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Socio-Cultural and Healthcare Barriers to Timely Antenatal Care Initiation Among Rural Ghanaian Women

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Abstract: This study investigates the factors influencing late initiation of antenatal care (ANC) among pregnant women in the Wa East District of Ghana, where maternal health outcomes remain a public health priority. Despite extensive evidence linking timely ANC to reduced maternal and neonatal mortality, late ANC attendance persists, especially in low-resource settings. Employing a facility-based cross-sectional study design, 405 pregnant women attending ANC were surveyed to identify socio-demographic, cultural, and healthcare service-related determinants of late ANC initiation. Findings reveal that older age, lower educational levels, farming occupations, and male-dominated decision-making significantly delay ANC attendance. Additionally, negative healthcare provider attitudes and geographical barriers further impede early ANC uptake. Regression analysis indicates that Muslim women and those with higher parity had markedly higher odds of late ANC initiation, while respectful healthcare provider attitudes and health education interventions reduced these odds. The study underscores the multifaceted barriers to timely ANC, emphasizing the need for culturally sensitive, community-based interventions involving male partners in maternal health education. Strategies to enhance respectful maternal care and improve healthcare access in remote settings are recommended as critical to fostering early ANC initiation. By addressing both socio-cultural and service-related barriers, this research contributes valuable insights for policymakers, healthcare providers, and community leaders aiming to improve maternal healthcare access and outcomes. Future research should explore the impact of male-inclusive health education and community health worker outreach on ANC attendance, fostering a robust understanding of effective maternal health interventions in rural Ghana and similar low-resource settings.

Keywords: Antenatal Care (ANC), Maternal Health, Socio-cultural Barriers, Health Service Accessibility, Wa East District, Ghana

1. INTRODUCTION

Antenatal care (ANC) is an essential component of maternal healthcare, aiming to optimize the health and well-being of expectant mothers and unborn children through timely interventions, health education, and preventive care (World Health Organization [WHO], 2016). Early ANC initiation is associated with improved pregnancy outcomes and enables healthcare providers to identify and manage potential risks, such as hypertension, infections, and malnutrition, which contribute to maternal and neonatal mortality (Kaswa et al., 2018). However, late initiation of ANC remains prevalent in many developing regions, including Ghana, with a significant proportion of expectant mothers delaying their first visit until the second or third trimester (GSS, 2013). Factors influencing late ANC attendance include socio-demographic, cultural, and healthcare-related factors, which differ across various regions and communities (Sakeah et al., 2014; Tenaw et al., 2023).

In Ghana, especially in rural areas like the Wa East District, challenges such as limited access to healthcare facilities, inadequate health infrastructure, and socioeconomic disparities contribute to suboptimal ANC attendance rates (GSS, 2013). Studies in sub-Saharan Africa indicate that barriers to timely ANC access also include cultural beliefs, low levels of maternal education, and limited decision-making autonomy among women (Izacar et al., 2023). Additionally, the attitudes and behavior of healthcare providers have been found to significantly impact mothers' willingness to seek ANC services, with negative attitudes often deterring timely access to care (Kaswa et al., 2018). The role of male partners in decision-making is another critical factor affecting ANC attendance in Ghanaian communities. In regions like Wa East, where traditional gender roles are prominent, husbands often hold primary decision-making power regarding their wives' health-seeking behaviors, which can delay or prevent ANC attendance if they perceive it as unnecessary (Tenaw et al., 2023). Addressing these cultural dynamics and enhancing community awareness about the importance of early ANC initiation could improve maternal health outcomes in these areas (Sakeah et al., 2014). The current study focuses on the Wa East District, where the healthcare delivery system faces unique challenges in reaching rural populations. By understanding the socio-demographic and health service-related factors influencing late ANC initiation, this study seeks to provide data-driven recommendations that could enhance maternal health interventions and improve the effectiveness of ANC services in rural Ghana.

A growing body of literature emphasizes the significance of early and regular antenatal care (ANC) for improving maternal and neonatal health outcomes in low-resource settings (Ahmed et al., 2019). Studies indicate that timely ANC visits allow healthcare providers to address complications and provide preventive care that can reduce maternal mortality (Yaya et al., 2020). In sub-Saharan Africa, the determinants of ANC utilization are often multifaceted, involving socio-demographic, cultural, and healthcare system factors that either facilitate or impede timely access to care (Bohren et al., 2017).

Socioeconomic barriers, including low income and educational attainment, have been shown to correlate with delayed ANC attendance. A study in Ethiopia reported that women with higher education levels and household income were more likely to attend ANC sessions early, as they were better informed about the benefits and had greater autonomy in health decisions (Fekadu & Regassa, 2014). Similarly, in a cross-sectional study in rural Kenya, financial constraints and long distances to healthcare facilities were associated with late ANC attendance, suggesting that improving healthcare accessibility could increase early ANC uptake (Mutua et al., 2018).

Cultural and social factors also play a significant role in determining ANC usage. In regions with strong traditional beliefs, such as Northern Ghana, husbands often hold primary decision-making authority regarding maternal health, which can delay or discourage ANC attendance (Ganle et al., 2015). This cultural dynamic is particularly pronounced in communities where healthcare decisions are influenced by patriarchal norms and gender roles (Pell et al., 2013). Research from Uganda has further indicated that ANC attendance improves when women have greater autonomy and decision-making power within their households, highlighting the need for gender-sensitive interventions (Kabakyenga et al., 2016).

Healthcare provider attitudes and behaviors are additional factors influencing ANC attendance. Negative experiences with healthcare providers, such as perceived neglect or lack of empathy, can deter women from seeking ANC services. Bohren et al. (2019) emphasize that respectful maternal care and supportive communication from healthcare staff encourage pregnant women to attend ANC appointments consistently. In addition, the availability of community health volunteers has proven effective in promoting ANC attendance in rural communities by raising awareness and assisting women with healthcare navigation (Sialubanje et al., 2015). Despite these findings, gaps remain in understanding the complex interactions between cultural, social, and healthcare-related factors that affect ANC utilization in Ghana's rural settings. This study builds on existing literature by exploring the specific determinants of late ANC initiation among pregnant women in the Wa East District, providing context-specific insights to improve maternal health interventions in similar low-resource areas.

2. METHODS

Study Design

The study adopted a facility-based cross-sectional study design to determine the factors that influence late initiation of ANC among pregnant women in Wa East district. Cross-sectional study measures health outcome and exposures in a population at a single point in time or a period. Is a snapshot and gives the prevalence of health outcomes at a specific time and place. Cross-sectional design fits the study because it consumed less time, it was inexpensive and representative of the study population.

Description of Study Area

The Wa East District was carved out of the former Wa District and made a district by L.I 1746 in July 2004. The district is in the southeastern part of the Upper West region. Funsi, the district capital, is about 115 km away from Wa, the regional capital. The district shares boundaries with West Mamprusi to the northwest, West Gonja to southeast and the Sissala East district to the north (Fig. 1.1). It has a landmass of about 4297.1sq/ km^2, which is located between latitudes 9º 55"N and 10º 25"N and longitude 1º 10"W and 2º 5"W. The district occupies (17.3%) of the total landmass of the region (18,478.4sq/ km2). Wa East District has a population of 72,074 out of which males constitute 36,396 (50.5%) and females 35,678 (49.5%) giving a sex ratio (number males to 100 females) of 102.0. There are four major ethnic groups in the district; Wala (45%), Sissala (21%), Chakali (19%) and Dagaaba/Lobi (15%) which are categorized under the Mole Dagbani group in the 2010 Population and Housing Census (Ghana Statistical Service [GSS], 2013).

Health Delivery System

The Regional Health Directorate, through the Regional Health Management Team provides supervision and management support to all Public Health facilities in the district. There are 7 sub-districts with 17 CHPS compounds that see to the provision of basic health care services. The district has a Health Management Committee and 35 Community Health volunteers who work to supplement that of health service providers (Wa East District Health Directorate., 2022, unpublished).

Map of WA East District

Figure 1: Map of Wa East District (GSS, 2013)

Study Population

This study involved pregnant women who sought ANC in various health facilities in the Wa East district.

Inclusion Criteria

Pregnant women, regardless of gestational age, had lived in the district six months prior to pregnancy and attended ANC in any facility within the Wa East district and consented to the study were recruited in the study.

Exclusion Criteria
The study did not include pregnant women with high-risk pregnancies or known medical conditions that could affect ANC attendance.

Sample Size
The sample size for this study was determined using Cochran's approach, which is appropriate for calculating the number of respondents required. This approach utilizes a formula where n=Z2·p·qe2n = \frac{Z^2 \cdot p \cdot q}{e^2}n=e2Z2·p·q. For this study, the statistical significance (ZZZ) level was set at 1.96, reflecting a 95% confidence interval. The proportion (ppp) of pregnant women who attend antenatal care (ANC) late was assumed to be 50%, based on findings by Kaswa and colleagues (2018), making qqq, or the complement of ppp, also 0.5. An error margin (eee) of 0.05 was selected for the calculation. Therefore, 405 women in childbearing phase who met the inclusion criteria were required for enrolment in the study.

Sampling Method
Multi-stage sampling technique was employed to choose respondents. stratified sampling technique was used to divide the sub-districts into strata. The strata were based on the kind of facility (Hospital, CHPS compound and clinic). The number of health facilities in each stratum formed a sampling frame. The sample size was proportionately allocated to each sub-district based on the average number of women who seek antenatal services at the facility. A simple random sampling technique was employed by a lottery method (YES/NO) to select facilities in the strata and eligible mothers to participate in the study.

Data Collection Procedure
KoBo Toolbox" was used to collect data electronically with a structured close-ended questionnaire adopted from previous studies by Sakeah et al. (2014), Izacar et al. (2023) and Tenaw et al. (2023). KoBo Toolbox is a data collection tool that allows data to be collected in the field using mobile devices such as mobile phones, tablets, or laptops. Two research assistants were recruited and trained to assist in the data collection process to acquaint them with the components of the questionnaire and how to use the KoBo Toolbox. This was to help identify, correct, and amend all gaps in the questionnaires.

Pretesting
The questionnaires were pretested among 20 randomly selected women at Wa West who were not part of the study but had characteristics similar to those of the respondents before the actual data collection. Data on demographic characteristics, health service-related factors, level of awareness and knowledge and predisposing factors that influence late initiation of ANC was solicited from respondents.

Data Analyses
Data collected using Kobo collect was downloaded into an excel software (MicrosoftofficeExcel2010) database. Data was analyzed using Statistical Package for Social Sciences, IBM® SPSS version 21 (SPSS Inc., USA). Data obtained from the field was checked for completeness and validity to mainly detect omissions and rectify mistakes to avoid deviations and errors in the data collected. Microsoft Excel were used to tabulate the collected and compiled data. Chi-square test was used to assess the associations between dependent and independent variables, and logistic regression was used to determine the association's strength. Descriptive statistics such as determination of percentages and frequencies were performed on categorical variables while mean and standard deviation were also performed on quantitative variables to describe the study results. A p-value <0.05 was considered statistically significant at a 95% confidence level.

Ethical Consideration
Ethical approval was sought from the Committee on Human and Publication Ethics (KNUST-CHRPE) with ethics approval reference number: CHRPE/AP/130/24 This study was carried out with strict adherence to the standards and principles of ethics in research. Further Permission were obtained from the Wa East District Health Directorate and the various health facilities were involved before the commencement of the study. Moreover, all research assistance and participants adhered to the Covid-19 guidelines the Ministry of Health set. The wearing of face

masks or face shields and social distancing were duly ensured during data collection.

3. RESULTS

Socio-demographic characteristics of expectant mothers attending ANC in the Wa East District

The sociodemographic characteristics of pregnant women seeking ANC services in the Wa East District are presented in table 1. The mean age of the expectant mothers was 29.7 ± (5.71) with the majority 240 (59.3%) aged between 29-38 years. A comparative majority of the respondents sought ANC services from a health facility in the Loggu subdistrict 95 (23.5%) followed by the Bulenga Subdistrict 89 (22.0%); while the least sought care in the Yaala subdistrict 21 (5.2%). Respondents who were Dagaare composed the majority 136 (33.6%) and other ethnic groups were the least representing only 31 (7.7%). With regard to religious affiliation, over half 235 (58.0%) of the respondents were Christian. Almost three-fourths 302 (74.6%) of the expectant mothers were married with only 36 (8.9%) having divorced. In terms of the highest level of education attained, a comparatively high proportion 106 (26.2%) of the respondents had no formal education while only 24 (5.9%) had attained a tertiary level of education. The predominant occupation was farming 222 (54.8%) whereas government employees comprised only 17 (4.2%). About the spousal level of education and occupation, more than half 212 (52.3%) of the partners of the expectant women had completed primary level of education, with 223 (55.1%) engaged in farming as an occupation. Respondents who had ever delivered two children were dominant 197 (48.6%).

Table 1: Socio-demographic characteristics of expectant mothers attending ANC in the Wa East District

Variable	Frequency *(n=405)*	Percentage (%)
Age (*in completed years*)		
19-28 years	165	40.7
>28 years	240	59.3
Religion		
Christian	235	58.0
Muslim	134	33.1
Traditionalist	36	8.9
Marital status		
Divorced	36	8.9
Married	302	74.6
Single	67	16.5
Highest completed level of education		
No formal education	106	26.2
JHS	90	22.2
Primary	81	20.0
SHS/Vocational	104	25.7
Tertiary/post-secondary	24	5.9
Ethnicity		
Akan	99	24.4
Dagaare	136	33.6
Lobi	36	8.9
Sissala	103	25.4
Table 4.1 continued		
Others	31	7.7
Occupation		
Farmer	222	54.8

Government worker	17	4.2
Trader	111	27.4
Unemployed	55	13.6
Partner's level of education		
No formal education	45	11.1
JHS	43	10.6
Primary	212	52.3
SHS/Vocational	77	19.0
Tertiary/post-secondary	28	6.9
Partner's occupation		
Business man	167	41.2
Farmer	223	55.1
Government worker	15	3.7
Parity		
1	0	0.0
2	197	48.6
3	136	33.6
≥4	72	17.8

Level of awareness and knowledge on the importance of early ANC attendance in the WA East District

Table 2 illustrates the expectant mothers' level of awareness and knowledge on the importance of early ANC initiation. About two-thirds 275 (67.9) of the respondents' ANC initiation decision lied with the partner or husband and 63 (15.6%) depended on both the pregnant woman and husband. A greater proportion 337 (83.2%) of the respondents showed bleeding to be a common pregnancy-related danger, and 368 (90.9%) asserted that absence from ANC could result in maternal mortality. A little over half 208 (51.4%) of the respondents indicated menstruation as a common symptom of pregnancy. According to the majority 296 (73.1%) of the expectant women, ANC should commence in the first trimester. A good number 324 (80.0%) of the women indicated that they knew the recommended number of ANC visits.

Table 2: Level of awareness and knowledge on the importance of early ANC attendance in the WA East District

Variable	Frequency *(n=405)*	Percentage (%)
Final decision-making power on when to start ANC		
Husband	275	67.9
Pregnant woman	67	16.5
Pregnant woman and spouse	63	15.6
Most common danger sign in pregnancy		
Bleeding	337	83.2
Blurred vision	36	8.9
Headache	32	7.9
Absence from ANC can cause maternal mortality		
No	37	9.1
Yes	368	90.9
Most common sign of pregnancy		
Absence of menstruation	208	51.4

Diarrhea	32	7.9
Morning sickness	165	40.7
Stage of pregnancy at which ANC should start		
First trimester	296	73.1
Second trimester	109	26.9
Know the WHO recommended number of ANC visits		
No	81	20.0
Yes	324	80.0

Knowledge Level of Expectant Mothers on ANC Services

Figure 1 depicts the level of knowledge on ANC among pregnant women seking ANC services in various health facilities in the Wa East District. Most (81.98%) of the expecant mothers had an adequate or good knowledge on ANC services whereas 18.02 percent had inadequate knowledge regarding ANC services.

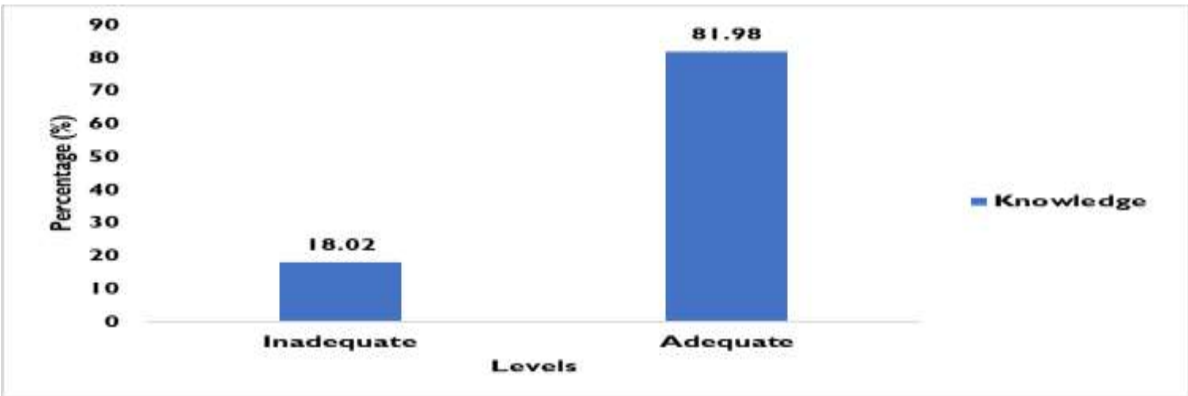

Figure 1: Knowledge level of expectant mothers on ANC services

Health Service-Related Factors for ANC Attendance among Expectant Mothers in the WA East District

Table 3 below shows the health-related factors for ANC attendance among pregnant women seeking ANC services at the various facilities in the Wa East District. Almost two-thirds 265 (65.4) of the respondents, indicated that their late initiation of ANC resulted from the negative or undesired attitudes of healthcare providers whilst 68 (16.8%) cited lack of privacy and confidentiality as a reason for the late initiation. A distance of 5-10km to the nearest health facility was showed by most 195 (48.1) of the expectant women to be a reason for the late start of ANC. Further, a good number 369 (91.1%) of the respondents indicated that a health professional attended to them each time on visit. According to most 140 (34.6%) of the expectant mothers, they spent over two hours seeking antenatal services, and 166 (41.0%) reported receiving health education about three times during ANC services.

Table 3: Health Service-Related Factors of ANC attendance among expectant mothers in the Wa East District

Variable	Frequency *(n=405)*	Percentage (%)
Reason for late initiation of ANC		
Lack of privacy/confidentiality	68	16.8
Health workers negative attitudes	265	65.4
Male health workers involvement	72	17.8
Distance to nearest health facility		
<5 km	147	36.3
5-10 km	195	48.1

≥10 km	63	15.6
Meet a health staff to attend to you		
No	36	8.9
Yes	369	91.1
Table 4.3 continued		
Waiting time at ANC services		
<1 hour	135	33.3
1 hour	130	32.1
≥2	140	34.6
Number of health educations received		
1	80	19.8
2	111	27.4
3	166	41.0
≥4	48	11.9

Time of ANC initiation among expectant mothers in the Wa East District

Figure 2 illustrates the time of ANC initiation among expectant mothers in the Wa East District. Nearly three-fourth (73.1%) of the expectant mothers-initiated ANC early.

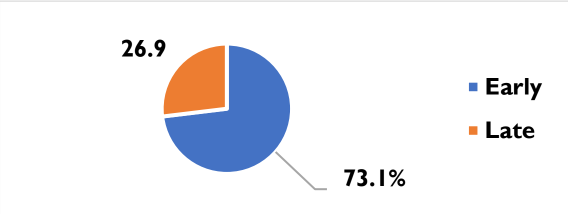

Figure 2: Time of ANC initiation among expectant mothers in the Wa East District

Predisposing Factors Influencing Late ANC Attendance among Expectant Mothers in the Wa East District

Table 4. shows the factors influencing ANC attendance among expectant mothers in the Wa East District. Factors associated with late initiation of ANC included being aged 29-38 years, Dagaare ethnicity, Muslim religion, being married, having no formal education or primary education, being a farmer or trader, having a partner with no formal education or primary education, having a partner who is a farmer, higher parity (more than children), husbands having the final decision-making power on delivery place, negative attitudes of health workers, residing less than 5 km from the health facility, not meeting a health staff to attend to them, and having inadequate knowledge of ANC services. After adjusting for other factors in the final model for variables with p-value ≤0.05, it was found that the odds of late ANC initiation were 9.44 times higher expectant women who belonged to the Muslim religion compared to those who were Christian (aOR = 9.44, 95% CI: 5.14-17.32, p=0.051). Then, women with a parity of more than four had an odds of two folds of late ANC initiation more than those with a lesser parity (aOR = 2.19, 95% CI: 0.99-4.81, p=0.051). However, negative attitudes of health workers (aOR = 0.20, 95% CI: 0.10-0.38, p<0.001), and receiving health education once or more (aOR = 0.10, 95% CI: 0.05-0.20, p<0.001) reduced the odds of late ANC initiation and these associations were statistically significant. with late initiation of ANC.

Table 4. Factors Influencing ANC attendance among expectant mothers in the Wa East District

Variable	Early initiation	Late initiation	χ^2(*p*-value)	aOR (95% CI), *p*-value
	n (%)	n (%)		
Age *(in years)*			**<0.001**	
19-28	165 (55.7%)	0 (0.0%)		
29-38	131 (44.3%)	109 (100.0%)		
Ethnicity			**<0.001**	
Akan	99 (33.4%)	0 (0.0%)		

Dagaare	63 (21.3%)	73 (67.0%)		
Lobi	36 (12.2%)	0 (0.0%)		
Others	31 (10.5%)	0 (0.0%)		
Sissala	67 (22.6%)	36 (33.0%)		
Religion			**<0.001**	
Christian	234 (79.1%)	37 (33.9%)		1
Muslim	62 (20.9%)	72 (66.1%)		9.44 (5.14-17.32) <0.001
Marital status			**<0.001**	
Married	193 (65.2%)	109 (100.0%)		
Single	103 (34.8%)	0 (0.0%)		
Level of education			**<0.001**	
JHS	90 (30.4%)	0 (0.0%)		
No formal education	33 (11.1%)	73 (67.0%)		
Primary	81 (27.4%)	0 (0.0%)		
SHS/Vocational	68 (23.0%)	36 (33.0%)		
Tertiary	24 (8.1%)	0 (0.0%)		
Occupation			**<0.001**	
Farmer	149 (50.3%)	73 (67.0%)		
Government worker	17 (5.7%)	0 (0.0%)		
Table 4.4 continued				
Trader	75 (25.3%)	36 (33.0%)		
Unemployed	55 (18.6%)	0 (0.0%)		
Partner's level of education			**<0.001**	
JHS	43 (14.5%)	0 (0.0%)		
No formal education	8 (2.7%)	37 (33.9%)		
Primary	140 (47.3%)	72 (66.1%)		
SHS/Vocational	77 (26.0%)	0 (0.0%)		
Tertiary	28 (9.5%)	0 (0.0%)		
Partner's occupation			**<0.001**	
Business man	167 (56.4%)	0 (0.0%)		
Farmer	114 (38.5%)	109 (100.0%)		
Government worker	15 (5.1%)	0 (0.0%)		
Parity			**<0.001**	
0				
1				
2-3	260 (87.8%)	73 (67.0%)		1
≥4	36 (12.2%)	36 (33.0%)		2.19 (0.99-4.81) 0.051
Final decision-making power on delivery place			**<0.001**	
Husband	166 (56.1%)	109 (100.0%)		
Mother and spouse	130 (43.9%)	0 (0.0%)		
Reason for late initiation of ANC			**<0.001**	
Lack of privacy and confidentiality	32 (10.8%)	36 (33.0%)		1
Negative attitudes of health workers	228 (77.0%)	37 (33.9%)		0.20 (0.10-0.38) <0.001

Male health workers Involvement	36 (12.2%)	36 (33.0%)		-
Distance to Health Facility			**<0.001**	
≤1 5 km	38 (12.8%)	109 (100.0%)		
Table 4.4 continued				
5-10 km	195 (65.9%)	0 (0.0%)		
≥10 km	63 (21.3%)	0 (0.0%)		
Met a health staff to attend to you			**<0.001**	
No	0 (0.0%)	36 (33.0%)		
Yes	296 (100.0%)	73 (67.0%)		
Waiting time at ANC services			0.690	
≤1 hour	192 (64.9%)	73 (67.0%)		
≥2 hours	104 (35.1%)	36 (33.0%)		
Number health educations received			**<0.001**	
0	43 (14.5%)	37 (33.9%)		1
1				0.10 (0.05-0.20) <0.001
≥2	253 (85.5%)	72 (66.1%)		
Knowledge on health education received			**<0.001**	
Inadequate	0 (0.0%)	73 (67.0%)		
Adequate	296 (100.0%)	36 (33.0%)		
Sub District			**<0.001**	
Baayiri	64 (21.6%)	0 (0.0%)		
Bulenga	55 (18.6%)	34 (31.2%)		
Funsi	36 (12.2%)	34 (31.2%)		
Holomuni	31 (10.5%)	0 (0.0%)		
Kundugu	0 (0.0%)	35 (32.1%)		
Loggu	95 (32.1%)	0 (0.0%)		
Yaala	15 (5.1%)	6 (5.5%)		

4. DISCUSSION

This study examined the determinants of late antenatal care (ANC) initiation among pregnant women in the Wa East District, Ghana, highlighting key factors including socio-demographics, cultural beliefs, and healthcare provider attitudes. The findings indicate that various socio-cultural and service-related factors significantly contribute to delayed ANC attendance, aligning with maternal healthcare literature in low-resource settings. The study reveals that older age, lower educational levels, and being a farmer are associated with delayed ANC initiation. This finding concurs with research by Kaswa et al. (2018), who observed that women with limited education are often less informed about the importance of early ANC, which contributes to delayed attendance. Studies in sub-Saharan Africa consistently indicate that maternal education correlates positively with early ANC attendance, as educated mothers are typically more empowered to make informed health decisions (Fekadu & Regassa, 2014; Ahmed et al., 2019). Furthermore, a lower socioeconomic status, commonly associated with farming as the primary occupation, often limits women's access to healthcare due to financial constraints (Mutua et al., 2018). This study corroborates findings by Izacar et al. (2023), who identified financial barriers as a significant hindrance to timely ANC access in rural Ghana.

The strong influence of male partners on ANC initiation was prominent, with 67.9% of respondents indicating that their husbands made the final decision regarding ANC visits. This aligns with findings from Tenaw et al. (2023), which highlight that in many African communities, cultural norms assign decision-making power to men, often resulting in delayed or limited healthcare access for women. Such cultural dynamics, particularly in regions where traditional gender roles are entrenched, can hinder ANC attendance and have adverse effects on maternal and child health (Ganle et al., 2015). Research also indicates that empowering women within household decision-making can improve ANC attendance, as seen in studies from Uganda, where women with greater autonomy exhibited higher ANC participation (Kabakyenga et al., 2016). Consequently, interventions aimed at ANC improvement in regions like Wa East may benefit from community-level education that includes male partners to support shared decision-making.

Negative attitudes from healthcare providers were identified as a primary barrier to early ANC initiation, with 65.4% of women citing provider behavior as a deterrent. This finding supports previous research by Bohren et al. (2019), which emphasizes that respectful and supportive interactions between healthcare providers and patients foster a positive healthcare experience and increase ANC uptake. Perceptions of neglect, lack of empathy, and poor communication from healthcare providers often discourage pregnant women from seeking ANC, as identified in maternal healthcare studies across sub-Saharan Africa (Sakeah et al., 2014; Bohren et al., 2017). Notably, the role of community health volunteers in raising awareness and facilitating ANC access, as reported by Sialubanje et al. (2015), suggests that deploying such volunteers could help mitigate the impact of healthcare provider attitudes on ANC attendance.

Additionally, the study highlights logistical challenges such as distance to health facilities, with nearly half of respondents traveling between 5–10 kilometers for ANC services. This geographic barrier echoes findings from studies in rural Kenya and Ethiopia, where long distances to health facilities significantly reduce healthcare access (Mutua et al., 2018; Ahmed et al., 2019). Improving access to ANC through community-based services or transportation support could address this barrier and facilitate early ANC uptake in rural settings.

The results of this study underscore the need for interventions that address socio-cultural norms and healthcare service quality to improve ANC attendance. Engaging male partners in health education campaigns, fostering respectful maternal care, and strengthening the healthcare workforce in rural areas are essential strategies. Moreover, deploying community health workers to conduct home visits and community sensitization on ANC importance may provide a more accessible pathway for pregnant women in remote areas to seek timely care (Sialubanje et al., 2015). By aligning these strategies with evidence from regional studies, policymakers can create tailored interventions that resonate with the local cultural context and address the multifaceted barriers identified. This study contributes to the understanding of late ANC initiation in Ghana's Wa East District, emphasizing the combined influence of socio-demographic, cultural, and healthcare service-related factors. The study's findings align with existing literature, confirming that multifaceted approaches addressing social, economic, and healthcare system barriers are essential to enhancing ANC attendance. Future research should explore the effectiveness of male-inclusive health education and the impact of community health volunteers in fostering early ANC attendance. This knowledge will be invaluable for implementing context-specific maternal health interventions aimed at reducing maternal and neonatal mortality in low-resource settings.

5. CONCLUSION

This study explored the factors influencing late antenatal care (ANC) initiation among pregnant women in the Wa East District, Ghana, highlighting the impact of socio-demographic characteristics, cultural beliefs, and healthcare-related factors. Findings indicate that limited maternal education, lower socioeconomic status, and strong male-dominated decision-making contribute to delayed ANC attendance. Additionally, negative healthcare provider attitudes and geographic barriers further deter early ANC initiation. These findings emphasize the need for holistic interventions that address both social and service-related barriers to maternal healthcare access. Community-centred approaches that involve male partners in health education, promote respectful maternal care, and enhance healthcare access through community health volunteers are recommended to improve ANC attendance and maternal health outcomes. Addressing these multifaceted barriers can help ensure timely ANC uptake, which is critical for reducing maternal and neonatal mortality. This study contributes valuable insights for policymakers and healthcare providers aiming to enhance ANC utilization in rural Ghana and similar low-resource settings. Future research should focus on evaluating the effectiveness of culturally tailored interventions that encourage shared decision-making and strengthen community health systems, thereby supporting improved maternal health outcomes.

6. RECOMMENDATION

Based on the study findings, it is recommended that healthcare policies in the Wa East District prioritize community-based interventions that address both socio-cultural and service-related barriers to antenatal care (ANC). Engaging male partners in maternal health education initiatives can promote shared decision-making and support early ANC attendance. Training healthcare providers on respectful maternal care practices is essential to foster a supportive environment for expectant mothers. Strengthening the role of community health volunteers to conduct home visits and raise awareness can further bridge accessibility gaps. Implementing these measures will help enhance ANC utilization and improve maternal health outcomes in the district.

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Conflict of Interest

The authors declare no conflict of interest.

Data Availability Statement

Data supporting these findings are available within the article, or upon request.

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