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Original Research Article

Antenatal care utilization among pregnant women in the third trimester in Wajir East Sub-County, Wajir County, Kenya

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ABSTRACT

Background: Antenatal care (ANC) is essential for maternal health, as it facilitates better pregnancy outcomes. This study aims to examine the determinants of ANC utilization among pregnant women in their third trimester in Wajir East Sub-county, Wajir County, Kenya.
Methods: A community-based cross-sectional analytical design across 30 villages and linked health facilities (including Wajir County Referral Hospital) between July 2025 and September 2025, targeting 221 pregnant women in their third trimester. Systematic sampling was employed to recruit participants, and data were collected using structured questionnaires, of which 216 completed ones were analyzed. Descriptive statistics and logistic regression were used to assess utilization patterns and determinants. Key informant interviews with CHVs and facility staff provided qualitative insights.
Results: Third-trimester ANC attendance was low: 26.9% of women reported one visit, 50.5% reported two visits, and only 1.4% attended four or more visits. Major barriers included distance to health facilities (68.1%), lack of transport (51.4%), and financial constraints (28.7%). CHV and family support were key facilitators. Unemployment significantly reduced the odds of adequate ANC utilization (AOR=0.09, p=0.046). College/University education showed a significant association in the bivariate analysis (OR=0.16, p=0.023).
Conclusions: Most women attended only one or two ANC visits. Sociodemographic factors, especially education level and household income, had a significant impact on the use of ANC. Distance to health facilities, lack of transport, financial constraints, and cultural norms are major facilitators and barriers to ANC utilization.

Keywords: Antenatal care, Utilization, Pregnant, Wajir East

INTRODUCTION

The term ANC describes the continuous medical support offered to women throughout their gestational period. This essential healthcare intervention plays a pivotal role in minimizing the occurrence of health complications and death among expectant mothers. ANC ensures that both mother and foetus receive appropriate medical supervision throughout pregnancy. This helps optimize health outcomes for both. Obstetricians and midwives play a vital role during ANC by educating expectant mothers on proper nutrition, birth preparedness, and family planning. The care received during ANC is essential for detecting and managing pregnancy-related complications that could affect maternal and neonatal health outcomes.[1]

ANC should ideally begin early in pregnancy to allow for timely monitoring and intervention. The WHO (2023) recommends that women experiencing normal pregnancies participate in a minimum of four prenatal check-ups.[1] However, the 2016 WHO ANC Model advocates for a more comprehensive approach,

recommending eight contacts throughout pregnancy, with five of these scheduled in the third trimester.[2] These third-trimester visits are crucial for ensuring that the mother is well-prepared for labour and delivery and for identifying any potential risks that may require medical intervention before childbirth.

Despite global progress, maternal mortality remains unacceptably high. Sub-Saharan Africa accounts for the majority of maternal deaths worldwide. This is largely attributed to the inadequate use of prenatal healthcare, especially as pregnancies progress into their later trimesters.[4] In Kenya, the maternal mortality ratio remains high at 342 deaths per 100,000 live births, according to the Kenya Demographic and Health Survey 2022.[5] Maternal deaths account for 27% of all deaths among women who are within the reproductive age.[5] To improve maternal health, Kenya government recommends at least 8 ANC visits during the entire period of pregnancy, which emphasizes on addressing common health risks and complications affecting pregnant women and newborns.[6] However, while progress has been made in improving early ANC attendance, the third-trimester visits remain underutilized, posing significant risks to maternal and neonatal health.

In Wajir County, ANC utilization is particularly low, with coverage slightly below 50%, compared to the national average of 58% (Wajir County MOH, 2022). Various barriers contribute to poor ANC attendance, particularly in the third trimester, including long distances to healthcare facilities, challenging terrain, cultural beliefs, financial constraints, and an inadequate healthcare system. Additionally, healthcare provider strikes and service disruptions further limit access to ANC services.[7]

Despite the recognized importance of late-pregnancy ANC, there is limited empirical evidence specifically examining third-trimester ANC utilization and its determinants in Wajir East. This gap constrains the development of targeted, context-appropriate interventions to improve maternal health outcomes in the region. This study aims to quantify third-trimester ANC utilization rates among pregnant women in Wajir East Sub-County and systematically identify key barriers and facilitators affecting their attendance, to inform targeted interventions.

METHODS

Research design

The study employs a community-based cross-sectional research design.

Study area

The study was conducted in Wajir East Subcounty, Wajir County, Kenya, covering 30 villages (B. BK, B. Central, B. Madina2, B. Baraza Park, B. Gichuru , B. Gichuru 2, B. South C, B. Got Rahma, B. Waso, B. Wagalla, B. Sokini, B. Chokaa, B. Power, B. Sunrise, B. Towhid, B. ICF, B. Sheikh, B. Isiolo, B. Bahati, B. Jogoo Bledi, B. Kurman, B. Wagberi 1, B. kom 1, B. Kom 2, B. Sheikh Abass, B. Madarasa, B. Digoahas, Halane 3, Halane 4, and Halane Power). Fieldwork was carried out between 1 July 2025 and 30 September 2025. Data collection included household interviews and facility linkage: Wajir County Referral Hospital served as the primary referral facility for the sub-county and was included as the main health facility site for key informant interviews and verification of facility records; peripheral dispensaries and health centres serving the 30 villages were also engaged.

Target population

Expectant women in their third trimester, residing in Wajir East Subcounty. The study included both women attending ANC services and those not utilizing these services.

Inclusion criteria

We included expectant women who are within their third trimester of pregnancy and have been residing in Wajir East Subcounty for at least six months.

Sampling

Pregnant women (221) were chosen through a systematic sampling technique, which reduces selection bias by guaranteeing that every eligible woman from the 30 villages has an equal chance of inclusion.

Data collection instruments

Key informant interviews (KIIs) guides and structured questionnaires were used to collect qualitative and quantitative data respectively.

Validity and reliability of the data collection tools

Research supervisors performed a thorough examination of the instruments to verify their validity. To attain internal validity, meticulous attention was given to structuring the instrument in a manner that directly addressed the study objectives and research inquiries (Cohen, Manion and Morrison, 2013). Moreover, the questionnaire was pre-tested in a similar setting outside the study area to ensure clarity, relevance, and appropriateness. Expert reviews from maternal health specialists were sought to refine the instrument. Internal consistency was assessed using Cronbach's alpha, with a target value of ≥0.7.

Data collection procedure

Following approval of the research protocol by the University's Institutional Review Board and obtaining administrative authorizations from Wajir County, we, through the research assistants did visit households with pregnant women through the assistance of CHVS,

introduced the study, and obtained written informed consent from the participants. CHVS were used in this case because they usually maintain the records of all pregnant women within their area. The structured questionnaire was then administered physically in a private setting to ensure confidentiality. For uniform interpretation, the research assistants did read the questions, interpret them into the local language and leave the participants to respond accordingly. Equally, KIIs was conducted with healthcare providers: community health volunteers (CHVs), and hospital in-charges at mutually agreed times and locations.

Data analysis

Collected data were entered and verified using CSPro 8, then exported to IBM SPSS Statistics 26.0 for analysis. The analytical phase commenced with the application of descriptive statistical methods, providing a foundational understanding of the data's characteristics. Furthermore, to identify potential determinants influencing the utilization of ANC services during the third trimester, bivariate and multivariate analyses was conducted, and odds ratios as well as adjusted odds ratio calculated. All statistical tests was performed with a predetermined significance level of 0.05, corresponding to a 95% confidence interval (CI). Qualitative data (interviews) was systematically categorized into distinct thematic domains, forming major themes. These thematic findings were then presented and interpreted in conjunction with quantitative data, facilitating an all-inclusive and integrated indulgent of the research phenomenon.

Ethical considerations

Ethical clearance was sought from the AMIU ethical and scientific review committee (ESRC). Moreover, a research permit was obtained from NACOSTI. Thereafter, a research permit was sought from the County government of Wajir, Health Department. Ethical considerations were austerely addressed. Participants were requested to consent before taking part in the study. Participants voluntarily participated in the study at will. Participants' confidentiality was guaranteed in the entire research process.

RESULTS

Socio-demographic characteristics of the study participants

A total of 216 women took part in the study. Majority of participants fell into the 20-24 years and 25-29 years age groups, representing 26.2% and 35.4% of the total sample, respectively. The 95.0% of the participants were married and 1.4% single. The educational background of participants revealed that 47.2% had no formal education, while others had primary education (33.8%). The 11.3% had attained secondary education, while 8.0% had college/university education. 76.2% of participants were unemployed, while self-employment stood at 17.5% and formal employment at 6.3% (Table 1).

The level of Antenatal Care utilization during the third trimester among pregnant women in Wajir East Sub-County

Regarding ANC visits during the third trimester, 109 (50.5%) women reported to have attended antetnal clinical twice during the third trimester with 50 (26.7%) women visiting only once. In terms of total ANC visits throughout the pregnancy, 66.20% (143 women) attended between three and four visits, 24.07% (52 women) attended five or more visits. Looking at services received during ANC visits, 26.91% (60) went for health education and counseling, 23.77% (53) had physical examinations and 7.17% (16) had blood pressure monitoring. The illustration on ANC utilization during the third trimester (Table 2). Several healthcare providers noted during the key informant interview that while the third trimester marks an increase in attendance, the uptake of services earlier in the pregnancy remains low. One healthcare provider remarked: "*ANC utilization in the third trimester is increasing, but this is mostly because women wait until their pregnancy is more advanced. Most of the time, they feel they don't need to attend ANC until the last trimester, but this is a major problem*."

Barriers of antenatal care utilization among pregnant women during the third trimester in Wajir East Subcounty

The 68.1% of the respondents cited distance to the health facility, while 51.4% (111) indicated lack of transport. Other barriers were long waiting times (13.4%, 29 women) and lack of awareness (6.0%, 13 women). Similarly, the primary reasons for missed or delayed ANC visits are lack of time (61.6%, 133 women) and financial constraints (28.7%, 62 women). Encouragingly, 19.9% (43 women) reported no missed or delayed visits. 99.1% (214 women) experience no cultural or societal pressures discouraging ANC, and 100% (216 women) feel safe and comfortable at health facilities. However, a notable 6.5% (14 women) do encounter language or communication barriers. Regarding provider preference, opinions are split: 38.0% (82 women) prefer a female healthcare provider, 36.1% (78 women) have no preference, and 25.9% (56 women) prefer not to have one (Table 3).

The most common barriers reported by healthcare providers during the KIIs include distance, lack of transport, and family influence. These barriers reflect the quantitative data, where distance to the health facility and lack of transport have been identified as significant challenges for many women. As stated by one of the healthcare providers: *"The distance is a major issue for the women. Many live far from the health facilities, and they simply cannot afford the transport to come to the clinic for ANC."*

Facilitators of ANC utilization among pregnant women during the third trimester in Wajir East Subcounty

Affordable services (80.7%, 167 women) and Proximity of health facility (56.0%, 116 women) are the foremost motivators for third-trimester ANC attendance. Positive attitude of healthcare providers (50.2%, 104 women) and personal health concerns (45.4%, 94 women) also drive women to seek care. Regarding practical assistance, 54.1% (117 women) of the study participants primarily receive accompaniment to a health facility, followed closely by Emotional support (45.4%, 98 women) (Table 4).

Bivariate analysis of the influence of demographic characteristics on adequate ANC utilization

The bivariate analysis suggests that women with a College/University education are significantly less likely to have adequate ANC utilization during their third trimester (OR=0.16, p=0.023). Other variables, including age, marital status, occupation, and household income, did not show a statistically significant association with adequate ANC utilization at the bivariate level (Table 5).

Multivariate analysis of the influence of demographic characteristics on adequate ANC utilization

The multivariate analysis reveals that women who are unemployed are significantly less likely to have adequate ANC utilization compared to those in formal employment (AOR=0.09, p=0.046).

While a College/ University education showed a significant association in the bivariate analysis, this association became non-significant after controlling for other variables in the multivariate model (p=0.134), suggesting a confounding effect (Table 6).

Bivariate analysis of the relationship between individual barriers/facilitators and the likelihood of ANC utilization

Bivariate analysis, which examined unadjusted relationship between individual factors and adequate ANC utilization, found no statistically significant associations. This means that, on their own, none of the specific barriers (such as fear of medical procedures, lack of transport/long waiting times)/facilitators (like personal health concerns, positive attitude of healthcare providers, or family support) had a statistically reliable link to whether women attended two or more ANC visits in their 3rd trimester. For example, the odds of having adequate ANC visits were about 76% lower for women who reported long waiting times, but because p=0.096, this finding was not considered significant. Similarly, while odds of adequate utilization were about 70% higher for women who received spouse/family support, this also not statistically significant (p=0.501). Another example is the barrier of high cost of services: women who cited this as barrier were about 79% less likely to have adequate ANC visits (OR=0.21), but again, this was not statistically significant (p=0.297). Since bivariate analysis did not identify any statistically significant variables, a more complex multivariate analysis was not needed (Table7).

Table 1: Socio-demographic characteristics of the study participants.

Variables	Categories	N	Percentages (%)
Age group (in years)	15-19	12	5.40
	20-24	58	26.20
	25-29	79	35.40
	30-34	47	21.20
	35 and above	20	9.00
Mean age (in years)		26.93±4.87 (15.0-35.0)	
Marital status	Married	211	95.00
	Single	3	1.40
	Widowed	1	0.50
Parity	1	18	8.30
	2	36	16.70
	3	44	20.40
	4	56	25.90
	5	38	17.60
	6	24	11.10
	Mean parity±SD	3.6±1.45 (1-6)	
Level of education	No formal education	102	47.20
	Primary level	73	33.80
	Secondary level	24	11.30
	College or University	17	8.00
Occupation	Unemployed	164	76.20
	Self-employed	39	17.50
	Formal employment	13	6.30

Continued.

Variables	Categories	N	Percentages (%)
Religion	Islam	207	96.00
	Christianity	9	4.00
Household monthly income (ksh)	Below 5,000	49	22.69
	5,000-10,000	64	29.63
	10,000-20,000	58	26.85
	Above 20,000	45	20.83

Table 2: ANC utilization during the third trimester.

Variables	Categories	N	Percentages (%)
How many ANC visits have you attended during the third trimester?	2 visits	109	50.46
	1 visit	58	26.85
	3 visits	35	16.2
	None	11	5.09
	4 or more visits	3	1.39
How many total ANC visits have you attended throughout your pregnancy?	3 or4 visits	143	66.2
	5 or more visits	52	24.07
	1 or2 visits	21	9.72
At what stage of your pregnancy did you start attending ANC?	First trimester (before 12 weeks)	74	33.18
	Second trimester (13-26 weeks)	74	33.18
	Third trimester (above 27 weeks)	75	33.63
Who influenced your decision to attend ANC during the third trimester?	Myself	128	62.44
	Healthcare providers	64	31.22
	Family members (parents, in-laws, etc.)	7	3.41
	Spouse/partner	6	2.93
What services have you received during third-trimester ANC visits? (Select all that apply)	Health education and counseling	60	26.91
	Physical examination	53	23.77
	Laboratory tests (e.g., blood and urine tests)	40	17.94
	Vaccination (e.g., tetanus toxoid)	28	12.56
	Blood pressure monitoring	16	7.17
	Ultrasound scan	16	7.17
	Iron/folic acid supplementation	10	4.48
How satisfied are you with the quality of ANC services during the third trimester?	Very dissatisfied	72	30.57
	Satisfied	57	25.92
	Extremely satisfied	54	24.54
	Neutral	43	18.97

Table 3: Barriers to ANC utilization.

Variables	Categories	N	Percentages (%)
Barriers to attending ANC services	Distance to the health facility	147	68.1
	Lack of transport	111	51.4
	Long waiting times at the facility	29	13.4
	Lack of awareness about importance of ANC	13	6
	Fear of medical procedures	8	3.7
	Others	11	5.1
Reasons for missed or delayed ANC visits	Lack of time	133	61.6
	Financial constraints	62	28.7
	Unawareness of ANC schedules	19	8.8
	Health facility challenges (e.g., unavailability of staff or equipment)	13	6
	Not missed or delayed	43	19.9
	Others	9	4.1
Do you face any cultural or societal pressures that discourage ANC attendance?	No	214	99.1
	Yes	2	0.9

Continued.

Variables	Categories	N	Percentages (%)
Do you feel safe and comfortable at health facilities in your area?	Yes	216	100
Do you encounter language/ communication barriers at health facility?	No	202	93.5
	Yes	14	6.5
Would you prefer having female healthcare provider for ANC visits?	Yes	82	38
	No	78	36.1
	No preference	56	25.9

Table 4: Facilitators of ANC utilization.

Variables	Categories	N	Percentages (%)
What factors have motivated you to attend ANC services during the third trimester? (Select all that apply)	Proximity of health facility	116	56
	Affordable services	167	80.7
	Positive attitude of healthcare providers	104	50.2
	Personal health concerns	94	45.4
	Support from spouse/family	50	24.2
	Awareness campaigns on ANC importance	25	12.1
	Peer advice	1	0.5
What type of support do you receive from your family or community to attend ANC services? (Select all that apply)	Accompaniment to health facility	117	54.1
	Emotional support	98	45.4
	Financial support	85	39.4
	None	1	0.5
Are there any govt. or NGO programs promoting ANC utilization in your area?	No	216	100
Have community health workers (CHWs) encouraged you to attend ANC services?	Yes	180	83.3
	No	36	16.7
How do you feel about receiving educational sessions regarding pregnancy and ANC?	Very helpful	203	93.98
	Somewhat helpful	12	5.56
	I do not know	1	0.46

Table 5: Bivariate analysis of the influence of demographic characteristics on the adequate ANC utilization.

Independent variable	Categories	N	Dependent variable	OR	95% CI	P value
Age (in years)	25-29 years	56	Adequate ANC utilization (2+ visits)	0.9	(0.34-2.41)	0.835
	30-34 years	41		0.4	(0.13-1.25)	0.116
	35 years and above	22		0.28	(0.07-1.05)	0.059
Level of education	Primary level	67	Adequate ANC utilization (2+ visits)	0.48	(0.19-1.20)	0.117
	Secondary level	23		0.24	(0.05-1.13)	0.071
	College/university	17		0.16	(0.03-0.77)	0.023*
Marital status	Married	185	Adequate ANC utilization (2+ visits)	2.5	(0.64-9.70)	0.183
Occupation	Self-employed	14	Adequate ANC utilization (2+ visits)	0.63	(0.16-2.45)	0.501
	Unemployed	173		1.14	(0.29-4.40)	0.849
Household monthly income (INR)	5,000-10,000	25	Adequate ANC utilization (2+ visits)	0.54	(0.18-1.63)	0.276
	10,000-20,000	12		0.4	(0.08-2.06)	0.268
	Above 20,000	10		0.35	(0.06-2.07)	0.245

*p<0.05 is statistically significant

Table 6: Multivariate analysis of influence of demographic characteristics on adequate ANC utilization.

Independent variable	Categories	N	Dependent variable	AOR	95% CI	P value
Age (in years)	15-19	14	Adequate ANC Utilization (2+ visits)	1	Reference	
	20-24	56		0.4	(0.03-4.60)	0.465
	25-29	41		0.47	(0.04-5.56)	0.54
	30-34	22		0.17	(0.01-2.15)	0.169

Continued.

Independent variable	Categories	N	Dependent variable	AOR	95% CI	P value
	35 and above	10		0.23	(0.01-5.48)	0.384
Level of education	No formal education	94	Adequate ANC Utilization (2+ visits)	1	Reference	
	Primary level	67		0.66	(0.07-6.30)	0.718
	Secondary level	23		0.3	(0.02-4.41)	0.388
	College/ University	17		0.09	(0.00-2.05)	0.134
Marital status	Single	3	Adequate ANC Utilization (2+ visits)	1	Reference	
	Married	185		0.39	(0.01-27.24)	0.706
	Divorced/separated	1		0	(0.00-0.00)	0.999
Occupation	Formal employment	12	Adequate ANC Utilization (2+ visits)	1	Reference	
	Self-employed	14		0.12	(0.01-1.25)	0.076
	Unemployed	173		0.09	(0.01-0.96)	0.046*
Household monthly income	Below 5,000	141	Adequate ANC Utilization (2+ visits)	1	Reference	
	5,000-10,000	25		0.5	(0.05-5.25)	0.563
	10,000-20,000	12		0.29	(0.02-3.47)	0.329
	Above 20,000	10		0.14	(0.01-2.29)	0.17

Table 7: Bivariate Analysis of the relationship between individual barriers/facilitators and the likelihood of adequate ANC utilization.

Independent variable	Categories	N	Dependent variable	OR	95% CI	P value
Barriers: Fear of medical procedures	Yes	4	Adequate ANC (2+ visits)	0.28	(0.01-5.56)	0.384
	No	25		1	Reference	
Barriers: Lack of transport	Yes	12	Adequate ANC (2+ visits)	0.81	(0.23-2.82)	0.741
	No	17		1	Reference	
Barriers: Lack of awareness	Yes	8	Adequate ANC (2+ visits)	1.13	(0.24-5.25)	0.871
	No	21		1	Reference	
Barriers: Long waiting times	Yes	8	Adequate ANC (2+ visits)	0.24	(0.04-1.29)	0.096
	No	21		1	Reference	
Barriers: High cost of services	Yes	3	Adequate ANC (2+ visits)	0.21	(0.01-3.73)	0.297
	No	26		1	Reference	
Facilitators: Personal health concerns	Yes	13	Adequate ANC (2+ visits)	1.63	(0.35-7.50)	0.536
	No	15		1	Reference	
Facilitators: Positive attitude of healthcare providers	Yes	12	Adequate ANC (2+ visits)	0.9	(0.22-3.59)	0.88
	No	16		1	Reference	
Facilitators: Awareness campaigns	Yes	11	Adequate ANC (2+ visits)	1.07	(0.26-4.41)	0.923
	No	17		1	Reference	
Facilitators: Affordable services	Yes	11	Adequate ANC (2+ visits)	1.12	(0.27-4.63)	0.877
	No	17		1	Reference	
Facilitators: Support from spouse/family	Yes	10	Adequate ANC (2+ visits)	1.7	(0.36-8.12)	0.501
	No	18		1	Reference	

DISCUSSION

This study provides important insights into ANC utilization during the third trimester in Wajir East Sub-County, Wajir County. The findings show that most women attended two ANC visits during their third trimester, while only a small proportion achieved three or more visits. This pattern reflects broader trends in sub-Saharan Africa, where many women seek ANC late in pregnancy despite the availability of services. Similar findings have been reported in India, where late ANC attendance was attributed to limited awareness and socio-cultural norms that discourage early care-seeking.[4] Evidence from other low-resource settings also shows that delayed ANC initiation is common in rural communities due to transportation challenges, financial constraints, and cultural beliefs.[8] In contrast, studies from regions with strong community-based interventions and health promotion campaigns have reported higher rates of early ANC attendance.[9] For example, research from Western Kenya found that 53% of women attended at least four ANC visits, while in Mandera County, 83% utilized ANC services, although only 60.3% completed the recommended number of visits.[11,12] The services most frequently received in this study-health education, counselling, physical examinations, and blood pressure monitoring-are consistent with findings from Southwestern Ethiopia.[12]

The relationship between sociodemographic characteristics and ANC utilization in this study presents an interesting pattern. Bivariate analysis suggested that women with college or university education were less likely to have adequate ANC utilization during the third trimester. Although this appears counterintuitive, it may be confounded by employment status, mobility, or small subgroup sizes. The Social Determinants of Health framework emphasizes that education and income typically enhance ANC uptake, and studies from Nigeria confirm that low educational attainment and poverty are major predictors of inadequate ANC use.[4,13] The multivariate analysis in this study, however, revealed that unemployment significantly reduced the likelihood of adequate ANC utilization. This aligns with extensive evidence showing that financial constraints both direct, such as transport costs, and indirect, such as opportunity costs are among the strongest barriers to ANC access in rural and marginalized settings.[14,15] Women in urban areas generally have better access to health facilities and resources, which may explain disparities in ANC uptake.[10]

Barriers to ANC utilization identified in this study such as distance to health facilities, lack of transportation, and financial constraints are well-documented in the literature and align with the conceptual framework based on the health belief model (HBM).[4] Distance and transportation challenges are among the most frequently cited barriers in rural sub-Saharan Africa, where poor road networks and limited health infrastructure hinder timely ANC attendance.[16] Healthcare providers in this study confirmed that logistical barriers often lead to missed or delayed ANC visits. These findings are consistent with studies showing that transportation costs account for a significant proportion of missed ANC appointments in rural regions.[17] Cultural norms and family influence also played a significant role in ANC utilization. Many women relied on husbands or parents to decide whether they should attend ANC, reflecting the “cues to action” component of the HBM.[4,18] This shows the value of male involvement and elders in ANC education and decision-making processes.

Despite these barriers, several facilitators of ANC utilization were identified. Affordable services, proximity to health facilities, community support, positive provider attitudes, and personal health concerns all contributed to improved ANC attendance. These factors correspond to key HBM constructs such as perceived benefits, perceived severity, and self-efficacy. Affordable ANC services were particularly influential, consistent with findings from other low-resource settings.[6] Community health workers (CHWs) emerged as especially important facilitators. Healthcare providers emphasized that CHWs play a central role in mobilizing communities, identifying pregnant women early, and encouraging timely ANC visits. Evidence from Ethiopia similarly shows that CHVs significantly improve maternal health outcomes by enhancing community engagement and promoting early ANC attendance.[19]

Overall, the findings of this study bring out the complex interplay of structural, socioeconomic, and cultural factors influencing third-trimester ANC utilization in Wajir East. Addressing these challenges requires context-specific strategies that strengthen community-based support systems, improve transport access, and enhance family involvement in maternal health decision-making. Strengthening CHW engagement (with a particular focus on female CHVs to improve acceptance), expanding outreach services, and reducing financial barriers may significantly improve third-trimester ANC uptake and contribute to better maternal and neonatal outcomes in this setting.

CONCLUSION

The study found that ANC use during the third trimester is common, and many women only seek care in later stages of their pregnancies. The most frequent pattern was that women attended only one (26.85%) or two (50.46%) ANC visits. Only a few (1.39%, 3 women) attended four or more visits. With many initiating ANC in the third trimester, primarily due to a lack of awareness and accessibility barriers. The findings underscore the dire need for interventions that would facilitate the earlier attendance of ANC. The analysis showed that sociodemographic factors, especially education level and household income, had a significant impact on the use of ANC. Females who had higher educational attainment and those in households with high income had greater chances of utilizing ANC services successfully. The multivariate analysis reveals that women who are unemployed are significantly less likely to have adequate ANC utilization compared to those in formal employment (AOR=0.09, p=0.046). On the other hand, the women who had low education and low income were likely to skip or postpone ANC visits. This highlights the persistent socioeconomic disparities in accessing maternal health services, a trend that aligns with existing literature. Lastly, the study identified several facilitators and barriers to ANC utilization, including distance to health facilities (68.1%), lack of transport (51.4%), financial constraints (28.7%), and cultural norms that limit women's decision-making power. Community support, more so from family members, spouses and CHWs, was established as an essential facilitator of ANC attendance. The findings imply that improving access to healthcare facilities, reducing transportation costs, and increasing community education and support would likely enhance ANC utilization in the region.

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