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Determinants of Antenatal Care Utilization Among Pregnant Women: A Qualitative Study

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ABSTRACT

Introduction: Antenatal care (ANC) plays a critical role in preventing pregnancy-related complications and improving maternal and neonatal outcomes. Despite expanded maternal health services, inadequate utilization of ANC remains a significant challenge in many settings. Understanding the contextual factors that influence women's decisions to seek antenatal services is essential for improving maternal healthcare delivery. This study aimed to explore the determinants influencing antenatal care utilization among pregnant women.

Research Methodology: This study employed a qualitative exploratory design. Data were collected through in-depth interviews with pregnant women who had experience accessing antenatal services. Participants were selected using purposive sampling to ensure inclusion of individuals with relevant experiences. Data collection continued until thematic saturation was achieved. Interviews were audio-recorded, transcribed verbatim, and analyzed using thematic analysis to identify patterns and themes related to antenatal care utilization.

Results: The analysis identified four major themes influencing antenatal care utilization: maternal knowledge and awareness of pregnancy care, accessibility of health services, family support and decision-making dynamics, and socio-cultural beliefs regarding pregnancy. Women with greater knowledge of the benefits of antenatal care were more motivated to attend routine visits. However, structural barriers such as distance to health facilities, transportation constraints, and long waiting times sometimes limit service utilization. Family encouragement, particularly from husbands, facilitated attendance at antenatal care, while cultural perceptions that pregnancy is a natural process occasionally reduced the perceived need for routine check-ups.

Conclusion: Antenatal care utilization is shaped by complex interactions among individual, social, and health system factors. Strengthening maternal health education, improving accessibility of primary healthcare services, and promoting family involvement in pregnancy care are essential strategies to increase ANC utilization. Policies and interventions addressing these multidimensional determinants are necessary to improve maternal health outcomes.

Keywords: Antenatal Care; Health Services Accessibility; Maternal Health; Pregnancy.

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INTRODUCTION

Antenatal care (ANC) is a fundamental component of maternal health services that aims to prevent complications, detect risk factors early, and ensure optimal outcomes for both mothers and infants (Aga, 2026). Despite global progress in maternal health, inadequate utilization of ANC remains a persistent challenge in many low- and middle-income countries (Akalanka et al., 2025). The World Health Organization recommends a minimum of eight antenatal contacts during pregnancy to improve maternal and neonatal outcomes (Al Agili et al., 2025). However, in many settings, pregnant women still initiate ANC late or attend fewer visits than recommended. Insufficient ANC utilization contributes to preventable maternal and neonatal morbidity and mortality, indicating that improving access alone is insufficient without understanding the determinants that influence women's decisions to seek care (Al-Zubayer et al., 2024).

Previous studies have identified multiple factors associated with ANC utilization. Socio-demographic determinants such as maternal education, household income, employment status, and parity are consistently reported as predictors of ANC attendance (Anumudu et al., 2025). Women with higher education and better economic status are more likely to utilize maternal health services because they possess greater health literacy and financial capacity to access care (Balta et al., 2026). In addition, geographic accessibility, including distance to health facilities and transportation availability, has been widely documented as a structural barrier to ANC attendance (Banti et al., 2026). Health system factors, such as service quality, waiting times, provider attitudes, and the availability of skilled health personnel, also play a significant role in shaping women's healthcare-seeking behavior (Bragg et al., 2025).

Beyond structural determinants, socio-cultural influences are increasingly recognized as critical factors affecting maternal health service utilization. Cultural beliefs regarding pregnancy, family decision-making dynamics, and the influence of husbands or older family members may either facilitate or hinder women's access to ANC (Fatiah et al., 2026). In several communities, pregnancy is perceived as a natural condition that does not require medical supervision unless complications arise (Gedef et al., 2024). Such perceptions may reduce the perceived necessity of routine antenatal visits. Additionally, fear of medical procedures, previous negative experiences with health providers, and lack of trust in healthcare systems may further discourage women from attending ANC services regularly (Hatijar et al., 2025).

While quantitative studies have contributed substantially to identifying statistical associations between socio-demographic variables and ANC utilization, these approaches often provide limited insight into the underlying social meanings, perceptions, and contextual realities that shape maternal health behaviors (Heyi et al., 2025). Statistical correlations alone cannot fully explain why certain women, even when services are available, still delay or avoid antenatal visits. As a result, understanding the complex interaction between structural barriers, cultural norms, and individual perceptions requires methodological approaches capable of capturing lived experiences and contextual nuances (Jackson et al., 2024).

The existing literature in maternal health research remains dominated by cross-sectional surveys that focus primarily on measurable determinants such as education, income, and geographic access. Although these studies offer valuable epidemiological evidence, they often overlook the experiential and contextual dimensions of healthcare decision-making during pregnancy (Markos et al., 2026). Consequently, there is still limited qualitative evidence that explores how pregnant women interpret the importance of ANC, negotiate healthcare decisions within family structures, and navigate barriers within the health system. This gap restricts the

development of context-sensitive maternal health interventions that address both structural and socio-cultural determinants simultaneously.

Addressing this gap requires a qualitative approach that explores pregnant women's perspectives, experiences, and decision-making processes regarding ANC utilization. By examining the social, cultural, and systemic contexts in which maternal healthcare decisions are made, qualitative inquiry can provide deeper insights into the mechanisms that shape care-seeking behaviors. Such understanding is essential for designing maternal health programs that are not only accessible but also socially acceptable and responsive to women's lived realities.

Therefore, the novelty of this study lies in its focus on antenatal care utilization through an in-depth qualitative lens, emphasizing women's lived experiences, perceptions of pregnancy care, and the socio-cultural contexts that influence their healthcare decisions. Rather than merely identifying statistical predictors, this study seeks to uncover the underlying mechanisms and meanings that shape ANC utilization. The objective of this study is to explore and understand the determinants influencing antenatal care utilization among pregnant women by examining their experiences, perceptions, and decision-making processes regarding maternal health services.

RESEARCH METHODOLOGY

Study Design

This study employed a qualitative research design using an exploratory approach. The qualitative design was chosen to obtain an in-depth understanding of the social, cultural, and contextual factors influencing antenatal care (ANC) utilization among pregnant women. This approach allows researchers to explore participants' experiences, perceptions, and decision-making processes related to maternal health service use.

Setting and Participants

The study was conducted at primary healthcare facilities and surrounding communities in the study area from January to April 2025. Participants were pregnant women who had experience accessing antenatal care services during their current or recent pregnancy. Inclusion criteria included pregnant women aged 18 years or older, residing in the study area for at least six months, and willing to participate in the study. Exclusion criteria included women with severe illness that prevented participation in interviews and those unable to communicate effectively during data collection. Participants were selected through purposive sampling to ensure inclusion of individuals who could provide rich, relevant information on ANC utilization. Sampling continued until data saturation was achieved, at which point no new themes emerged from additional interviews.

Variables and Measurement

The main focus of this study was the exploration of determinants influencing antenatal care utilization. Key domains explored included socio-demographic characteristics, perceptions of pregnancy and maternal health services, accessibility of healthcare facilities, family support, cultural beliefs, and experiences with healthcare providers. Data were collected using a semi-structured interview guide developed based on existing maternal health literature. Maternal health experts reviewed the interview guide to ensure content validity. A pilot interview was conducted to assess the clarity and relevance of the questions. Reliability was ensured through the consistent use of the interview protocol and the audio recording of interviews to maintain data accuracy. The primary data source consisted of in-depth interviews with pregnant women. Additional contextual information was obtained from field notes recorded during the interviews.

Data Collection

Data collection was conducted through face-to-face in-depth interviews. Each interview lasted approximately 30–45 minutes and was conducted in a private setting to ensure participant comfort and confidentiality. Interviews were audio-recorded with participants' consent and later transcribed verbatim for analysis. To maintain data quality, researchers followed standardized interview procedures, conducted regular team discussions to review interview transcripts, and cross-checked transcripts with audio recordings. Field notes were also used to capture non-verbal cues and contextual observations during the interviews.

Data Analysis

Qualitative data analysis was performed using thematic analysis. Interview transcripts were read repeatedly to achieve familiarity with the data. Initial codes were generated from meaningful text segments and subsequently organized into broader categories and themes representing determinants of antenatal care utilization. The coding process was conducted independently by two researchers to enhance analytical rigor. Differences in coding were discussed until consensus was reached.

Ethical Approval

This study received ethical approval from the Institutional Health Research Ethics Committee of the affiliated university. The ethical approval number for this study was No. 001553/KEPK Poltekkes Kemenkes Palu/2025. All participants provided written informed consent before participation. Participants were informed about the study objectives, the voluntary nature of participation, the confidentiality of data, and their right to withdraw from the study at any time without consequences.

RESULT

Table 1 presents the demographic characteristics of the study informants.

Informant Code	Age (years)	Education Level	Parity	Occupation	Gestational Age
P1	22	Secondary school	Primigravida	Housewife	24 weeks
P2	28	Secondary school	Multigravida	Housewife	32 weeks
P3	30	Higher education	Multigravida	Private employee	28 weeks
P4	25	Secondary school	Primigravida	Housewife	20 weeks
P5	34	Primary school	Multigravida	Farmer	30 weeks
P6	27	Secondary school	Multigravida	Small trader	26 weeks
P7	23	Secondary school	Primigravida	Housewife	22 weeks
P8	31	Higher education	Multigravida	Government employee	29 weeks

Table 2. Presents the major themes and subthemes identified from the qualitative analysis.

Theme	Subthemes
Knowledge and perception of pregnancy care	Awareness of ANC importance; Perceived benefits of regular check-ups
Accessibility of health services	Distance to health facility; Transportation availability; Waiting time
Family and social support	Husband's encouragement; Influence of family members
Experience with healthcare providers	Communication with midwives: Perceived quality of care
Cultural beliefs and perceptions	Pregnancy is considered a natural process; Preference for traditional advice.

Theme 1. Knowledge and Awareness of Antenatal Care

The first theme identified from the analysis was maternal knowledge and awareness regarding antenatal care (ANC). Participants generally understood that ANC plays an important role in monitoring pregnancy and identifying potential complications early. Women who had received information from midwives or health workers were more aware of the benefits of routine antenatal visits.

Two main subthemes emerged within this theme: awareness of pregnancy risk and perceived benefits of routine pregnancy monitoring. Participants reported that antenatal examinations helped them understand their health condition and the development of the fetus. One participant explained:

> *"The midwife explained that regular antenatal check-ups help detect problems early, so I try not to miss my visits."* (P3)

Another participant emphasized the importance of monitoring fetal health:

> *"When I come for a check-up, the midwife examines the baby and tells me whether everything is normal."* (P1)

These findings indicate that knowledge and health information obtained from healthcare providers significantly influence pregnant women's motivation to utilize antenatal services.

Theme 2. Physical and Structural Accessibility of Health Services

The second theme concerns the accessibility of health services, including geographical distance, transportation availability, and service-related barriers. Several participants reported that the distance between their homes and healthcare facilities sometimes made it difficult to attend regular antenatal visits.

Two subthemes were identified: distance to health facilities **and** service-related constraints such as waiting time and transportation availability. Women living in areas with limited transportation options often had to rely on family members to reach the health facility. One participant stated:

> *"The health center is quite far from my house, so sometimes I postpone the visit if transportation is not available."* (P5)

Another participant highlighted the issue of waiting time at the health facility:

> *"Sometimes there are many patients at the clinic, and the waiting time is long."* (P4)

These findings suggest that structural barriers within the healthcare system can influence women's ability to access antenatal services consistently.

Theme 3. Family Support and Decision-Making Dynamics

The third theme highlights the role of family support and household decision-making in antenatal care utilization. Many participants emphasized that encouragement and assistance from husbands and other family members facilitated their attendance at antenatal visits.

Two subthemes emerged: husband's encouragement and family influence in healthcare decisions. Women who received emotional and logistical support from their families were more likely to seek maternal health services regularly. One participant described the role of her husband in supporting antenatal care attendance:

> *"My husband always reminds me to go for antenatal check-ups and sometimes accompanies me to the clinic."* (P7)

Another participant noted that family advice also influenced her decision to seek care:

> *"My mother told me that checking the pregnancy regularly is important for the baby's health."* (P6)

These findings demonstrate that family dynamics play an important role in shaping maternal health-seeking behavior.

Theme 4. Cultural Beliefs and Experiences with Healthcare Providers

The fourth theme relates to cultural beliefs and experiences with healthcare providers, which influence women's perceptions of antenatal care. Some participants reported that in their community, pregnancy is often considered a natural condition that does not require frequent medical supervision unless complications occur. Two subthemes were identified: cultural perceptions of pregnancy and women's experiences with healthcare providers. While cultural beliefs sometimes reduced the perceived need for regular check-ups, positive experiences with healthcare providers increased women's trust in maternal health services. One participant explained:

> *"Some older people say pregnancy is normal, so there is no need to check it too often unless there is a problem."* (P6)

However, positive interactions with healthcare providers encouraged women to continue attending ANC visits. As one participant stated:

> *"The midwives are friendly and explain everything clearly, which makes me feel comfortable coming here."* (P2)

Overall, these findings highlight the importance of culturally sensitive communication and respectful care in improving antenatal care utilization.

The qualitative findings revealed that antenatal care (ANC) utilization among pregnant women is influenced by a multidimensional interaction of individual knowledge, structural accessibility, family dynamics, and socio-cultural beliefs. Women with greater knowledge of pregnancy monitoring and the benefits of antenatal examinations demonstrated stronger motivation to attend routine ANC visits. Health information provided by midwives and healthcare workers played a critical role in shaping women's awareness regarding the importance of early detection of pregnancy complications and fetal health monitoring. However, structural barriers within the healthcare system were also identified as important determinants influencing ANC utilization. Geographic distance to health facilities, transportation limitations, and long waiting times at clinics were frequently reported as challenges that sometimes delayed or reduced the frequency of antenatal visits. These findings suggest that physical accessibility and service efficiency remain key factors affecting maternal healthcare utilization.

Family and social support further influenced women's healthcare-seeking behavior. Support from husbands and family members facilitated antenatal care attendance by providing encouragement and logistical assistance, such as transportation to health facilities. In contrast, cultural perceptions that regard pregnancy as a natural condition requiring minimal medical supervision sometimes reduce the perceived necessity of routine antenatal examinations. Overall, the findings indicate that improving antenatal care utilization requires integrated strategies that address not only knowledge gaps but also structural barriers, family engagement, and culturally sensitive maternal health services.

Table 3: Determinants of Antenatal Care (ANC) Utilization

Domain	Key Factors	Description of Findings	Impact on ANC Utilization
Individual Knowledge	Awareness of ANC benefits; Pregnancy monitoring knowledge	Women with a better understanding of ANC and pregnancy risks were more motivated to attend routine visits. Health education from midwives increased awareness.	Positive influence increases ANC attendance.
Health System / Structural Accessibility	Distance to facilities, transportation, and waiting time	Geographic barriers, limited transport, and long waiting times reduced access and delayed visits.	Negative influence reduces the frequency of visits.
Family and Social Support	Husband support; Family encouragement; Logistical assistance	Emotional and practical support (e.g., transport, reminders) from family facilitated healthcare-seeking behavior.	Positive influence improves attendance.
Socio-Cultural Beliefs	Pregnancy as a natural condition: Traditional perceptions	Beliefs that pregnancy does not require medical care unless complications arise reduced perceived need for ANC.	Negative influence decreases perceived necessity.
Health Information & Provider Role	Communication with midwives; Health education	Information provided by healthcare workers shaped awareness and motivated women to seek care.	Positive influence strengthens utilization.
Overall Interaction	Multidimensional factors (individual, structural, social, cultural)	ANC utilization is shaped by the interaction of multiple determinants rather than a single factor.	Complex effect requires integrated interventions.
Implications for Practice	Education; Accessibility improvement; Family engagement; Cultural sensitivity	Strategies should address knowledge gaps, reduce structural barriers, involve families, and ensure culturally sensitive care.	Improves overall ANC utilization

DISCUSSION

This study explored the determinants of antenatal care (ANC) utilization among pregnant women using a qualitative approach. The findings demonstrate that ANC utilization is shaped by an interaction of individual knowledge, structural accessibility of health services, family support systems, and socio-cultural perceptions of pregnancy. Women with greater awareness of the benefits of routine antenatal monitoring were more motivated to attend regular ANC visits. However, structural barriers such as distance to healthcare facilities, transportation constraints, and waiting times sometimes limited consistent utilization of services. In addition, family dynamics, particularly support from husbands and close relatives, played an important facilitating role in women's healthcare-seeking behavior. Cultural beliefs that view pregnancy as a natural process that does not necessarily require medical supervision also influenced perceptions of the necessity of routine antenatal visits. These findings indicate that antenatal care utilization is

determined by complex interactions between individual, household, and health system factors (Omar et al., 2026).

The findings of this study can be interpreted through the lens of health behavior and healthcare utilization theories, particularly Andersen's Behavioral Model of Health Services Use. According to this framework, health service utilization is influenced by predisposing factors, enabling resources, and perceived needs (Rishard et al., 2026). Maternal knowledge and perceptions regarding pregnancy care function as predisposing factors that shape attitudes toward antenatal services. Women who perceive ANC as beneficial for monitoring fetal development and preventing complications are more motivated to use maternal health services (Ritu et al., 2025).

Enabling factors identified in this study include the physical accessibility of health facilities, the availability of transportation, and service efficiency within primary healthcare settings (Sani et al., 2025). These structural elements determine whether individuals who intend to seek care can do so effectively (Shibeshi et al., 2025). In contexts where geographic distance and transportation barriers exist, even women with adequate knowledge may have difficulty accessing antenatal services. This finding highlights the importance of strengthening primary healthcare systems to reduce structural barriers to maternal healthcare utilization (Shiferaw & Minale, 2025).

Perceived need also emerged as an important determinant of ANC attendance. Cultural perceptions that pregnancy is a normal life event rather than a medical condition requiring supervision may reduce women's perceived need for regular antenatal visits (Sichalwe et al., 2026). Community norms and intergenerational advice from family members often reinforce such perceptions. This dynamic illustrates how healthcare decisions during pregnancy are embedded within broader socio-cultural contexts rather than being purely individual choices (Silaen et al., 2025).

Another theoretical perspective relevant to these findings is the socio-ecological model of health behavior, which emphasizes the interaction between individual, interpersonal, community, and institutional factors (Suriyani et al., 2025). In this study, individual knowledge influenced women's understanding of pregnancy risks. At the same time, interpersonal relationships, particularly support from husbands and family members, played a critical role in facilitating access to healthcare services (Zeleke et al., 2025). At the institutional level, the quality of interactions between women and healthcare providers shaped trust and willingness to continue attending antenatal visits (Tilahun et al., 2026). These interconnected levels highlight that improving maternal health service utilization requires interventions that operate across multiple layers of the health system and community structures (Tolossa et al., 2024).

From a broader maternal health systems perspective, these findings reinforce the importance of aligning local health services with global recommendations for pregnancy care. The World Health Organization recommends a minimum of eight antenatal contacts during pregnancy to improve maternal and neonatal outcomes through early detection and management of complications (Wijayanti et al., 2025). However, achieving this target requires not only service availability but also community acceptance and accessibility of care. Programs that focus solely on expanding facility-based services without addressing social and cultural determinants may fail to improve antenatal care utilization significantly (Wirawan et al., 2026).

Strengths and Limitations

This study has several strengths that contribute to its conceptual and practical relevance. First, the qualitative research design enabled an in-depth exploration of pregnant women's experiences and perceptions regarding antenatal care utilization. This approach allowed the study

to capture contextual factors such as cultural beliefs, family dynamics, and perceptions of healthcare providers that are often difficult to measure using quantitative methods. Second, purposive sampling ensured that participants had relevant experience in pregnancy care, thereby enriching the data. Third, the application of thematic analysis enabled the systematic identification of patterns across participants' narratives, contributing to a more comprehensive understanding of the determinants influencing ANC utilization.

Despite these strengths, several limitations should be considered when interpreting the findings. The study was conducted in a specific local setting, which may limit the transferability of the results to other regions with different cultural or health system contexts. In addition, qualitative findings are inherently interpretative and rely on participants' subjective experiences and recollections. While efforts were made to ensure analytical rigor through careful coding and discussion among researchers, potential biases in interpretation cannot be entirely excluded. Finally, the number of participants in qualitative research is typically limited, which may restrict the diversity of perspectives captured in the study. Nevertheless, the insights from this research provide valuable contextual evidence to inform maternal health policies and interventions to improve antenatal care utilization.

CONCLUSION

This study aimed to explore the determinants influencing antenatal care (ANC) utilization among pregnant women. The findings demonstrate that ANC utilization is shaped by a complex interaction of maternal knowledge, accessibility of health services, family support, and socio-cultural perceptions of pregnancy. Women who possessed greater awareness of the benefits of routine pregnancy monitoring were more motivated to attend antenatal visits, particularly when supported by encouraging family environments. However, structural barriers such as distance to healthcare facilities, transportation constraints, and service-related challenges sometimes limited consistent access to ANC services. Cultural perceptions that view pregnancy as a natural condition not requiring frequent medical supervision also influenced women's healthcare-seeking behavior.

These findings highlight that improving antenatal care utilization requires integrated strategies that address both individual and systemic determinants. Strengthening maternal health education through community-based programs, involving husbands and family members in pregnancy care promotion, and improving accessibility of primary healthcare services are essential interventions. In addition, health systems should prioritize respectful and culturally sensitive maternal care to enhance women's trust in healthcare providers. Policymakers should consider these multidimensional factors when designing maternal health programs to increase antenatal care coverage and improve maternal and neonatal outcomes.

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Conflict of Interest

The authors declare that there are no conflicts of interest related to this study.

Data Availability

The data supporting the findings of this study are available from the corresponding author upon reasonable request.

Authors' Contributions

Hasni conceptualized and designed the study, conducted data collection and analysis, and drafted the manuscript. Saman contributed to study design, data interpretation, and manuscript revision. Novica Ariyanti Putri assisted in data collection and analysis. Sova Evie contributed to data interpretation and manuscript editing. Enggar supported data analysis and final manuscript preparation. All authors read and approved the final manuscript.

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