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Analysis of the quality of health services on satisfaction, anxiety, and physical health of pregnant women

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ABSTRACT

Healthcare constitutes a fundamental societal necessity, wherein rising social standards have driven an intensified public demand for quality services. Within this framework, pregnant women's satisfaction with midwifery care is significantly influenced by effective communication, personalized attention, professional competence, and the adequacy of facilities at community health centers. This study aims to analyze healthcare service quality on satisfaction, anxiety, and physical health of pregnant women. This quantitative study uses a descriptive correlational approach. The respondents in this study were 246 pregnant women receiving healthcare services. The sampling technique used was stratified random sampling. Analysis was conducted using linear regression tests. The results showed a significant relationship between healthcare quality and the three variables ($P < 0.001$). Maternal satisfaction was the strongest factor, with a coefficient B of 5.451 and an odds ratio (OR) of 233.026. The quality of healthcare services significantly influences maternal satisfaction, anxiety, and physical health, with satisfaction being the dominant variable. Pregnant women are advised to be active with healthcare providers, undergo regular check-ups, and improve health communication literacy to improve satisfaction and physical health, as well as reduce anxiety during pregnancy.

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INTRODUCTION

Healthcare is a fundamental necessity for society, and as social standards rise, so does the public demand for high-quality medical services (Homer et al., 2022). This increasing expectation requires healthcare providers to continually refine their service delivery, as the care they provide is directly experienced by patients, and any negligence can have profound negative impacts on both the patient and the provider (Khosravi et al., 2022). Within this broader context, healthcare for pregnant women is a critical component of improving maternal and child health outcomes (Hailemeskel et al., 2022). A healthy pregnancy is achieved through regular monitoring and services that comply with established medical standards, placing a significant responsibility on healthcare personnel, particularly midwives, to provide quality education and care (Gupta & Khan, 2024). Consequently, the quality of midwifery services is not merely a clinical requirement but a vital determinant of overall maternal well-being (Vedam et al., 2022).

The quality of midwifery healthcare services is multifaceted and is significantly influenced by factors such as the midwife's professional competence, communication quality, and the availability of adequate facilities (Khakbazan et al., 2022). Effective communication and adequate training are essential for improving service quality, which, in turn, contributes to higher patient satisfaction (Agbi et al., 2023). Furthermore, the availability of comprehensive facilities and

supporting technologies in community health centers is pivotal in meeting the standards set by professional organizations and health agencies (Edmundson et al., 2025). Despite intensive health education programs conducted by local Health Offices to increase knowledge regarding routine check-ups and healthy lifestyles, gaps remain (Leelavathi et al., 2025). Some pregnant women still experience limited access or persistent anxiety, suggesting that structural and interpersonal service qualities must be optimized to create conditions truly conducive to maternal health (Maguire et al., 2024).

Patient satisfaction is a primary indicator of the quality of healthcare services (Alhaqbani & Bawazir, 2021). A pregnant woman's satisfaction with midwifery care reflects the provider's effectiveness and influences decision-making about further care and support (Mose et al., 2023). Key factors driving this satisfaction include waiting times, the clarity of information provided about the pregnancy and delivery process, and the responsiveness of medical staff to specific needs (Kidane et al., 2023). Good service quality, characterized by attention to detail and emotional support, significantly impacts maternal satisfaction levels (Tiyare et al., 2025). Therefore, a comprehensive understanding of the characteristics of midwifery services that influence satisfaction is crucial, as it directly correlates with women's willingness to engage with the healthcare system throughout their pregnancy (Alemu et al., 2024).

Beyond satisfaction, the psychological and physical state of the pregnant woman is a critical outcome of service quality (Hussen & Worku, 2022). Anxiety is a common problem among pregnant women, often stemming from uncertainty about fetal health, concerns regarding the birth process, and physical changes (Diezi et al., 2023). Symptoms such as excessive worry, sleep disturbances, and stress-related hypertension can adversely affect physical health outcomes (Bernad et al., 2024). Midwives play a crucial role in mitigating these issues by providing emotional support and accurate information (Catsaros et al., 2024). By addressing psychological needs, midwives can help reduce anxiety, increase self-confidence, and ultimately improve the mother's physical health (Yousefi et al., 2025). Thus, the midwife's role extends beyond medical procedures to encompass essential psychological support and education (Stoodley et al., 2023).

Despite the recognized importance of these factors, there is a need to further empirically analyze how specific dimensions of service quality interact with maternal psychological and physical outcomes (Cibralic et al., 2022). While previous efforts have focused on education and infrastructure, the direct link between service quality, anxiety reduction, and satisfaction requires deeper investigation to inform policy and practice (Xu et al., 2026). Addressing this gap is essential for developing interventions that holistically support pregnant women. Therefore, this study aims to analyze the quality of health services, focusing on satisfaction, anxiety, and physical health among pregnant women, and to provide evidence-based insights to enhance midwifery care standards.

METHOD

Research Design

This study employed a quantitative research design with a descriptive correlational approach. A cross-sectional design was used, in which data for both independent and dependent variables were collected simultaneously at a single point in time. This approach allowed examination of relationships between the quality of health services and maternal outcomes, specifically satisfaction, anxiety, and physical health, among pregnant women receiving care in the East Bekasi Region in 2025.

Participants

The target population comprised 637 pregnant women receiving healthcare services across four Community Health Centers in East Bekasi: Karang Kitri (n=174), Bekasi Jaya (n=181), Duren Jaya (n=114), and Aren Jaya (n=168). Using stratified random sampling to ensure proportional representation from each facility, a sample of 246 respondents was selected. Participants were included based on predefined inclusion and exclusion criteria, ensuring that the sample consisted of pregnant women who actively received midwifery services during the study period and were willing to participate voluntarily.

Data Collection

Primary data were collected by distributing structured, self-administered questionnaires to respondents. Three validated instruments were utilized: (1) a health service quality questionnaire assessing dimensions such as communication, professional competence, and facility adequacy; (2) a satisfaction questionnaire measuring pregnant women's contentment with midwifery care; and (3) a maternal anxiety questionnaire evaluating psychological distress related to pregnancy and childbirth. Questionnaires were distributed directly to participants at the respective Community Health Centers following informed consent procedures.

Data Analysis

Data analysis was conducted in three stages. First, univariate analysis was performed to describe the characteristics of the study variables. Second, bivariate analysis using the Pearson correlation test examined the relationships between service quality dimensions and the outcome variables. Finally, a multivariate analysis using multiple linear regression was conducted to determine the simultaneous effects of health service quality on satisfaction, anxiety, and physical health outcomes. A significance level of $\alpha=0.05$ was applied to all statistical tests to assess the reliability of the findings.

Ethical Clearance

This study was conducted in accordance with ethical principles for research involving human subjects. Ethical approval was granted by the Ethics Committee of the Faculty of Health Sciences at the National University. All participants provided written informed consent prior to data collection, and their rights to confidentiality, anonymity, and voluntary withdrawal from the study at any stage were strictly upheld throughout the research process.

RESULT

Univariate Analysis

Respondents' characteristics

The results of the analysis of the frequency distribution of pregnant women's characteristics are presented in Table 1.

Table 1. Characteristics of pregnant women (N=246)

Characteristic	Frequency	Percentage	Mean	Standard Deviation	Min	Max
Education						
Elementary School	15	6.2				
Junior High School	45	18.3				

Characteristic	Frequency	Percentage	Mean	Standard Deviation	Min	Max
Senior High School	114	46.3				
College	72	29.3				
Age			27.36	4.832	22	49
Occupation						
Housewife	167	67.9				
Private sector employee	62	25.2				
Casual laborer	1	0.4				
Civil servant	16	6.5				

Based on Table 1, the data show that of the 246 respondents, the majority had a high school education (114, 46.3%). Respondents had an average age of 27.36 years, ranging from 22 to 29 years. Most respondents were housewives (167, 67.9%).

Quality of Maternal Health Services

The results of the analysis of average maternal health service quality are presented in Table 2.

Table 2. Average quality of health services for pregnant women (N=246)

Quality of Health Services	Mean	Standard Deviation	Std. Error	Minimum	Maximum
Tangible	8.57	1.712	0.109	6	12
Responsiveness	9.64	1.579	0.101	7	13
Empathy	9.33	1.963	0.125	2	13
Reliability	7.41	2.883	0.184	4	13
Assurance	6.72	3.715	0.237	2	13

Based on Table 2, the average quality of maternal health services in the Tangible category is 8.57, with a standard deviation of 1.712. The lowest Tangible score among respondents is 6, while the highest is 12. The Responsiveness category has a score of 9.64 and a standard deviation of 1.579. The lowest Responsiveness score among respondents is 7, while the highest is 13. The Empathy category has a score of 9.33 and a standard deviation of 1.963. The lowest Empathy score among respondents is 2, while the highest is 13. The reliability category is 7.41 with a standard deviation value of 2.883. The lowest reliability score among respondents is 4, while the highest is 13. The Assurance category has a score of 6.72 with a standard deviation of 3.715. The lowest Assurance score among respondents is 2, while the highest is 13.

Table 3. Average of satisfaction, anxiety, and physical health among pregnant women (N=246)

Variable	Mean	Standard Deviation	Std. Error	Minimum	Maximum
Satisfaction	18.60	2.660	0.170	14	26
Anxiety	27.89	4.197	0.268	21	39
Physical Health	18.44	2.532	18.44	14	26

Based on Table 3, the average satisfaction score for pregnant women was 18.60, with a standard deviation of 2.660. The lowest satisfaction score among respondents was 14, while the highest was 26. The average anxiety level of pregnant women was 27.89, with a standard deviation value of 4.197. The lowest satisfaction score among respondents was 21, while the highest was 39. The average physical health of pregnant women was 18.44, with a standard

deviation of 2.532. The lowest satisfaction score among respondents was 14, while the highest was 26.

Bivariate Analysis

Normality Test

The normality test used is the Kolmogorov-Smirnov test, as shown in Table 4.

Table 4. Normality test

Variables	ρ value	Information
Quality Health Services	0.144	Normally distributed
Satisfaction	0.271	Normally distributed
Anxiety	0.597	Normally distributed
Physical Health	0.280	Normally distributed

Table 4 shows that the results of the normality test using the Kolmogorov-Smirnov test yielded a p-value > 0.05, indicating that the data were normally distributed. Because the normality test indicated non-normality, the researcher used the Pearson correlation test.

The Relationship between Quality of Health Services and Satisfaction, Anxiety, and Physical Health of Pregnant Women

Based on the analysis of the relationship between the quality of health services and the satisfaction, anxiety, and physical health of pregnant women, the results are presented in Table 5.

Table 5. The relationship between health service quality and satisfaction, anxiety, and physical health of pregnant women

Variables	Correlation Value	ρ value	Strength	Information
Satisfaction	0.858	0.001	Very strong	Significant
Anxiety	0.869	0.001	Very strong	Significant
Physical Health	0.537	0.001	Strong enough	Significant

Based on Table 5, the Pearson Correlation test for the satisfaction variable yields a correlation coefficient of r = 0.858 and a p-value of 0.001 < 0.05, indicating a strong and significant relationship between the quality of health services and satisfaction in the East Bekasi region in 2025. This shows that higher service quality is associated with greater satisfaction among pregnant women.

For the anxiety variable, a correlation coefficient (r) of 0.869 was obtained, with a p-value of 0.001 (< 0.05), indicating a strong and significant relationship between the quality of health services and pregnant women's anxiety. This shows that the better the quality of service, the lower the level of anxiety of pregnant women.

For the physical health variable, a correlation coefficient (r) of 0.537 was obtained. 0.001 < 0.05, which means there is a powerful and significant relationship between the quality of health services and the physical health of pregnant women. This shows that higher service quality is associated with better physical health among pregnant women.

Multivariate Analysis

Model Candidate

The results of the analysis of the variables included in the multivariate model are presented in Table 5 below.

Table 5. Candidate models

Variables	ρ value
Satisfaction	0.001
Anxiety	0.001
Physical Health	0.001

Based on Table 5, three variables are included in the candidate model (p-value < 0.25): satisfaction (p-value = 0.001 < 0.25), anxiety (p-value = 0.001 < 0.25), and physical health (p-value = 0.001 < 0.25).

Model Fit Test

A fit test is a test conducted by comparing the value between -2 Log Likelihood (-2LL) at the beginning (Block Number = 0) with the value of -2 Log. Likelihood (-2LL) at the end (Block Number = 1). There is a reduction between the initial -2LL (initial -2LL function) and the - value in the next step (-2LL final), indicating that the hypothesized model fits the data. The results of the overall model test (Overall Model Fit) are presented in Table 6.

Table 6. Overall model fit test

Iteration		-2 Log likelihood	Coefficients Constant
Step 0	1	320.847	-0.569
	2	320.832	-0.585
	3	320.832	-0.585

Based on Table 6, the initial -2 Log-likelihood value (Iteration History 0 table) is 320,847. Mathematically, this figure is significant at the 5% Alpha level, indicating that the null hypothesis (H0) is rejected. This means only the constant does not fit the data.

Coefficient of Determination (Nagelkerke R-Square)

The Nagelkerke R-square coefficient of determination from logistic regression is presented in Table 7.

Table 7. Coefficient of determination (Nagelkerke R-Square)

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	110.980[a]	0.574	0.788
2	112.121[b]	0.572	0.785

Based on Table 7, the Nagelkerke R-squared value is 0.788. which means that the variability of the dependent variable that can be explained is 78.8%, while variables outside the research model explain the remaining 21.2%.

Multicollinearity Test

Based on the results of the multicollinearity test presented in Table 8.

Table 8. Multicollinearity test

		Constant	Satisfaction (1)	Satisfaction (2)	Health (1)	Anxiety (1)	Anxiety (2)	Anxiety (3)
Step 1	Constant	1.000	-0.479	-0.534	-0.036	-0.287	-0.257	0.000
	Satisfaction (1)	-0.479	1.000	0.623	0.016	-0.568	-0.499	0.000
	Satisfaction (2)	-0.534	0.623	1.000	-0.015	-0.255	-0.210	0.000
	Physical health (1)	-0.036	0.016	0.015	1.000	-0.255	-0.219	0.000
	Anxiety (1)	-0.287	-0.568	0.255	-0.255	1.000	0.713	0.000
	Anxiety (2)	-0.257	-0.499	0.210	-0.219	0.713	1.000	0.000
	Anxiety (3)	0.000	0.000	0.000	0.000	0.000	0.000	1.000
Step 2	Constant	1.000	-0.841	-0.665	-0.117			
	Satisfaction (1)	-0.841	1.000	0.604	-0.178			
	Satisfaction (2)	-0.665	-0.604	1.000	-0.081			
	Physical health (1)	-0.117	-0.178	-0.081	1.000			

Based on Table 8, the correlation matrix indicates no serious multicollinearity, with all correlations below 0.80.

Partial Test and Model Building

The results of the partial test analysis and model formation are presented in Table 9.

Table 9. Partial test and model formation

Variables	Model 1	Model 2	Model 3
Satisfaction	0.001	0.001	0.001
Anxiety	0.861	-	-
Physical Health	0.037	0.030	-

Based on Table 9, it is known that there is 1 variable that has a probability value (p-value) < 0.05, namely the satisfaction of pregnant women (p = 0.001). This shows that the quality of health services affects pregnant women's satisfaction with care.

Regression Model Feasibility Test (Hosmer and Lemeshow Test)

Based on the results of the feasibility test analysis of the regression model (Hosmer and Lemeshow Test) presented in Table 10.

Table 10. Regression model feasibility test (Hosmer and Lemeshow Test)

Step	Chi Square	df	Sig.
1	0.314	2	0.855

Based on Table 15, there is 1 variable with a Chi-square value of 0.314 and a sig value of 0.855. This indicates that the sig value of 0.855 is greater than the α = 0.05 threshold, suggesting the regression model is suitable for further analysis because there is no real difference between the predicted and observed classifications.

Final Results of Linear Regression Test

The final analysis results of the linear regression test are presented in Table 11.

Table 11. Final results of the linear regression test

		B	SE	Wald	df	Sig.	Exp(B)	95% CI for Exp(B)	
								Lower	Upper
Step 1[a]	Satisfaction			73.712	2	0.001			
	Satisfaction (1)	5.451	0.658	68.638	1	0.001	233.026	64.171	846.191
	Satisfaction (2)	5.803	0.849	46.686	1	0.001	331.333	62.709	1,750.650
	Constant	-3.857	0.583	43.711	1	0.001	0.021		

Based on Table 11, the quality of health services influences the satisfaction of pregnant women in the East Bekasi Region in 2025. Based on the analysis, the coefficient B and OR (Odds Ratio) values were obtained, with the satisfaction of pregnant women showing the highest coefficient B (5.451) and OR (233.026) values among the variables.

DISCUSSION

Quality of Health Services

Based on research conducted in the East Bekasi region, the average quality of maternal health services was 45.76 (SD = 5.106; range: 37–59), indicating that health facilities generally met pregnant women's expectations regarding medical care, communication, facilities, and service procedures. The competence of medical personnel and speed of service emerged as the most influential factors driving satisfaction, with respondents particularly valuing fast, friendly, and informative interactions. Furthermore, high-quality care—primarily characterized by clear communication and empathy from healthcare professionals—was significantly associated with lower anxiety levels, providing pregnant women with greater security and comfort and contributing to more stable physical health outcomes (AlOmari & Hamid, 2022). However, approximately 35.8% of respondents still perceived services as suboptimal, highlighting critical areas for improvement, particularly in waiting times, service accessibility, and communication continuity. These findings underscore that non-medical aspects of care can substantially influence both satisfaction and anxiety, reinforcing the importance of a holistic approach that addresses not only clinical needs but also the psychological and emotional well-being of pregnant women to ensure a positive pregnancy experience and optimal maternal health.

Satisfaction

The study results revealed that the average satisfaction score among pregnant women was 18.60 (SD = 2.660; range: 14–26), indicating that more than half of respondents perceived the services provided by health workers—encompassing professionalism, attentiveness, and facility adequacy—as meeting their expectations. Satisfaction was primarily influenced by perceptions of service quality, particularly the speed of service, staff friendliness, and the ability of healthcare providers to deliver clear, comprehensive information, while positive interpersonal communication characterized by empathy, patience in answering questions, and relationship-building further enhanced maternal contentment. Additionally, the physical environment, including comfortable waiting areas, clean facilities, and accessible supporting equipment, emerged as an important determinant of satisfaction, with many respondents appreciating well-organized, hygienic service settings that facilitated easy access to information (Pandey &

Adhikari, 2024). Nevertheless, 41.1% of pregnant women reported dissatisfaction, highlighting persistent gaps related to prolonged waiting times, limited health education during examinations, inadequate medical facilities, unclear queuing systems, and insufficient privacy during consultations. These findings suggest that while overall satisfaction levels are favorable, targeted improvements in administrative procedures, communication training for healthcare workers, and infrastructure enhancements remain essential to sustainably elevate the quality of maternal healthcare services and address the concerns of dissatisfied patients.

Anxiety

The study results indicated that the average anxiety level among pregnant women was 27.89 (SD = 4.197; range: 21–39), reflecting a predominance of mild anxiety despite the majority receiving good-quality healthcare. This persistent psychological stress likely stems from concerns about fetal health, the impending delivery process, and physiological or hormonal changes inherent to pregnancy, suggesting that internal factors such as fear of childbirth can sustain anxiety even when clinical care meets expectations. Notably, high-quality care characterized by adequate health education, empathetic communication, and clear information about pregnancy and delivery was associated with lower anxiety levels, as pregnant women who felt valued, heard, and involved in medical decision-making exhibited fewer anxiety symptoms than those who perceived their concerns as overlooked. Nevertheless, the physical and clinical focus of standard antenatal services may leave room for improvement in non-medical aspects, such as dedicated psychological counseling and emotionally supportive approaches. The presence of mild anxiety remains a significant concern, as untreated psychological distress has the potential to escalate into moderate or severe anxiety in the third trimester, potentially adversely affecting the delivery process and fetal health outcomes (Singla et al., 2025). Therefore, while most pregnant women in this study experienced only mild anxiety, proactive integration of psychosocial strategies into routine antenatal care—including group counseling, relaxation therapy, and regular emotional support sessions—is recommended to effectively manage and prevent the progression of anxiety, thereby promoting holistic maternal well-being.

Physical Health

The study results demonstrated that the average physical health score among pregnant women in East Bekasi was 18.44 (SD = 2.532; range: 14–26), indicating that the majority maintained a stable and well-managed health status throughout pregnancy, a finding strongly associated with the quality of systematic and scheduled antenatal care (ANC) services. Quality healthcare—including regular check-ups, nutritional supplementation, weight and blood pressure monitoring, and comprehensive counseling—was significantly correlated with improved physical health outcomes, as pregnant women who received complete ANC services tended to experience uncomplicated pregnancies, stable blood pressure, healthy body mass index levels, and minimal complaints of pain or discomfort. Furthermore, the active involvement of health workers in providing education during ANC visits regarding diet, safe physical activity, and recognition of pregnancy warning signs emerged as a crucial promotive and preventive component, empowering women to adopt healthier behaviors and sustain optimal physical condition (Rezaei et al., 2025). Nevertheless, 40.2% of respondents did not fall within the physically healthy category, reporting minor complications such as anemia, blood pressure instability, back pain, or fatigue, which underscores that, despite available services, challenges, including irregular visit adherence, limited compliance with medical advice, and socio-economic

constraints, continue to hinder optimal health outcomes for a substantial minority. Consequently, while comprehensive, educational, and humanistic ANC services have proven effective in supporting the physical well-being of most pregnant women, future strategies must prioritize expanding service coverage, strengthening adherence to visits, and enhancing maternal health literacy to ensure that all pregnant women can achieve and maintain optimal physical health throughout pregnancy.

The Relationship between Quality of Health Services and Satisfaction of Pregnant Women

The Pearson correlation test results revealed a statistically significant relationship between health service quality and maternal satisfaction among pregnant women in East Bekasi ($p = 0.001 < 0.05$), indicating that higher perceived service quality is associated with greater satisfaction. Key dimensions influencing this relationship included punctuality, staff friendliness, facility adequacy, responsiveness, and—critically—the interpersonal aspects of care, such as empathy, effective communication, and the extent to which pregnant women felt valued and involved in decision-making. These findings align with the Servqual theory, which posits that satisfaction arises when patient perceptions of service meet or exceed expectations. In contrast, gaps in quality—particularly in reliability, assurance, and emotional support—can lead to dissatisfaction and potentially reduce adherence to subsequent antenatal care visits (Karume et al., 2025). Significantly, maternal satisfaction was shaped not only by technical medical competence but also by non-technical factors, including clear procedures, comfortable environments, and compassionate social interactions, with women who experienced respectful, informative, and timely care being significantly more likely to report positive evaluations. Consequently, these results underscore the strategic importance of holistic service improvement for healthcare facility managers, suggesting that targeted interventions—such as interpersonal communication training for staff, infrastructure enhancements, and systematic efforts to reduce waiting times—can sustainably elevate patient satisfaction, foster loyalty to maternal health services, and ultimately contribute to better maternal and infant health outcomes in diverse urban settings.

The Relationship between Quality of Health Services and Anxiety in Pregnant Women

The Pearson correlation and chi-square test results both revealed a statistically significant relationship between the quality of healthcare services and anxiety levels among pregnant women in East Bekasi ($p = 0.001 < 0.05$), demonstrating that higher-quality care—particularly characterized by empathetic communication, active patient engagement, and personalized attention—is strongly associated with reduced maternal anxiety. Pregnant women who perceived their care as respectful, informative, and emotionally supportive reported lower anxiety levels, likely because such interactions foster a sense of safety, comfort, and control, which can mitigate stress-related physiological responses, including elevated cortisol levels. Critical service dimensions influencing this outcome included the friendliness and professionalism of health workers, the provision of clear, comprehensive education about fetal development and delivery procedures, and opportunities for two-way communication and involvement in clinical decision-making; conversely, women who received minimal, impersonal, or inconsistent care—especially those with high-risk pregnancies or limited health literacy—were more likely to experience moderate to severe anxiety. Within antenatal care (ANC) settings, structured counseling, regular visits, and dedicated emotional support functioned as protective buffers against psychological distress, underscoring the value of a holistic approach that integrates mental and emotional well-being alongside physical health monitoring (Cuthbert et al., 2025). These findings reinforce that

service quality extends beyond technical competence to encompass psychosocial responsiveness, with practical implications for healthcare systems: strengthening workforce capacity in empathetic communication, implementing systematic pregnancy education protocols, and cultivating calm, patient-centered service environments are essential strategies to not only alleviate anxiety but also promote a healthier, more positive pregnancy experience overall.

The Relationship between the Quality of Health Services and the Physical Health of Pregnant Women

The Pearson correlation and chi-square test results both demonstrated a statistically significant relationship between the quality of health services and the physical health of pregnant women in East Bekasi ($p = 0.001 < 0.05$), indicating that higher-quality care—particularly through routine antenatal check-ups, comprehensive nutritional counseling, responsive management of pregnancy-related complaints, and access to essential ANC components such as laboratory services, immunization, and early risk detection—is strongly associated with more stable and optimal maternal physical condition. Pregnant women who received care at facilities with robust service structures (adequate human resources, medical equipment, and streamlined procedures) and participatory processes—including involvement in health monitoring and decision-making—reported fewer complications such as gestational hypertension, anemia, severe nausea, back pain, and chronic fatigue, likely because holistic, educational, and empathetic service delivery promotes healthier behaviors and enhances adherence to preventive measures. Conversely, poor service quality—characterized by prolonged waiting times, limited equipment, unfriendly staff attitudes, and minimal health education—was linked to reduced motivation for regular ANC attendance and a higher prevalence of physical complaints, underscoring that service deficiencies impact not only patient perceptions but also tangible health behaviors and outcomes (Mwenebanda et al., 2024). These findings align with the Donabedian framework, wherein optimal service structure and process jointly drive favorable health outcomes, and they reinforce that quality ANC extends beyond clinical interventions to encompass clear communication, consistent education on diet and safe physical activity, and timely recognition of warning signs—all of which empower pregnant women to maintain their health actively. Consequently, the study affirms that strengthening service quality through responsive staff training, comprehensive facility provisioning, systematic patient feedback mechanisms, and a service management system centered on maternal needs is essential not only to prevent complications but also to foster a healthier, safer, and more positive pregnancy experience for women across diverse urban settings.

The Relationship between Quality of Health Services and Satisfaction, Anxiety, and Physical Health in Pregnant Women

Based on the Logistic Regression analysis, a significant relationship was identified between health service quality and maternal satisfaction among pregnant women in East Bekasi in 2025, with satisfaction emerging as the variable exhibiting the strongest association—demonstrated by the highest coefficient B value (5.451) and Odds Ratio (OR = 233.026) compared to other outcomes. Key service quality dimensions, including reliability, responsiveness, and empathy of healthcare workers, were found to significantly influence patient satisfaction, underscoring that pregnant women's perceptions of interpersonal care, such as feeling actively involved in consultations, receiving consistent and humane treatment, and accessing clear, comprehensive medical information, are pivotal determinants of their overall contentment. In the antenatal care

(ANC) context, services that prioritize effective communication, patient empowerment, and a respectful, secure environment substantially enhance satisfaction, even amid resource constraints, highlighting that non-technical aspects of care often carry greater weight than structural limitations alone (Agbi et al., 2023). Given that common challenges in urban settings like East Bekasi, such as high staff workloads, prolonged waiting times, and inefficient queuing systems, frequently diminish patient satisfaction, the findings advocate for implementing standardized, efficient service protocols that balance clinical competence with compassionate, patient-centered engagement. Ultimately, this study confirms that health service quality is the most potent predictor of maternal satisfaction, reinforcing the need for strategic interventions that target both technical excellence and interpersonal responsiveness to sustainably improve patient experiences across primary and referral maternal healthcare facilities.

CONCLUSION

This study demonstrates that the quality of maternal health services in the East Bekasi region is significantly associated with pregnant women's satisfaction, anxiety levels, and physical health outcomes. Respondents, predominantly young adults with secondary education and engaged in homemaking roles, perceived service quality across key dimensions, including tangibles, responsiveness, empathy, reliability, and assurance, as central to their care experience. Among these, satisfaction emerged as the outcome most strongly influenced by service quality, underscoring the critical role of interpersonal care, effective communication, and patient-centered engagement in shaping positive maternal perceptions. The findings affirm that high-quality antenatal care, characterized by empathetic interactions, timely service delivery, and comprehensive health education, not only enhances satisfaction but also reduces psychological distress and improves physical well-being during pregnancy. Consequently, health facilities in East Bekasi are encouraged to strengthen service standards by prioritizing dimensions that directly impact maternal experiences, particularly through targeted training for healthcare workers in compassionate communication, routine monitoring of patient feedback, and the integration of efficient, transparent service systems. Ultimately, adopting a holistic, patient-centered approach to maternal healthcare, where clinical excellence is complemented by emotional support and respectful engagement, is essential for fostering positive pregnancy outcomes and advancing the overall quality of maternal and child health services in urban community settings.

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CONFLICT OF INTEREST

The authors declare that there is no conflict of interest in this study.

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