Level of antenatal care compliance and satisfaction among selected pregnant women

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Abstract

Antenatal care (ANC) compliance is vital in reducing maternal mortality by preventing pregnancy-related complications. Satisfaction, however, is a primary factor influencing compliance. This study aimed to assess the level of ANC compliance and satisfaction among pregnant women in three selected barangays in Candelaria, Quezon, Philippines as well as the factors influencing service utilization. A total of 146 pregnant women from the target client list of their respective barangays were included through total enumeration sampling. The study adopted a quantitative, non-experimental design using comparative and descriptive correlational methods to examine the relationship between compliance and satisfaction, and to compare the three barangays in terms of ANC service implementation. Data were gathered using researcher-made and modified questionnaires, with responses assessed through the user scale. Statistical tools employed included frequency and percentage, weighted mean, and Pearson r Correlation. Findings revealed that pregnant women across the three barangays were highly compliant and satisfied with the ANC services available to them. Results further showed a statistically significant, moderate correlation between compliance and satisfaction, highlighting that higher satisfaction tends to improve compliance. This study emphasizes the importance of maintaining both quality and accessibility of ANC services to ensure maternal well-being. Strengthening patient-centered care and continuously improving service delivery may further enhance satisfaction and encourage consistent ANC compliance, ultimately contributing to reduced maternal health risks.

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1. Introduction

The health of both mother and baby during pregnancy is a primary concern to ensure optimal well-being and to prevent adverse outcomes across different stages of pregnancy. Antenatal care (ANC) is a vital preventive health service provided to pregnant women by healthcare professionals. ANC is aligned with Sustainable Development Goal (SDG) 3, Good Health and Well-Being, specifically Target 3.1, which seeks to reduce the global maternal mortality ratio (MMR) to fewer than 70 deaths per 100,000 live births (World Health Organization [WHO], 2015). Beyond reducing risks, ANC also prepares mothers for childbirth and parenthood, while managing three major health issues: pregnancy-related complications, pre-existing medical conditions aggravated by pregnancy, and risks linked to unhealthy lifestyle practices.

Reducing MMR remains a global challenge, particularly in developing and underdeveloped nations. Despite progress in recent decades, MMR remains disproportionately high in low- and middle-income countries. Many Southeast Asian nations continue to fall short of the SDG targets due to limited ANC utilization, sociocultural barriers, and unequal access to health services. These shortcomings highlight gaps in government programs and interventions (Herwansyah et al., 2022).

In the Philippines, maternal mortality remains high despite the implementation of maternal healthcare programs, particularly ANC services. Effective utilization and compliance with ANC services can bridge the gap between maternal health needs and service use, ultimately reducing maternal morbidity and mortality (Cagayan et al., 2022). However, barriers such as the lack of skilled barangay health workers (BHWs), financial constraints, and other discouraging factors hinder access. Addressing these barriers is essential to improve maternal healthcare and increase ANC compliance (Yamashita et al., 2017).

Compliance with ANC services is a key strategy in reducing MMR, particularly in resource-limited settings. Pregnant women must recognize the importance of ANC in preventing maternal and child mortality and pregnancy-related complications. Assessing women's knowledge and satisfaction with ANC services is crucial in understanding and addressing compliance issues.

This study aims to examine the level of ANC compliance and satisfaction among pregnant women in three barangays of Candelaria, Quezon, Philippines. Specifically, it seeks to answer the following research questions:

1. What factors affect pregnant women's compliance with antenatal care?

2. What is the level of compliance of pregnant women receiving antenatal care from the Barangay Health Center?

3. What is the level of satisfaction of pregnant women receiving antenatal care from the Barangay Health Center?

4. How do healthcare providers' attitudes and communication skills influence pregnant women's satisfaction with antenatal services?

2. Literature Review

Attendance at ANC services is shaped by several socio-demographic, economic, cultural, and healthcare-related factors.

Age and Parity. Age is one of the most consistent predictors of ANC utilization. Maligana (2017) noted that younger women, particularly those in the lower age brackets, are four times more likely to comply with ANC compared to older women. Younger mothers are often more cautious, especially during their first pregnancy, and therefore seek guidance from health professionals. Their level of awareness about pregnancy may be good, but they still require further education and reassurance, which makes them more reliant on health facilities. Sossah (2015) further emphasized that women aged 15–29 are more likely to comply with maternal health programs since this group often experiences first-time pregnancies, requiring a higher level of engagement.

Parity, or the number of pregnancies a woman has had, also shapes ANC behavior. Primiparous women (first-time mothers) are generally more compliant because they lack prior experience and thus feel the need to attend all recommended visits (Sharifipour et al., 2023; Tarekegn et al., 2014). Laksono et al. (2020) found that primiparous women are more likely to complete ANC schedules than multiparous women, who may feel confident in handling pregnancy without frequent consultations. Tessema and Minyihun (2021) confirmed that women with fewer pregnancies tend to have at least four ANC visits, while multiparous women often have fewer, believing that their past experience substitutes for medical guidance.

Marital Status and Partner Support. Marital status plays a decisive role in ANC compliance. Women who are single, widowed, or divorced face greater challenges due to lack of financial and emotional support, making them more vulnerable to poor ANC attendance (Rurangirwa et al., 2017). In contrast, married women with supportive partners are far more

likely to access services consistently. Wulandari et al. (2021) found that having a husband's support increases ANC attendance by four times compared to women without such support.

Partner involvement provides emotional reassurance, financial resources, and encouragement throughout pregnancy, making women more confident in seeking care. De Vaus et al. (2019) added that modern cohabiting couples often plan pregnancies together, which fosters shared responsibility in accessing maternal services. This joint participation reduces the likelihood of women carrying the burden of pregnancy alone, ensuring higher compliance.

Education. Education is another strong determinant of ANC compliance. Maligana (2017) argued that education enhances women's decision-making power, confidence, and capacity to recognize the importance of maternal health. Mothers with secondary or higher education are more likely to initiate ANC early, as they are aware of its benefits for both mother and child. Conversely, women with little or no education often delay visits or fail to attend at all.

Education not only empowers women but also influences their husbands. Omar et al. (2020) emphasized that men with higher education are more likely to accompany their wives to ANC visits and encourage compliance. Similarly, Ali et al. (2018) found that educated women are better able to understand health information, recognize danger signs, and effectively utilize services. Education also shapes long-term family planning behaviors, as Nang-Bayi (2021) observed among high school graduates, where socioeconomic constraints often redirect focus to family life rather than higher education.

Socioeconomic Status. Socioeconomic factors, particularly income and occupation, strongly affect ANC attendance. Nicholls-Dempsey et al. (2023) found that women with stable occupations and sufficient income have better access to services, as financial resources ease the burden of medical and indirect costs. On the other hand, low-income women often perceive ANC as unaffordable, leading to lower compliance.

Unemployment during pregnancy is also common, as women may stop working to prioritize their health. However, this often reduces household income, making it difficult to cover hospital and medication expenses (Scorgie et al., 2015). Mwase-Musicha et al. (2022) highlighted that inadequate savings increase the likelihood of financial stress during pregnancy and childbirth. Likewise, Sakar et al. (2021) and Weldemariam et al. (2018) reported that

women from lower socioeconomic backgrounds are less likely to attend ANC due to cost barriers, reinforcing the importance of economic preparation for a healthy pregnancy.

Geographical Barriers. Accessibility remains a major determinant of ANC utilization. Khan (2024) observed that as the distance to healthcare facilities increases, ANC attendance decreases significantly, especially in rural areas. Lack of reliable transportation compounds this issue, making it costly and time-consuming for women to seek care. Travel expenses, when added to service-related costs, discourage regular visits, particularly among economically disadvantaged households.

Cultural Beliefs and Traditions. Cultural practices also affect ANC compliance. In some areas, traditional taboos and local practices continue to discourage women from seeking formal health services, often resulting in higher maternal and neonatal mortality (Aynalem et al., 2023). However, not all women are influenced by cultural pressures. Sikar et al. (2023) found that some pregnant women reject superstitious beliefs and rely solely on medical guidance, demonstrating that cultural factors are not universally restrictive but vary across communities.

Quality of Care. The quality of healthcare services is a crucial factor in utilization. Ali et al. (2018) reported that poor service delivery, such as being sent home without proper care, insufficient staff, and lack of free medications, reduces women's motivation to attend. Outdated equipment, shortages of supplies, and unsanitary work environments further compromise service quality and trust in the system (van Pelt et al., 2020).

Long waiting times also discourage attendance. Lakew et al. (2018) found that some women waited an hour or more to be seen, with delays often caused by late-arriving staff. These inefficiencies waste women's time and reduce satisfaction. Broader structural issues such as weak policies, untrained staff, and low motivation contribute to poor service delivery (Geta et al., 2023; Saad-Haddad et al., 2016).

Provider Attitudes and Communication. Healthcare workers' attitudes and communication styles significantly influence compliance. Respectful, empathetic, and friendly providers encourage women to return for follow-ups, increasing compliance and satisfaction (Mannava et al., 2015; Canning et al., 2016; Nicol, 2015). Baliddawa et al. (2021) stressed that effective communication requires understanding patients' perspectives, which fosters trust and cooperation.

Negative provider behavior, however, discourages utilization. Mwenebanda et al. (2024) found that verbal abuse, scolding, and disrespect by staff often deterred women from returning. Drigo et al. (2020) reported cases of mistreatment and discrimination, where women were denied services or made to wait excessively, leading to frustration and distrust. Asifere and Tessema (2018) and Bako et al. (2022) confirmed that poor communication erodes confidence, while respectful engagement improves satisfaction.

Compliance and Satisfaction. ANC compliance and satisfaction are closely linked. Women who attend multiple ANC visits are more knowledgeable about their pregnancies and express higher satisfaction with services (Ayalew et al., 2021). Satisfaction, in turn, leads to better health behaviors, increased compliance, and improved pregnancy outcomes (Rabago et al., 2024; Fatmawati, 2020). Cullen et al. (2023) noted that providing appropriate education and care increases women's willingness to continue attending services.

Compliance ensures timely detection of complications and promotes safe pregnancies, ultimately lowering maternal mortality (Tessema et al., 2022; Roro et al., 2022). Rahman et al. (2016) showed that satisfaction and compliance are positively correlated, though both are influenced by external factors such as service quality and accessibility. Kebede et al. (2020) emphasized that assessing satisfaction is essential for understanding compliance behaviors and reducing maternal deaths.

3. Methodology

3.1 Research Design

The study employed a quantitative, experimental research design, utilizing descriptive, comparative, and correlational techniques. This design was used to compare the levels of ANC compliance and satisfaction among selected pregnant women across three barangays in Candelaria, Quezon. A descriptive-correlational approach was also applied to assess the relationship between two variables, compliance and satisfaction, and the possible factors influencing pregnant women's beliefs and perceptions regarding the services provided at their respective Barangay Health Centers.

3.2 Research Instrument

The researchers developed a structured research questionnaire or survey as the primary data-gathering tool. The questionnaire consisted of five parts:

Part I: Demographic profile of respondents.

Part II: Situations assessing potential factors influencing perceptions and attendance of pregnant women at ANC services.

Parts III and IV: Statements and situations evaluating the level of compliance and satisfaction with ANC services.

Part V: Statements assessing the development of healthcare providers' communication skills.

A four-point Likert scale was applied to measure attitudes and opinions, with options ranging from strongly disagree (1) to strongly agree (4). This scale supported Parts II to V of the questionnaire to capture participants' perceptions and experiences. Responses served as the primary dataset for analysis.

3.3 Data Gathering Procedures

The data were collected through the following steps:

Permission to conduct the study – A letter of consent was presented to the school administration to secure approval. Similar permission was sought from local authorities, including Barangay Captains, midwives, community nurses, and BHWs.

Questionnaire development – Upon approval, the researchers finalized the questionnaires for distribution.

Respondent selection – Participants were identified from the 2024–2025 Target Client List of their respective barangays. Each was asked for informed consent before participation.

Questionnaire distribution – The researchers, in collaboration with midwives and BHWs, distributed the questionnaires to eligible respondents. Data collection began in the last week of January 2025.

3.4 Participants of the Study

The participants were selected pregnant women from Barangay Mangilag Sur, Malabanban Norte, and Pahinga Norte in Candelaria, Quezon. A total of 146 respondents were included, based on their inclusion in the target client list and an expected delivery date between March and the latter part of 2025. An additional 20 respondents participated in a pilot test.By focusing on these participants, the study assessed the quality and effectiveness of ANC services in the three barangays, which recorded the highest number of pregnant women in Candelaria.

Table 1

Demographic characteristics of the participants

Profile	Frequency	Percentage
Age		
19 and Below	19	13
20 - 29 Years Old	80	54.8
30 -39 Years Old	42	28.8
40 - 49 Years Old	5	3.4
Marital Status		
Single	3	2.1
Married	71	48.6
Lived-In	72	49.3
Educational Background		
Elementary Level	2	1.4
High School Level	23	15.8
College Level	30	20.5
Elementary Graduate	11	7.5
High School Graduate	52	35.6
College Graduate	26	17.8
Post-Graduate	2	1.4
Occupation		
Employed	50	34.2
Unemployed	82	56.2
Self-Employed	14	9.6
Monthly Income		
Less Than 10,000	72	49.3
10,000 - 20,000	54	37
20,000 - 30,000	17	11.6
30,000 - 40,000	2	1.4
40,000 and Above	1	0.7
Gravida		
1	36	24.7
2	47	32.2
3	36	24.7
4	14	9.6
5 and More	13	8.9
Parity		
None	40	27.4
1	50	34.2
2	34	23.3
3	14	9.6
4	5	3.4
5 and More	3	2.1
Number of Prenatal Visits		
4 and Below	58	39.7
4 and Above	88	60.3
TOTAL	**146**	**100**

The demographic profile of the respondents provides valuable insights into the factors influencing ANC compliance and satisfaction among pregnant women in the three selected

barangays of Candelaria, Quezon. Age emerged as a significant factor in ANC utilization. Younger women, particularly those in the 20–29 age group, are more likely to attend ANC services due to higher sexual activity, which leads to both planned and unplanned pregnancies. This age group has a greater tendency to participate in maternal programs compared to older women (Sossah, 2015). Marital and cohabitation status also plays a crucial role. Many respondents reported living with a partner, highlighting the importance of shared responsibility in pregnancy. Cohabitation often reflects a deliberate step in family planning, where couples work together to ensure a healthy pregnancy before entering into formal marriage (De Vaus et al., 2019). Education further shapes compliance. High school graduates were highly represented, reflecting how socioeconomic factors, particularly financial limitations, may prevent women from pursuing higher education. Instead, many enter into early family life, leading to early childbearing (Nang-Bayi, 2021). Socioeconomic status, including occupation and income, also influences ANC attendance. Many pregnant women remain unemployed during pregnancy to focus on their health, though this limits financial stability. Low income reduces their capacity to prepare adequately for pregnancy and future childrearing needs (Scorgie et al., 2015; Mwase-Musicha et al., 2022). Reproductive history also affects compliance. Primigravid and primiparous women tend to attend ANC more consistently, as they lack prior experience and are more cautious, while multigravid and multiparous women often rely on past experiences and are less likely to complete recommended visits (Laksono et al., 2020; Tessema & Minyihun, 2021).

The study used total enumeration sampling, inviting all individuals who met the inclusion criteria to participate. This method was chosen to examine the entire population sharing the specified characteristics.

3.5 Data Analysis Plan

Responses to the questionnaires were analyzed using appropriate statistical methods. An arbitrary scale guided the interpretation of compliance and satisfaction levels.

The following are the statistical treatments used:

Frequency and percentage – to describe data distribution, especially demographic profiles.

Weighted mean – to measure the overall level of compliance and satisfaction, and the factors influencing these.

Pearson's r correlation – to determine the significance, strength, and direction of the relationship between compliance and satisfaction.

4. Findings and Discussion

Table 2 presents the mean distribution of factors affecting compliance with ANC services. Overall, respondents generally agreed on the factors influencing their compliance, with the results indicating that several key elements play a role in shaping women's behavior toward antenatal care.

Table 2

Mean distribution according to the factors that affect compliance with ANC services

Statements	Mean	Standard Deviation	Remarks
The health workers are displaying good attitudes.	3.8014	0.4003	Strongly Agree
They were providing good-quality services.	3.7603	0.4742	Strongly Agree
The number of staff in the healthcare facility is sufficient.	3.6507	0.5330	Strongly Agree
I am receiving enough support from my family.	3.6027	0.6693	Strongly Agree
They utilized good-quality equipment in providing their services.	3.4589	0.5648	Strongly Agree
I have transportation that I can use every time I go to the center.	3.1096	0.9331	Agree
The health center is far from our home.	2.6164	0.9341	Agree
I need to pay for transportation fare every time I go to the center.	2.5411	1.0314	Agree
There are still the family's traditions and beliefs that affect my pregnancy.	2.0753	0.9328	Disagree
I have many expenses related to the services I am receiving.	2.0616	0.9338	Disagree
Grand Mean	**3.0678**	**0.7407**	**Agree**

Legend: 1.00-1.75 - Strongly Disagree, 1.76-2.50 - Disagree, 2.51-3.25 - Agree, 3.26-4.00 Strongly Agree

A major factor identified was the attitude of health workers. Participants strongly agreed that health workers in the barangay health centers displayed positive attitudes toward them. This suggests that respectful, supportive, and professional behavior from health care providers encourages pregnant women to attend their scheduled visits. When health workers demonstrate empathy and kindness, patients feel more comfortable, safe, and respected, which improves both satisfaction and compliance with ANC services (Mannava et al., 2015). Positive provider attitudes therefore act as a strong motivator for women to consistently utilize maternal

health programs. By contrast, respondents generally disagreed with the statement that family traditions and beliefs affected their pregnancy. This indicates that most pregnant women in the study prioritized medical services over traditional practices. While some communities in the Philippines and other countries still observe practices such as home deliveries or consulting a "hilot" (traditional birth attendant), these practices are associated with increased risks of pregnancy complications and, in severe cases, maternal or neonatal death (Aynalem et al., 2023). The findings suggest that greater access to formal health care services in these barangays has reduced reliance on cultural taboos or traditional practices, reinforcing the role of government-supported programs in promoting safe maternal care.

Participants also disagreed that they faced high expenses for ANC services. This finding highlights that financial costs were not perceived as a barrier since most ANC services at local health centers are provided free of charge through government programs. Only specialized procedures or additional pregnancy-related services might require out-of-pocket expenses. Nonetheless, socioeconomic status remains an important factor influencing maternal health behaviors, as women with limited resources may still experience difficulties accessing services or preparing for potential costs in the future (Weldemariam et al., 2018).

These findings underscore that women's compliance with ANC is strongly supported by the positive attitudes of health workers, facilitated by free or low-cost services, and less influenced by traditional beliefs in the selected communities.

Table 3 presents the mean distribution of the level of ANC compliance among pregnant women, indicating that respondents generally demonstrated a high level of compliance. This suggests that the participants actively engage with and adhere to the ANC services provided, which are essential for maintaining a healthy pregnancy.

The participants strongly agreed that they are fully aware that ANC services help prevent complications during pregnancy. This highlights their knowledge and understanding of the importance of participating in ANC programs to ensure the well-being of both mother and baby. Proper engagement with ANC services supports a healthier and more manageable pregnancy, providing care and interventions that contribute to positive outcomes up to delivery (Tessema et al., 2022). Furthermore, they strongly agreed that ANC appointments and consultations provide significant benefits, and that they follow the prescribed schedules for vitamins and other medications. These findings indicate a high level of compliance, reflecting their understanding of the importance of regular visits and adherence to medical

recommendations. ANC services are beneficial only when pregnant women actively participate in the programs and follow prescribed treatments, such as oral medications and injectable supplements, to prevent complications during pregnancy (Roro et al., 2022).

Table 3

Mean distribution according to the level of antenatal care compliance

Statements	Mean	Standard Deviation	Remarks	Verbal Description
I am fully aware that Antenatal Care services prevent complications during my pregnancy.	3.7877	0.4104	Strongly Agree	Highly Compliant
I know that my ANC appointments help me gain sufficient knowledge for my pregnancy.	3.7397	0.4706	Strongly Agree	Highly Compliant
I attend to the scheduled vaccinations and immunizations based on the advice of my healthcare provider.	3.7329	0.4740	Strongly Agree	Highly Compliant
I believe that ANC appointments or consultations offer me valuable benefits.	3.7123	0.4692	Strongly Agree	Highly Compliant
I am taking the vitamins and other medications prescribed to me at the proper schedule.	3.7123	0.4977	Strongly Agree	Highly Compliant
I am attending my scheduled prenatal/ANC check-up.	3.6301	0.5384	Strongly Agree	Highly Compliant
I arrive early at the center to attend my scheduled ANC appointment.	3.4178	0.5603	Strongly Agree	Highly Compliant
I was able to attend my ANC appointments even when I experienced health issues.	3.2534	0.7028	Agree	Compliant
I prioritize doing household chores and other things before attending my ANC appointments.	3.2192	0.7474	Agree	Compliant
I worry about the expenses for my ANC check-ups.	2.2466	0.9064	Disagree	Less Compliant
Grand Mean	**3.4452**	**0.5777**	**Strongly Agree**	**Highly Compliant**

Legend: 1.00-1.75 - Strongly Disagree, 1.76-2.50 - Disagree, 2.51-3.25 - Agree, 3.26-4.00 Strongly Agree

Finally, participants disagreed that they worry about expenses related to ANC check-ups, suggesting that financial concerns do not significantly affect their compliance. This is likely because ANC services are generally provided free of charge and are accessible through government-supported programs in their barangays. However, low socioeconomic status may still influence some women's perceptions of maternal programs, as those with limited resources may anticipate potential costs or feel uncertain about attending services alone (Sarkar et al., 2021). These findings indicate that pregnant women in the selected barangays are highly

compliant with ANC services, demonstrating awareness, knowledge, and active engagement in their maternal care.

Table 4 presents the mean distribution of the level of ANC satisfaction among pregnant women, showing that participants generally expressed high satisfaction with the services they received. The overall results indicate that the participants are highly satisfied with the ANC services provided at their respective Barangay Health Centers.

Table 4

Mean distribution according to the level of antenatal care satisfaction

Statements	Mean	Standard Deviation	Remarks	Verbal Description
The health workers were polite and approachable	3.7466	0.4365	Strongly Agree	Highly Satisfied
I feel comfortable and safe during my Prenatal care services.	3.7260	0.4475	Strongly Agree	Highly Satisfied
I am satisfied with their services.	3.7192	0.4947	Strongly Agree	Highly Satisfied
Every healthcare service is explained very well by the healthcare workers.	3.7123	0.4542	Strongly Agree	Highly Satisfied
The healthcare provider takes care of my health with tenderness, love, and care.	3.7123	0.4692	Strongly Agree	Highly Satisfied
The assistance I received for my health issues was appropriately handled.	3.6644	0.4738	Strongly Agree	Highly Satisfied
I received the services that I needed immediately.	3.6370	0.4966	Strongly Agree	Highly Satisfied
They maintain a safe, clean, and healthy environment.	3.5685	0.4970	Strongly Agree	Highly Satisfied
They properly advertised their services through visual aids for patients like me.	3.3904	0.6578	Strongly Agree	Highly Satisfied
They were utilizing new equipment for their services.	3.3493	0.5941	Strongly Agree	Highly Satisfied
Grand Mean	**3.6226**	**0.5022**	**Strongly Agree**	**Highly Satisfied**

Legend: 1.00-1.75 - Strongly Disagree, 1.76-2.50 - Disagree, 2.51-3.25 - Agree, 3.26-4.00 Strongly Agree

Participants strongly agreed that healthcare workers were polite and approachable. This finding suggests that receiving a positive attitude from healthcare workers significantly enhances satisfaction during prenatal visits. Being polite and approachable fosters effective relationships between patients and healthcare providers, promoting a positive experience for both parties (Canning et al., 2016). They also strongly agreed that healthcare services were well explained and that providers delivered care with tenderness, love, and attentiveness. These findings highlight the importance of effective communication and empathetic care in increasing patient satisfaction. Proper health education and treatment not only meet the

patient's medical needs but also make them feel valued and respected, encouraging continued engagement with ANC services (Cullen et al., 2023).

Participants expressed high satisfaction with the use of new equipment by healthcare providers. This suggests that participants recognize the importance of modern and well-maintained medical equipment in delivering high-quality care. Poor working conditions, including outdated equipment or insufficient supplies, can discourage pregnant women from attending prenatal visits, as inadequate services may compromise their safety and health outcomes. Utilizing updated equipment ensures accurate assessments and improves both the quality of care and patient confidence (van Pelt et al., 2020). These findings indicate that positive healthcare worker attitudes, clear communication, empathetic care, and the use of modern equipment contribute significantly to pregnant women's high satisfaction with ANC services in the selected barangays.

Table 5 presents the mean distribution of respondents' perceptions regarding the attitude and communication skills of healthcare workers.

Table 5

Mean distribution according to the healthcare workers' attitude and communication skills

Statements	Mean	Standard Deviation	Remarks
They demonstrated compassion and empathy in their care provision.	3.6918	0.4634	Strongly Agree
They ensure that all the patient's questions and concerns are addressed clearly and concisely.	3.6918	0.4634	Strongly Agree
They work well with their fellow BHW and other community healthcare providers.	3.6781	0.4688	Strongly Agree
They treat all patients with respect and dignity, regardless of their background.	3.6644	0.4738	Strongly Agree
They speak clearly and in an appropriate volume when explaining something to the patients.	3.6644	0.5157	Strongly Agree
Their body language is open, making patients feel comfortable.	3.6438	0.4805	Strongly Agree
They offer comfort and emotional support when patients need them.	3.6370	0.4966	Strongly Agree
They consistently demonstrate a positive attitude, even in the most stressful situations.	3.6370	0.5103	Strongly Agree
They respect every patient's beliefs and values, even if they differ from their own.	3.6096	0.5169	Strongly Agree
They are punctual and arrive on time during their work hours.	3.5274	0.5146	Strongly Agree
Grand Mean	**3.6445**	**0.4904**	**Strongly Agree**

Legend: 1.00-1.75 - Strongly Disagree, 1.76-2.50 - Disagree, 2.51-3.25 - Agree, 3.26-4.00 Strongly Agree

The results indicate a strong agreement among participants that healthcare workers demonstrate positive attitudes and practical communication skills, which significantly influence their compliance and satisfaction with ANC services. The overall mean score supports the conclusion that these factors play a crucial role in shaping the pregnancy experience (M = 3.6445, SD = 0.4904). Participants strongly agreed that healthcare workers demonstrated compassion and empathy in providing care and ensured that all patient questions and concerns were addressed clearly and concisely. These findings suggest that healthcare workers possess a deep understanding of patients' conditions and are able to deliver quality care that directly supports positive pregnancy outcomes. Effective communication and empathetic interactions create a sense of safety and comfort, encouraging patients to engage actively with healthcare services (Nicol, 2015).

The participants also strongly agreed that healthcare workers treated all patients with respect and dignity regardless of their backgrounds, and that they spoke clearly and at an appropriate volume when explaining health information. These findings highlight the importance of equitable treatment and clear communication in promoting patient understanding, compliance, and confidence in managing a healthy pregnancy (Baliddawa et al., 2021). Additionally, participants strongly agreed that healthcare workers provided comfort and emotional support when needed and maintained a positive attitude during stressful situations. This suggests that even under high patient volume or challenging conditions, healthcare workers were able to meet patient needs through consistent professionalism and a supportive approach. Understanding the patient's viewpoint and collaborating to address their concerns fosters trust, satisfaction, and active participation in healthcare decisions (Baliddawa et al., 2021).

Participants strongly agreed that healthcare workers were punctual and arrived on time for their duties. Punctuality is essential for managing daily tasks efficiently and ensuring timely service delivery. However, delays in healthcare worker attendance remain a challenge in some areas, which can negatively affect patient willingness to arrive early for prenatal visits. Previous studies indicate that long waiting times can lead to dissatisfaction and reduce patient engagement with ANC services (Lakew et al., 2018). These findings emphasize that positive healthcare worker attitudes, effective communication, empathy, respect, and punctuality collectively enhance pregnant women's compliance and satisfaction with ANC services, ultimately contributing to better pregnancy outcomes.

The results in Table 6 examine the relationship between the two primary variables: the level of compliance and the level of satisfaction of pregnant women with ANC services. The findings indicate a moderate positive correlation between compliance and satisfaction ($r = 0.473$, $p < 0.001$). This suggests that as pregnant women's satisfaction with ANC services increases, their compliance with recommended prenatal care also tends to increase, and vice versa. The statistically significant p-value confirms that this relationship is unlikely to have occurred by chance.

Table 6

Significant relationship between the level of compliance and satisfaction of pregnant women receiving Antenatal Care rendered by the Healthcare provider

		Level of Satisfaction	Remarks
Level of Compliance	Pearson Correlation	0.473	Moderate Relationship
	Sig. (2-tailed)	0.000	Significant

**Correlation is significant at the 0.01 level (2-tailed)

Note: Level of compliance to level of satisfaction statistically significant

Client satisfaction is influenced by patients' subjective experiences, personal preferences, and expectations regarding the care they receive. These perceptions play a crucial role in shaping their compliance with ANC schedules and future visits. Low satisfaction and poor engagement with ANC services can contribute to reduced utilization, which in turn may increase the risk of adverse maternal and neonatal outcomes, including prenatal and maternal deaths (Kebede et al., 2020). Although the correlation is moderately strong, certain factors may still affect either variable. Social, economic, cultural, and healthcare-related factors can influence a pregnant woman's perceptions of ANC services and, consequently, her satisfaction and compliance. Therefore, addressing these contributing factors is essential to maintain high levels of both satisfaction and compliance among pregnant women, ensuring better maternal health outcomes (Rahman et al., 2016).

5. Conclusion

This study focused on a wide range of ages among pregnant women, revealing that most participants were primigravida and primiparous, typically completing at least four prenatal visits throughout their pregnancy. The study identified several factors that influence

compliance with ANC services, both positively and negatively. These include the distance of the healthcare facility, the quality of services provided, especially when cost is involved, and the quality of working conditions, including the location, equipment, and other resources.

The study concluded that pregnant women in the three selected barangays were highly compliant with ANC services. This high compliance suggests a greater potential for reducing maternal mortality and preventing pregnancy-related complications, as women had access to essential prenatal care. Similarly, the pregnant women were highly satisfied with the ANC services they received. Satisfaction was influenced by healthcare workers' professionalism, prompt service, and quality care, all of which increased patients' willingness to engage in and utilize ANC services.

The study also highlighted the importance of healthcare workers' attitudes and communication skills. Positive attitudes and effective communication were found to improve pregnant women's utilization of ANC services, contributing to healthier pregnancies and reducing the risk of complications. Furthermore, the results revealed a statistically significant relationship between compliance and satisfaction. As satisfaction increased, compliance also increased, indicating that these variables are closely connected. While this relationship was significant, the study noted that various contributing factors could still positively or negatively affect both compliance and satisfaction.

For pregnant women, it is recommended that they acquire more knowledge about the importance of complying with and utilizing ANC services. By understanding the benefits of scheduled prenatal visits, they can avoid pregnancy-related complications and ensure a healthier outcome for both themselves and their babies. Families should provide strong support to pregnant women, as family encouragement significantly influences adherence to ANC services. Mothers and close relatives should share trusted advice, while husbands should actively participate in decision-making and accompany their wives to prenatal visits to foster a positive environment for maternal care.

Barangay Health Workers are encouraged to continue delivering professional, prompt, and high-quality care to improve pregnancy outcomes. Punctuality is essential, as timely service impacts patients' perceptions and willingness to utilize ANC services. Healthcare workers should also use visual aids and clear explanations to educate patients about available services, which can encourage regular attendance and engagement.

The Local Government Unit (LGU) should evaluate and improve working conditions at community health centers, including upgrading equipment and ensuring sufficient supplies. Allocating adequate resources will help provide high-quality maternal healthcare services for all pregnant women in the community.

Finally, future researchers are encouraged to explore additional factors affecting pregnant women's perceptions and utilization of ANC services, and to collect comprehensive data to support evidence-based recommendations and interventions aimed at improving maternal health outcomes.

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Institutional Review Board Statement

This study was conducted in accordance with the ethical guidelines set by Manuel S. Enverga University Foundation-Candelaria, Inc. The conduct of this study has been approved and given relative clearance by MSEUF University Ethics Review Committee with Ethics Review Board Reference Number: MSEUFCI-2025-021.

References

Ali, S. A., Ali, G. B., & Savera, A. (2018). Factors affecting the utilization of antenatal care: Literature review. *Journal of Pregnancy and Neonatal Medicine, 2*(2), 41–45. https://doi.org/10.35841/neonatal-medicine.2.2.41-45

Asifere, V., & Tessema, M., et al. (2018). Clients' satisfaction with healthcare providers' communication-associated factors in accessing antenatal care in Jimma town public health facilities, Jimma Zone, Southwest Ethiopia. *International Journal of Pregnancy & Childbirth, 4*(5). https://doi.org/10.15406/IPCB.2018.04.00113

Ayalew, M. M., Nebeb, G. T., Bizuneh, M. M., & Dagne, A. H. (2021). Women's satisfaction and its associated factors with antenatal care services at public health facilities: A cross-sectional study. *International Journal of Women's Health, 13,* 279–286. https://doi.org/10.2147/IJWH.S293725

Aynalem, B. Y., Ayalew, M. M., Wassie, G. T., Nigussie, T. S., Tsegaye, A. T., & Mulugeta, T. (2023). Cultural beliefs and traditional practices during pregnancy, childbirth, and the postpartum period in East Gojjam Zone, Northwest Ethiopia: A qualitative study. *Women's Health Reports, 4*(1), 415–422. https://doi.org/10.1089/whr.2023.002

Bako, I. A., Sasetu, S. I., Joshua, A. I., & Rimamnunra, G. N. (2022). Are clients satisfied with the communication they receive from health workers? A study among pregnant women attending primary health care centers in Nasarawa State, Nigeria. *African Journal of Reproductive Health, 26*(6), 55–63. https://doi.org/10.29063/ajrh2022/v26i6.7

Baliddawa, J. H., & Kipkulei, J. (2015). Factors affecting ANC women's satisfaction with communication skills of health care providers. *International Journal of Development and Sustainability, 2*(3), 2188–2196. https://isdsnet.com/ijdsv2n339.pdf

Cagayan, M., Nisperos, G., Facun, G., & Cagayan, B. (2022). Mothers' perspectives on utilization of maternal health services in rural health units in Luzon: A qualitative study. *Acta Medica Philippina.* https://actamedicaphilippina.upm.edu.ph

Canning, D., Rosenberg, J. P., & Yates, P. (2007). Therapeutic relationships in specialist palliative care nursing practice. *International Journal of Palliative Nursing, 13*(5), 222–229. https://doi.org/10.12968/ijpn.2007.13.5.23492

Cullen, S., Seymour, V., Dwyer, I., Doyle, S., Crosby, D., & Allen, C. (2023). Tender loving care following recurrent miscarriages: A review of a dedicated antenatal clinic. *British Journal of Midwifery, 31*(5), 248–251. https://doi.org/10.12968/bjom.2023.31.5.248

De Vaus, D. A., Qu, L., & Weston, R. (2019). Family trends: Changing patterns of partnering. *Family Matters, 64*, 10–15.

Drigo, L., Luvhengo, M., Lebese, R. T., & Makhado, L. L. (2020). Attitudes of pregnant women towards antenatal care services provided in primary health care facilities of Mbombela Municipality, Mpumalanga Province, South Africa. *The Open Public Health Journal, 13,* 569. https://doi.org/10.2174/1874944502013010569

Geta, T., Israel, E., & Atinafu, B. (2023). Prevalence and associated factors of client satisfaction with antenatal care services among antenatal care attendants in Ethiopia: A

systematic review and meta-analysis. *International Journal of MCH and AIDS, 13,* e016. https://doi.org/10.25259/IJMA_616

Herwansyah, H., Czabanowska, K., Kalaitzi, S., & Schröder-Bäck, P. (2022). The utilization of maternal health services at primary healthcare setting in Southeast Asian countries: A systematic review of the literature. *Sexual & Reproductive Healthcare, 32,* 100726. https://doi.org/10.1016/j.srhc.2022.100726

Kebede, D. B., Belachew, Y. B., Selbana, D. W., & Gizaw, A. B. (2020). Maternal satisfaction with antenatal care and associated factors among pregnant women in Hossana Town. *International Journal of Reproductive Medicine, 2020,* 2156347. https://doi.org/10.1155/2020/2156347

Khan, M. N., Alam, M. B., Chowdhury, A. R., Kabir, M. A., & Khan, M. M. A. (2024). Availability and readiness of healthcare facilities and their effects on antenatal care services uptake in Bangladesh. *BMC Health Services Research, 24*(1), 431. https://doi.org/10.1186/s12913-024-10824-4

Lakew, S., Ankala, A., & Jemal, F. (2018). Determinants of client satisfaction to skilled antenatal care services at Southwest of Ethiopia: A cross-sectional facility-based survey. *BMC Pregnancy and Childbirth, 18,* 479. https://doi.org/10.1186/s12884-018-2121-6

Laksono, A. D., Rukmini, R., & Wulandari, R. D. (2020). Regional disparities in antenatal care utilization in Indonesia. *PLOS ONE, 15*(2), e0224006. https://doi.org/10.1371/journal.pone.0224006

Maligana, M. (2017). Socio-demographic factors affecting utilization of antenatal care services in Botswana. *International Journal of Academic Research in Business and Social Sciences, 7*(9), 477-520.

Mannava, P., Durrant, K., Fisher, J., Chersich, M., & Luchters, S. (2015). Attitudes and behaviours of maternal health care providers in interactions with clients: A systematic review. *Global Health, 11,* 36. https://doi.org/10.1186/s12992-015-0117-9

Mwase-Musicha, L., Chipeta, M. G., Stephenson, J., & Hall, J. A. (2022). How do women prepare for pregnancy in a low-income setting? Prevalence and associated factors. *PLOS ONE, 17*(3), e0263877. https://doi.org/10.1371/journal.pone.0263877

Mwenebanda, E., Machado, A., Patel, A. I., Banda, C., & Chiumia, R. (2024). Factors influencing antenatal care attendance in the eight contact era policy: A case of selected

maternal health service facilities in Blantyre, Malawi. *BMC Pregnancy and Childbirth, 24,* 704. https://doi.org/10.1186/s12884-024-06895-0

Nang-Bayi, J., Wie, S., Siepaal, V., Kuufira, P., & Der, E. (2021). Factors associated with rising trend in teenage pregnancy within the West Gonja Municipality of the Savannah Region of Ghana. *Open Journal of Obstetrics and Gynecology, 11,* 1273–1290. https://doi.org/10.4236/ojog.2021.119119

Nicholls-Dempsey, L., Badeghiesh, A., Baghlaf, H., & Dahan, M. H. (2023). How does high socioeconomic status affect maternal and neonatal pregnancy outcomes? A population-based study among American women. *European Journal of Obstetrics & Gynecology and Reproductive Biology: X, 20,* 100248. https://doi.org/10.1016/j.eurox.2023.100248

Nicol, J. (2015). *Nursing adults with long term conditions* (2nd ed.). Sage Publications.

Omar, F., Kodhiambo, M. O., & Musili, F. (2020). Socio-demographic and economic factors associated with ANC attendance among women of reproductive age. *Journal of Health, Medicine and Nursing, 5*(1), 48–59.

Rabago, P. A. A., Fuerte, V. C., Buenaobra, K. R. R., Advincula, B. S., & Pacris, M. B. (2024). The level of compliance of teenage mothers to maternal care from the selected barangay health centers in Marikina City: Basis for health teaching. *Ignatian International Journal for Multidisciplinary Research, 2*(7), 481–501.

Rahman, M. M., Ngadan, D. P., & Arif, M. T. (2016). Factors affecting satisfaction on antenatal care services in Sarawak, Malaysia: Evidence from a cross-sectional study. *SpringerPlus, 5,* 725. https://doi.org/10.1186/s40064-016-2447-3

Roro, M., Deressa, W., & Lindtjørn, B. (2022). Antenatal care utilization and compliance with national and WHO guidelines in rural Ethiopia: A cohort study. *BMC Pregnancy and Childbirth, 22,* 849. https://doi.org/10.1186/s12884-022-05171-3

Rurangirwa, A. A., Mogren, I., Nyirazinyoye, L., Ntaganira, J., & Krantz, G. (2017). Determinants of poor utilization of antenatal care services among recently delivered women in Rwanda: A population-based study. *BMC Pregnancy and Childbirth, 17,* 142. https://doi.org/10.1186/s12884-017-1328-2

Saad-Haddad, G., DeJong, J., Terreri, N., Restrepo-Méndez, M. C., Perin, J., Vaz, L., Newby, H., Amouzou, A., Barros, A. J., & Bryce, J. (2016). Patterns and determinants of antenatal care utilization: Analysis of national survey data in seven countdown

countries. *Journal of Global Health, 6*(1), 010404. https://doi.org/10.7189/jogh.06.010404

Sarkar, M., Das, T., & Basu Roy, T. (2021). Determinants or barriers associated with specific routine check-up in antenatal care in gestational period: A study from EAG states, India. *Clinical Epidemiology and Global Health, 11,* 100779. https://doi.org/10.1016/j.cegh.2021.100779

Scorgie, F., Blaauw, D., Dooms, T., Chersich, M., & Konje, J. C. (2015). "I get hungry all the time": Experiences of poverty and pregnancy in an urban healthcare setting in South Africa. *Global Health, 11,* 37. https://doi.org/10.1186/s12992-015-0122-z

Sharifipour, F., Javadnoori, M., Moghadam, Z. B., Najafian, M., Cheraghian, B., & Abbaspoor, Z. (2023). Primiparous mothers' perception and expectations regarding social support during the postpartum period: A qualitative study. *Iranian Journal of Nursing and Midwifery Research, 28*(1), 38–46. https://doi.org/10.4103/ijnmr.ijnmr_383_21

Sossah, L. (2015). Sexual behavior during pregnancy: A descriptive correlational study among pregnant women. *European Journal of Research in Medical Sciences, 2*(1).

Tarekegn, S. M., Lieberman, L. S., & Giedraitis, V. (2014). Determinants of maternal health service utilization in Ethiopia: Analysis of the 2011 Ethiopian Demographic and Health Survey. *BMC Pregnancy and Childbirth, 14,* 161. https://doi.org/10.1186/1471-2393-14-161

Tessema, Z. T., & Minyihun, A. (2021). Utilization and determinants of antenatal care visits in East African countries: A multicountry analysis of Demographic and Health Surveys. *Advances in Public Health, 2021,* 6623009. https://doi.org/10.1155/2021/6623009

Tessema, Z. T., Tesema, G. A., & Yazachew, L. (2022). Individual-level and community-level factors associated with eight or more antenatal care contacts in sub-Saharan Africa: Evidence from 36 sub-Saharan African countries. *BMJ Open, 12,* e049379. https://doi.org/10.1136/bmjopen-2021-049379

van Pelt, S., Massar, K., van der Eem, L., Shields-Zeeman, L., de Wit, J. B. F., & Ruiter, R. A. C. (2020). "If you don't have enough equipment, you're not going to provide quality services": Healthcare workers' perceptions on improving the quality of antenatal care in rural Tanzania. *International Journal of Africa Nursing Sciences, 13,* 100232. https://doi.org/10.1016/j.ijans.2020.100232

Weldemariam, S., Damte, A., Endris, K., & Abebe, S. (2018). Late antenatal care initiation: The case of public health centers in Ethiopia. *BMC Research Notes, 11,* 562. https://doi.org/10.1186/s13104-018-3653-6

World Health Organization [WHO]. (2015). SDG target 3.1 maternal mortality. https://www.who.int/data/gho/data/themes/topics/sdg-target-3-1-maternal-mortality

Wulandari, R. D., Laksono, A. D., & Rohmah, N. (2021). Urban-rural disparities of antenatal care in South East Asia: A case study in the Philippines and Indonesia. *BMC Public Health, 21,* 1221. https://doi.org/10.1186/s12889-021-11318-2

Yamashita, T., Reyes Tuliao, M. T., Concel Meana, M., Suplido, S. A., Llave, C. L., Tanaka, Y., & Matsuo, H. (2017). Utilization of healthcare services in postpartum women in the Philippines who delivered at home and the effects on their health: A cross-sectional analytical study. *International Journal of Women's Health, 9,* 695–700. https://doi.org/10.2147/IJWH.S141689