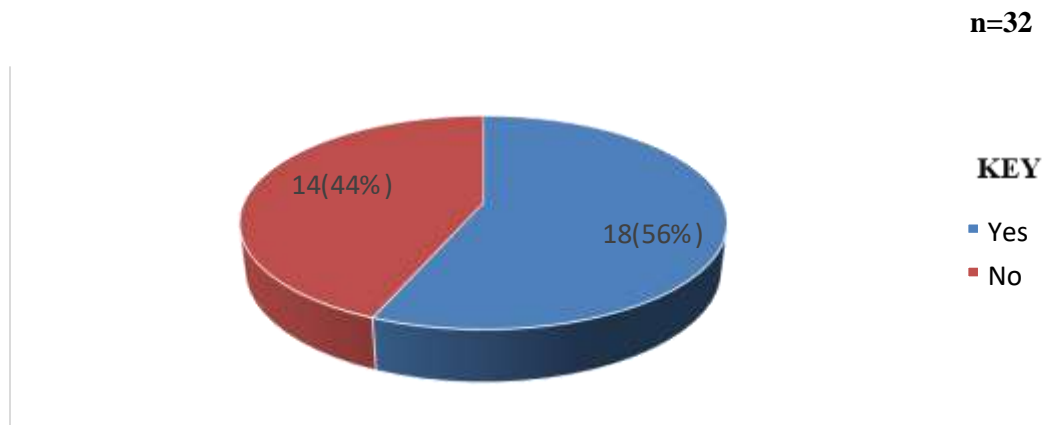


Figure 4 majority, 18(56%) said their spouse or other family members play a role in deciding whether or not to attend ANC, while the least 14(44%) said they do not play any role.

Figure 5: Showing whether the distance to the health facility affects the respondents' ability to attend ANC visits regularly

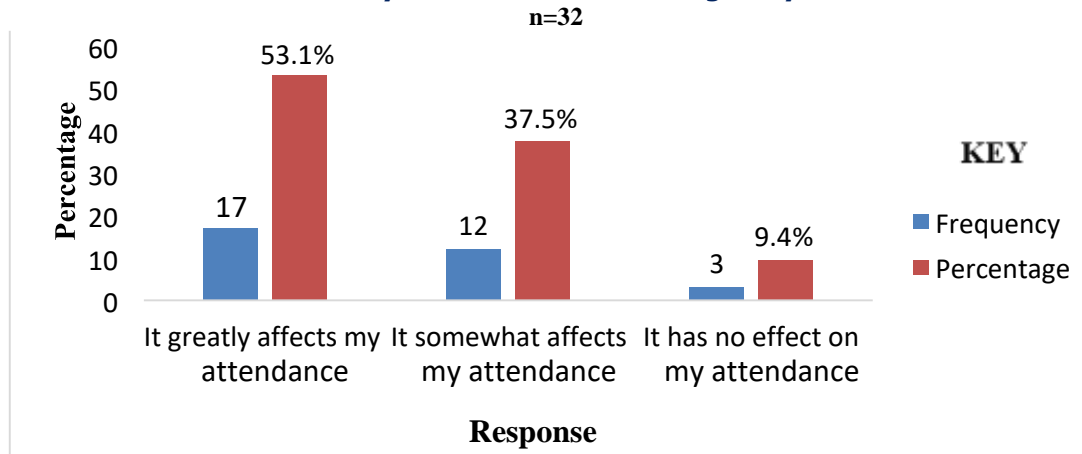


Figure 5 shows that 17(53.1%) said the distance to the health facility greatly affects the respondents' ability to attend ANC visits regularly, while 3(9.4%) said it has no effects.

Health Facility-Related Factors Affecting the Utilization of ANC

Table 4: Showing whether respondents believe the quality of care at the health facility influences their decision to attend ANC visits n=32

Response	Frequency (F)	Percentage (%)
Always	13	40.6
Some times	10	31.3
Never	09	28.1
Total	32	100

Table 4 majority 13(40.6%) believe the quality of care at the health facility influences their decision to attend ANC visits, and least 9(28.1%) believe it never.

Figure 6: Showing whether respondents have ever delayed or skipped ANC visits due to the high cost of transportation or medical supplies

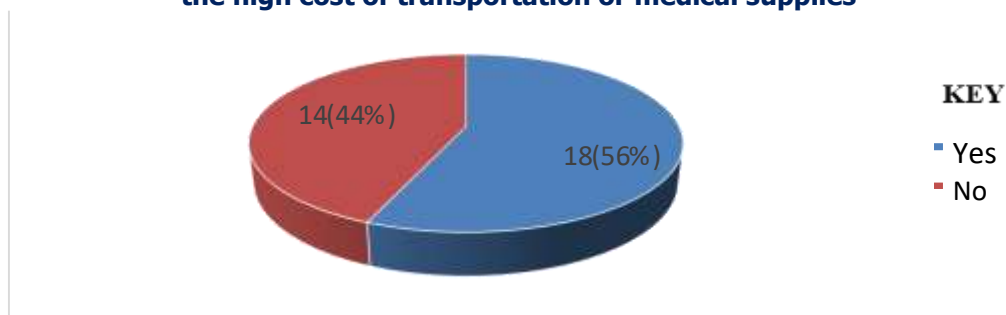


Figure 6 shows that 18(56%) have ever delayed or skipped ANC visits due to the high cost of transportation or medical supplies, while the rest, 14(44%), said they have never.

Table 5: Showing whether respondents have experienced mistreatment or disrespect from healthcare staff during an ANC visit n=32

Response	Frequency (F)	Percentage (%)
Never	20	62.5
Some times	12	37.5
Total	32	100

Table 5 shows the majority, 20(62.5%), have experienced mistreatment or disrespect from healthcare staff during an ANC visit, and the rest, 12(37.5%), said sometimes.

Table 6: Showing whether the availability of skilled healthcare providers at the facility impacts the decision to seek ANC n=32

Response	Frequency (F)	Percentage (%)
Yes	22	68.7
No	10	31.3
Total	32	100

Table 6 shows the majority of 22(68.7%) said that the availability of skilled healthcare providers at the facility impacts the decision to seek ANC, while the least 10(31.3%) said it does not.

Figure 7: Showing whether the respondents think that the health workers should understand their cultural beliefs when providing ANC services

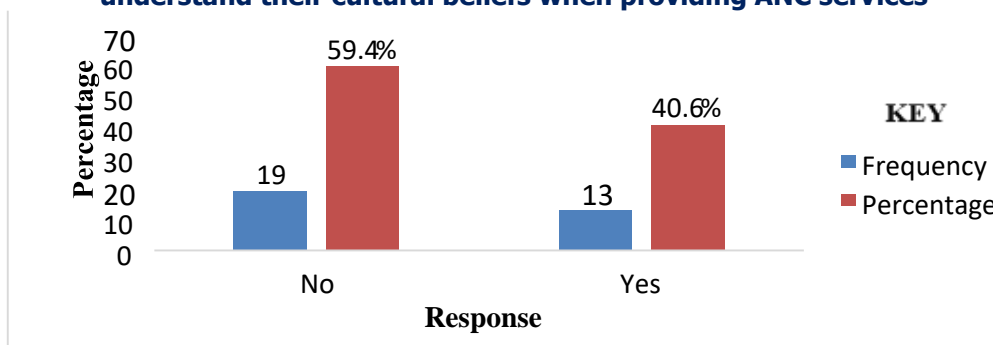


Figure 7 shows that 19(59.4%) think that health workers should understand their cultural beliefs when providing ANC services, and 13 (40.6%) said no.

Discussion

Socio-economic Factors Affecting the Utilization of ANC

The findings of this study showed that the majority, 21(65.6%) of the respondents, mentioned receiving advice on pregnancy management as the most important reason for attending ANC. Findings are consistent with a study by Holm (2019), which demonstrated that receiving specific, actionable guidance from healthcare professionals is a significant motivator for women to attend ANC visits, as it provides them with tools and knowledge to better manage their health during pregnancy.

The findings of this study indicated that the majority, 28(87.5%) of the respondents, reported that financial constraints prevent them from attending ANC visits. This aligns with studies from Ethiopia (Gebremeskel et al., 2015; Tesfaye et al., 2017) and Tanzania (Njiku et al.,

2017; August et al., 2015), which found that low household income, lack of partner financial support, and transportation costs are common barriers, even when ANC services are technically free. An overwhelming number of 29(91%) of the respondents in this study said that their partners provide financial support for ANC-related expenses, which could be due to efforts done at ANC in all public facilities to health educate mothers about the importance of partner involvement. The findings are consistent with Kaswa et al.'s (2018) findings from South Africa, where the majority reported their partners to provide financial support.

This study showed that 15(46.9%) of the respondents said that a significant influence the respondents feel education level on your decision to attend ANC, which is in line with studies by Fernandes et al. (2021) and Basha (2019), where education was associated with better ANC utilization. Similarities in the findings could be because education raises awareness about maternal health risks and encourages proactive health-seeking behaviors, leading to more frequent ANC visits. Most 21(65.6%) of the respondents also reported that their cultural norms or

traditions in the community do not affect their decision to seek ANC services. This is similar to research from Zambia and Zimbabwe, which found that cultural norms and traditional beliefs could hinder women's health-seeking behaviors (Hibusu et al., 2024; Mutowo et al., 2021). The relatively lower influence of cultural norms in this study may be a result of regional or urban-rural differences, suggesting that cultural norms have varying levels of impact on ANC utilization based on context. The findings of this study indicated that 18(56%) of the respondents said their spouse or other family members play a role in deciding whether or not to attend ANC. Similar findings by Majumder et al. (2024) and Altman et al. (2019) underscore the role of family and social support in maternal health decisions. Women who participate more in household decisions are often more likely to seek ANC, as seen in studies from India and Ethiopia (Tsfaye et al., 2020). In regards to distance, 17(53.1%) of the respondents said the distance to the health facility greatly affects the respondents' ability to attend ANC visits regularly, which echoes findings from Ethiopia by Shibre & Mekonnen (2019) and Uganda by Dowhaniuk (2021) where similar results were revealed. Transportation barriers can greatly hinder access to ANC, especially in rural areas where health facilities are few and far between, like in Kyankwanzi, leading to missed or delayed ANC visits.

Health Facility-Related Factors Affecting the Utilization of ANC

Results of this study indicated that 13(40.6%) of the respondents believed the quality of care at the health facility influences their decision to attend ANC visits, which suggests that perceptions of service quality are crucial in determining whether women seek regular maternal healthcare. This is in line with the findings of Ali et al. (2018), where it was found that poor-quality services and understaffing deterred women from attending ANC. Most 18(56%) of the respondents also reported having delayed or skipped ANC visits due to the high cost of transportation or medical supplies, which stresses the impact of financial barriers on accessing maternal healthcare services. Findings echo results from Ghana by Haruna et al. (2019), which reinforce that the indirect costs are substantial for low-income women, reducing ANC attendance even when primary care is affordable. Most 20(62.5%) of the respondents have experienced mistreatment or disrespect from healthcare staff during an ANC visit. Similar cases in Tanzania (Miltenburg, 2019) and South Sudan (Mugo et al., 2018) indicated that negative interactions with staff can deter women from further ANC services. These findings indicate that a respectful, supportive healthcare environment is crucial to enhancing ANC attendance.

This study showed that the majority, 22(68.7%) of the respondents, said that the availability of skilled healthcare providers at the facility impacted the decision to seek ANC. This mirrors the findings of Straneo et al. (2021) that emphasize the role of skilled care in facilitating ANC

uptake, which indicates that access to qualified providers enhances the perceived value of ANC, encouraging more frequent attendance. Also, 19(59.4%) of the respondents think that the health workers should understand their cultural beliefs when providing ANC services, which means respect for cultural norms improves the patient-provider relationship, fostering trust and enhancing ANC utilization. Similar studies in Zimbabwe by Mutowo et al. (2021) and Ghana by Alatinga et al. (2021) showed similar results. Respect for cultural norms improves the patient-provider relationship, fostering trust and enhancing ANC utilization.

Conclusion

Financial barriers, including high transportation and medical supply costs, as well as inadequate support from partners and families, contribute to delays and missed ANC visits. Health facility-related factors, such as perceived quality of care and interactions with healthcare providers, also influenced ANC attendance. Instances of mistreatment or perceived lack of respect from healthcare staff deterred some respondents, emphasizing the importance of respectful and culturally sensitive care in encouraging regular ANC use.

Recommendation

Increasing educational initiatives to inform communities, families, and expectant mothers about the importance of timely and regular ANC visits. These programs should also address misconceptions about ANC, emphasizing its preventative nature and importance beyond managing complications.

Enhancing healthcare staff training to promote respectful, culturally sensitive care, focusing on improving patient-provider interactions and reducing instances of mistreatment.

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List of Abbreviations

ANC: Antenatal care
SPSS: Statistical Package for Social Science
UDHS: Uganda demographic health survey
WHO: World Health Organization

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There is no source of funding.

Conflict of interest

No conflict of interest was reported or declared.

Author contributions

Owembabazi Moreen collected data and reported about the study.

Mpamize Habert supervised the students at all levels

Data availability

Permission to reuse published work can be sought from the Mildmay School of Nursing and Midwifery.

Author Biography

Owembabazi Moreen is a student midwife doing a diploma in midwifery at Mildmay Uganda School of Nursing and Midwifery.

Mpamize Habert is a tutor at Mildmay Uganda School of Nursing and Midwifery.

Immaculate Prosperia Naggulu is the dean of studies at Mildmay Uganda School of Nursing and Midwifery.

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