

The analysis of factors correlated to pregnant women's satisfaction with Antenatal Care (ANC) Services at Lepo-Lepo Community Health Center in 2025

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Abstract

Pregnant women's satisfaction with *Antenatal Care* (ANC) services is one of the important indicators of the quality of health services, which can affect the sustainability of K4 and K6 visits. Factors such as service quality, emotions, officer performance, aesthetics of the service room, communication, and price are suspected to also affect the level of satisfaction of pregnant women. This study aims to analyze factors related to pregnant women's satisfaction with ANC services, including product/service quality, emotional factors, performance, aesthetics, communication, and price at the Lepo-Lepo Health Center, Kendari City. This study uses a quantitative design with a cross sectional approach. The research sample consisted of 96 pregnant women who were selected through *simple random sampling*. The research instrument is in the form of a questionnaire that assesses the variables of product/service quality, emotion, performance, aesthetics, communication, and price. Data analysis was carried out bivariate and univariate, using *the Spearman Rank Correlation* test. The results showed that all independent variables, namely product/service quality, emotional factors, performance, aesthetics, communication, and price had a significant relationship with pregnant women's satisfaction ($p < 0.05$). These findings show that visual experience, spatial comfort, and service environment arrangement have a strong influence on pregnant women's perception of satisfaction. The factors of service quality, emotion, performance, aesthetics, communication, and price are significantly related to pregnant women's satisfaction with ANC services. Improving the quality of ANC services, especially in the comfort and aesthetics aspects of the service room, needs to be a priority for increasing ANC satisfaction and visits.

Keywords: Pregnant Mother's Satisfaction; Antenatal Care; Service Quality; Aesthetics; Communication

1. Introduction

Antenatal Care (ANC) is a series of structured health services that involve observation, education, and medical intervention to pregnant women by trained medical personnel. The quality of ANC is crucial in reducing the risk of death for both mother and baby (Sukmawati et al., 2025). Initial screening and other forms of ANC services are contained through Regulation of the Minister of Health of the Republic of Indonesia No. 21 of 2021 which provides legal certainty in fulfilling the right of every pregnant woman to obtain quality health services. The goal is to be able to have a healthy pregnancy, give birth safely, and give birth to a healthy and quality baby. This Permenkes contains ANC service standards for pregnant women and requires pregnant women to routinely control 6 times, namely K1 to K6 to health service facilities (Permenkes RI No. 21 of 2021).

World Health Organization (WHO) estimates that in 2023 more than 700 women every day die from preventable causes related to pregnancy and childbirth. More than 90% of all maternal deaths occurred in low- and lower-middle-income countries in 2023 (WHO, 2025). Data from the Southeast Sulawesi Provincial Health Office (2023) shows that K1 coverage is 79.85%, while K4 coverage is 74.98%. Although the coverage is quite high, it is still below the national target

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of 95% (Southeast Sulawesi Health Office, 2024). Meanwhile, data from the Kendari City Health Office in 2021 stated that K1 coverage was 62.61%, and K4 coverage was 90.75%, and K6 was 65.35%, while in 2023, K4 coverage was 90.95%, K6 was 80.65% (Kendari City Health Office, 2022, 2023)

Study Demissie et al. (2024) describes the low achievement of optimal visits of ANC visits in sub-Saharan African countries influenced by factors of satisfaction, socio-economic, media exposure, parity, and family support. The results of Dewi's (2019) research stated that 66.67% of pregnant women were dissatisfied with the antenatal services obtained from health facilities in Surabaya.

Visits by pregnant women to health service facilities are very important because they are the first impression of pregnant women on the health services of an institution. This is because patient satisfaction is an important factor. Because the patient is not satisfied, he will not return to use the services offered (Aliyah, 2024). The first ANC visit is important to give a good impression and experience to pregnant women so that pregnant women are willing to make a return visit (Belachew et al., 2024).

Research Faozi et al., (2022) identify the relationship between ANC services and patient satisfaction based on factors that affect patient satisfaction and service quality dimensions including *Reability*, *responsiveness*, *assurance*, *emphaty* and *tangible*. Other factors that also affect are educational status, quality of service, skill of the provider, sense of appreciation, clear explanations, mother's involvement in decisions, waiting time, confidentiality (Tiyare et al., 2025).

The results of this preliminary study show that ANC services at the Lepo-Lepo Health Center have been running quite well, but there is still a need for improvement in the aspects of communication, comfort of the service room, and emotional approach to patients. Pregnant women as a sensitive group need special attention, of course they expect service that is not only fast and precise, but also full of empathy and comfort. This condition is an important basis for researchers to explore more deeply the factors that correlate pregnant women's satisfaction with antenatal services at the Lepo-Lepo Health Center.

2. Methods

2.1. Study and Sample Design

This study uses a quantitative design with a *cross sectional* approach which aims to analyze factors that correlate with pregnant women's satisfaction with ANC services at the Lepo-Lepo Health Center. The population of this study consists of the number of K6 visits of pregnant women in the working area of the Lepo-Lepo Health Center for the January-June 2025 period, which is 503 people. The sample in this study was 96 respondents. The sampling technique in this study uses *simple random sampling*.

2.2. Instruments and Data Analysis

The instrument used in this study is a questionnaire containing questions related to the variables studied which include product or service quality, emotion, performance, aesthetics, communication and price. The data collected consisted of primary data obtained directly from respondents. The data analysis used in this study is bivariate and univariate analysis which is then displayed in the form of a frequency distribution table accompanied by a narrative to show the percentage of each research variable.

3. Results and Discussion (Heading 1, WJS heading level 1)

3.1. Results

Table 1 Characteristics of Respondents Based on Age, Occupation and Education at the Lepo-Lepo Health Center, Kendari City in 2025

Variable	Category	N	%
Age	20-24	24	25.0
	25-29	26	27.1
	30-34	21	21.9
	35-39	25	26.0
Work	IRT	60	62,5
	PNS	5	5,2
	PPPK	3	3.1
	Private	13	15.5
	Self employed	15	15.6
Education	SD	2	2.1
	JUNIOR	17	17.7
	SMA	54	56.3
	D3	9	9.4
	S1	14	14.6

Table 1 shows that most of the respondents were 24-29 years old, namely 26 people (27.1%), while a small number were respondents with an age group of 30-34 years, namely 21 people (21.9%). Most of the respondents' jobs were IRTs as many as 60 people (62.1%), while a small number of respondents as PPPK were 3 people (3.1%), while the education of respondents was mostly high school, which was 54 people (56.3%), and a small number of respondents were elementary education, namely 2 people (2.1%).

Table 2 Distribution of Results of Univariate Analysis of Research Variables on Respondents at the Lepo-Lepo Health Center, Kendari City in 2025

Yes	Research Variables	Sig
1	Product/service quality	0.131
2	Emotional	0.200
3	Performance	0.081
4	Aesthetic	0.200
5	Communication	0.167
6	Price	0.200
7	Satisfaction	0.000

Table 2 shows that independent variables consisting of product or service quality, emotional, performance, aesthetics, communication and price have a sig value of > 0.05 , so that the independent variable data is distributed normally. Meanwhile, the dependent variable, namely the satisfaction of pregnant women with ANC services, < 0.05 , which means that the distributed data is abnormal. So in bivariate analysis, the test used is *Spearman Rank Correlation* to see the correlation between independent variables and dependent variables.

Table 3 Distribution of the Results of Bivariate Analysis of Research Variables in Respondents at the Lepo-Lepo Health Center, Kendari City in 2025

Yes	Research Variables	Correlation Coefficients	Sig. (2-tailed)
1	Product/service quality * Satisfaction	0.388	0.000
2	Emotional * Satisfaction	0.248	0.015
3	Performance * Satisfaction	0.411	0.000
4	Aesthetics * Satisfaction	0.654	0.000
5	Communication * Satisfaction	0.409	0.000
6	Price * Satisfaction	0.327	0.001

Table 3 describes the results of the *Spearman Rank Correlation* test which shows that all variables have a significant relationship with the Quality variable, shown by a *Sig. (2-tailed)* value that is less than 0.05 for all research variables. This indicates that there is a meaningful relationship between each independent variable and the variable of pregnant women's satisfaction with ANC services.

4. Discussion

4.1. The Effect of Product/Service Quality with Pregnant Women's Satisfaction on Antenatal Services

The results of the analysis showed that the product/service quality variable had a correlation coefficient of 0.388 with a significance value of 0.000, which showed a positive and significant influence between the quality of products/services and the satisfaction of pregnant women with ANC services at the Lepo-Lepo Health Center. The influence of product/service quality on satisfaction indicates that the higher the perception of service quality, the more likely mothers are to feel satisfied with the service received. This correlation indicates that various aspects create trust and comfort for pregnant women. Thus, this correlation strengthens the hypothesis that service quality is an important determinant of pregnant women's satisfaction with ANC services at the Lepo-Lepo Health Center.

The results of the multivariate analysis showed that the quality variable *was not* a significant predictor of satisfaction (p value $0.090 > 0.05$). This means that the quality improvement provided has not been able to have a real influence on pregnant women's satisfaction with K4 and K6 ANC services. As well as indicating that the quality aspect is not the main factor that determines satisfaction in the context of this study.

The quality of the product/service affects satisfaction through the mechanism of trust and perception of the benefits received. This is in line with research Hussen & Worku (2022) showed that good ANC quality was significantly correlated with pregnant women's satisfaction. Quality health services should meet patient satisfaction, because patient satisfaction is very important in assessing the quality of health services. The results showed that the quality variable was not significantly a predictor of satisfaction. The researcher found that pregnant women's perception of the quality of ANC services was quite large and affected the satisfaction of pregnant women.

4.2. The Influence of Emotions on Pregnant Women's Satisfaction on Antenatal Services

The results showed that the emotional variable had an average value of 18.50 with a standard deviation of 5.039. Although ANC services have been implemented according to SOPs, warm communication, responses to mothers' concerns, and emotionally supportive interactions have not been consistently met. This condition reinforces that emotional variables need to be strengthened so that services not only run clinically but also pay attention to the emotional experiences of pregnant women.

The results of the bivariate analysis found that emotional variables had a positive influence on pregnant women's satisfaction with ANC services with a correlation coefficient of 0.248 ($\text{Sig.} = 0.015$). These results show that the better the emotional aspect is felt, the higher the level of satisfaction. Research shows that services that pay attention to emotional aspects such as empathy, good communication, and attention will increase a sense of security and comfort,

which makes mothers feel more fulfilled. In addition, during K4 and K6 (advanced trimester) visits, the mother's emotional needs often increase as worries increase, so good emotional interaction becomes increasingly important.

Patients' emotional experiences such as how they perceive the service differ from the actual experience can determine the overall perception of the service. Research on *emotional service quality* affirms that attention to the patient's emotional state, sense of calm, and good interpersonal relationships can strengthen the perception of service quality and satisfaction (Budiman & Riorini, 2023). Patient satisfaction considers a multidimensional concept that includes several elements such as the competence of medical personnel or how patients perceive the knowledge and expertise of healthcare workers (Batra & Taneja, 2021).

4.3. The Effect of Performance with Pregnant Women's Satisfaction on Antenatal Services

Performance in the field of health services is defined as the level of achievement of the duties and responsibilities of health workers in carrying out predetermined procedures, standards, and targets (Mangkunegara, 2018). In the context of ANC services (*antenatal care*) in pregnant women, performance includes the readiness of officers/midwives, completeness of pregnancy examinations, speed of response, documentation of visits, and follow-up of pregnancy risks. The results of univariate analysis showed that the performance variable had an average of 19.03 and a standard deviation of 4.671. Based on this research, this could mean that although the technical procedures for pregnancy examination have been implemented, such as providing an explanation of the actions to be taken in easy-to-understand language and paying attention to each patient's complaint, it is not fully optimal.

The results of the bivariate analysis showed that the Performance variable had a correlation coefficient value of 0.411 (Sig. = 0.000), which means that there was a positive and significant influence on pregnant women's satisfaction with ANC services. In addition, good performance also increases maternal trust in health officials and institutions, which psychologically increases satisfaction. Thus, these results strengthen the hypothesis that ANC service performance is one of the determinants of satisfaction in this study. In ANC services, the process of examination, pregnancy education, risk identification and follow-up are critical parts of officer performance. Therefore, the bivariate correlation found between performance and satisfaction is very much in line with the theoretical foundation (Yesica Geovany Sianipar et al., 2025).

Previous research has shown that the results are in line with the Sembiring et al. (2019) showed that midwife's performance was significantly related to ANC service satisfaction ($p = 0.000$). Other research has also shown that factors that affect the performance of midwives in ANC services have found that competence, training, and workload are significant factors in determining their performance (Diantari, 2024; Siregar, 2021). These results reinforce that the performance of ANC officers does have a real influence on user experience and satisfaction in the context of pregnancy services.

4.4. The Influence of Aesthetics on Pregnant Women's Satisfaction on Antenatal Services

Aesthetics are part of *formal attributes* that affect the user experience in healthcare. This theory explains that the elements such as spatial planning, cleanliness, and human interaction become part of the patient's emotional experience (Blomkvist et al., 2023). The results of the univariate analysis showed that the aesthetic variable obtained an average value of 12.37 and a standard deviation of 4.203. The results of bivariate analysis showed that the aesthetic variable showed the highest correlation coefficient, which was 0.654 (Sig. = 0.000), which indicates a strong and significant influence between aesthetics on pregnant women's satisfaction with K4 and K6 ANC services.

Thus, bivariate results that show the relationship between aesthetics and visit compliance can be understood because aesthetics foster a sense of trust and comfort that has an impact on patient behavior. Previous research has shown that aesthetics in nursing practice are not just about visual appearance, but also relevant to therapeutic presence and the empathic relationship between nurse and patient (Betriana et al., 2022) Other research has found that when aesthetics are considered (e.g. a quiet environment, nurse relationships-patients), then patients report higher levels of satisfaction and more active involvement in the treatment plan (Reed, 2023).

The results of the study showed that the aesthetic variables in the study contributed significantly to the satisfaction of pregnant women with ANC services. The theoretical reason supporting these results is that aesthetics are not just an additional factor, but rather a part of the overall service experience that influences patient intentions and behavior. Aesthetics combines art and science into one-day practice-day, with the aim of reinforcing the meaning of patient experience and dignified care (Betriana et al., 2025). In a multivariate context, this theory helps explain why aesthetics remain significant because aesthetics affect the overall perception of services, rather than just one aspect of isolation. Thus, aesthetics can be a mediator or moderator in the relationship between service quality and patient compliance.

4.5. The Effect of Communication with Pregnant Women's Satisfaction on Antenatal Services

In ANC services for pregnant women at health centers, service communication includes explanations by midwives or health workers about pregnancy risks, the importance of regular visits, and responses to questions from pregnant women. The results of the univariate analysis of research data showed that the communication variable had an average value of 19.28 with a standard deviation of 4.200. The communication variables in this study showed that most of the respondents assessed the communication of ANC services well by using language that was easy to understand, the midwives took the time to answer all the questions of pregnant women who visited, the information conveyed was clear, the follow-up instructions that I easily understood (control schedule, referrals) and the delivery showed that they were not trivial and treated politely.

The results of the bivariate analysis obtained that the Communication variable also had a positive and significant relationship with pregnant women's satisfaction with ANC services with a coefficient of 0.409 (Sig. = 0.000). The results showed that there was a significant influence between communication variables and ANC visit compliance, suggesting that the better the mother's perception of communication, the higher the likelihood of regular visits. The results showed that communication had a significant contribution to ANC visits. Effective communication reinforces factors *Enabling* and *Reinforcing* in the health behavioral model, so that despite other barriers, good communication still facilitates visits (Notoatmodjo, 2018). Recent research support also shows that when the implementation of technology-based communication such as teleconsultation is carried out, ANC visits increase (Beluan & Sukihananto, 2024).

4.6. The Effect of Price on Pregnant Women's Satisfaction with Antenatal Services

The results of univariate analysis show that the price variable has an average of 18.75 and a standard deviation of 5.331. The results of the study also showed that most of the respondents gave a good assessment of the price aspect, reflecting the perception that the cost of ANC in the health center is still affordable. This is in accordance with the conditions in the field that the respondents agree with the easy administrative statement, pregnant women at the Puskesmas are not charged fees, the examination of pregnant women is insured by BPJS and the officer explains about the costs of examinations that are not burdensome for pregnant women.

The results of bivariate analysis showed that the price variable had a correlation coefficient of 0.327 (Sig. = 0.001), which means that there was a positive and significant influence on the satisfaction of pregnant women with ANC services. There is a significant correlation between the price variable and ANC visits, which means that the more affordable the price of the service, the more likely pregnant women are to make regular visits. This correlation can be caused by the sensitivity of health behaviors to cost barriers, especially in low- to middle-income groups.

The results showed that the price variable was proven to still have a significant effect on ANC visits even though it was controlled by other variables such as service quality, communication, and aesthetics. Theoretically, this suggests that price has a direct influence on healthcare search behavior, regardless of other service experience factors. Previous research has shown that healthcare costs remain a strong predictor of ANC utilization in developing countries (Shabbir et al., 2022). Therefore, it can be understood that price remains a key component in influencing pregnant women's decision to visit regularly.

5. Conclusion

This study concluded that all variables of product/service quality, emotional, performance, aesthetics, communication, and price were significantly related to pregnant women's satisfaction with ANC services, with aesthetic variables as the most influential factor. Based on these findings, the Lepo-Lepo Health Center is advised to improve the quality of ANC services to prevent a decrease in K4 and K6 visits, while the community is expected to increase their understanding of the importance of ANC so that the use of services for pregnant women can be more optimal. Compliance with ethical standards.

Compliance with ethical standards

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Disclosure of conflict of interest

There is no conflict of interest in this research.

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