Correlates of Responsiveness and Empathy on Antenatal Patients' Satisfaction in Primary Healthcare Facilities

Abstract

Purpose: This study examines the correlates of empathy and responsiveness on antenatal patient satisfaction in primary healthcare facilities in Obio-Akpor LGA, Rivers State. The objective is to elucidate how these dimensions of service quality impact patient satisfaction during antenatal care.

Design/methodology/approach: Utilizing a quantitative survey design, the study surveyed 264 outgoing antenatal patients from 24 primary healthcare facilities in Obio-Akpor LGA. Stratified random and purposive sampling techniques ensured a representative sample, focusing on women with significant antenatal experience. Data collection involved adapted scales for measuring empathy, responsiveness, and patient satisfaction. Analysis was performed using multivariate analysis of variance (MANOVA), discriminant analysis, and multiple regression.

Findings: The regression analysis revealed a strong positive correlation between empathy, responsiveness, and antenatal patient satisfaction ($R = 0.859$, $R^2 = 0.738$). Responsiveness emerged as a more substantial predictor of patient satisfaction (unstandardized coefficient = 0.727) compared to empathy (unstandardized coefficient = 0.546). The ANOVA results confirmed the

significance of both predictors, with empathy and responsiveness significantly affecting patient satisfaction ($p < 0.001$).

Research limitations/implications: While empathy significantly contributes to patient care, its direct impact on satisfaction is less pronounced compared to responsiveness. The study highlights the need for healthcare facilities to enhance both responsiveness and empathy to improve antenatal patient satisfaction. Future research could explore additional dimensions of service quality and their impact on patient outcomes.

Practical implications: To improve responsiveness, healthcare facilities should invest in staff training focused on timely and effective care and adopt modernized communication tools for real-time patient interactions.

Originality/value: This study provides new insights into how empathy and responsiveness influence antenatal patient satisfaction, emphasizing the importance of both dimensions in enhancing the quality of antenatal care. The findings offer practical recommendations for improving patient experiences in primary healthcare settings.

Keywords: Antenatal care, Patient satisfaction, Empathy, Responsiveness, Healthcare Quality.

1.1 Introduction

The healthcare sector plays a crucial role in addressing pregnancy-related challenges among women and ensures safe delivery. Patient satisfaction during the antenatal period is essential, as it reflects the quality of care received and influences maternal and neonatal health outcomes. High-quality antenatal care is associated with lower risks of prenatal complications and improved health results for both mothers and newborns [66, 62). Studies underscore the importance of antenatal education and birth preparedness in enhancing maternal health and access to skilled obstetric care [24, 2]. Furthermore, [44, 59] illustrates that skilled birth attendance and institutional deliveries significantly reduce maternal mortality rates and improve health outcomes.

Despite its recognized importance, antenatal care utilization and satisfaction in Nigeria are alarmingly low. Only 61% of pregnant women attend at least one antenatal visit, significantly lower than the 79% average for other lower-middle-income countries [46]. Additionally, 41% of women who receive antenatal care prefer non-institutional deliveries, contributing to Nigeria's high maternal mortality rate of 576 deaths per 100,000 live births [66, 46]. [7] suggests that inadequate attention from healthcare providers contributes to increased maternal mortality rates in developing nations.

Traditionally, the evaluation of healthcare service quality has focused on organizational metrics, such as efficiency and policy adherence [22, 51]. While these metrics are important, they often overlook patients' subjective experiences. Recent studies [28, 61] advocate for a paradigm shift that prioritizes patient perspectives in assessing healthcare quality. Specifically, the dimensions of service quality that affect patient satisfaction have not been thoroughly explored from the viewpoint of women undergoing antenatal services [16, 10]. Research on patients' perceptions of service quality remains limited [19], with a lack of consensus on how to conceptualize the relationship between patient satisfaction and their perceptions of healthcare quality.

This study aims to bridge this gap by examining healthcare service quality through the experiences of antenatal women, specifically focusing on responsiveness and empathy during antenatal visits. Understanding how these factors influence satisfaction is vital, as deficiencies in these areas can deter women from seeking essential care [14; 67]. Existing literature indicates that healthcare providers' responsiveness to patient needs and empathy towards their concerns can enhance patient satisfaction, and increase trust in the healthcare system [41, 3].

Drawing on the Social Cognitive Theory [13] and Service Quality Theory (Parasuraman, Zeithaml, & Berry, 1988), this study posits that patients' perceptions of responsiveness and empathy from

healthcare providers significantly influence their overall satisfaction and likelihood of continued service utilization. Social Cognitive Theory suggests that patients form expectations based on their experiences, which impacts satisfaction levels. Likewise, Service Quality Theory identifies responsiveness and empathy as essential dimensions that shape patient perceptions [51]. Therefore, demonstrating responsiveness and empathy by healthcare providers is crucial in ensuring long-term trust, satisfaction, and adherence to healthcare services.

2.1 Review of Related Literature and Hypothesis Development

2.1.1 Healthcare Service Quality

Service quality remains a vital research area in marketing and management, especially in healthcare. Defined as the gap between patient expectations and actual service delivery, it is fundamentally assessed through the SERVQUAL model established by [51]. This model outlines five key dimensions: tangibles, reliability, responsiveness, assurance, and empathy. In healthcare settings, the importance of these dimensions is underscored by recent studies [48, 4, 63], which emphasize that responsiveness and empathy are important for enhancing patient satisfaction and overall care quality. Measuring service quality poses challenges, particularly given the diverse cultural contexts of healthcare systems worldwide [37]. This variability necessitates a nuanced understanding of quality metrics, as factors influencing service perceptions may differ based on specific healthcare environments [18]. Consequently, this study defines healthcare service quality as the overall patient judgment regarding a healthcare unit's excellence, with a focus on responsiveness and empathy as essential indicators of patient satisfaction [31, 60].

2.1.1.1 Empathy

Empathy plays a pivotal role in enhancing patient experiences and outcomes in the healthcare sector. Rooted in Bandura's Social Cognitive Theory [13], empathy in healthcare settings is essential for understanding patients' perspectives and responding to their emotional states. According to [20], empathy is defined as an individual's response to another person's experiences and can be expressed as warmth, compassion, and concern toward the observed individual. Empathy manifests both cognitively and emotionally. The cognitive dimension of empathy is the ability to understand other people's perspectives, to see their point of view, and to anticipate their reactions [21] and the ability of healthcare providers to place themselves in the patient's situation. On the other hand, the affective component, known as "empathic concern," involves an emotional reaction that facilitates understanding of another's feelings, such as "feeling their pain" [21]. In antenatal care, empathetic interaction reduces stress and enhances patient satisfaction [58, 68, 57]. In this study, empathy refers to the capacity of healthcare workers to exhibit compassion, warmth, soft-heartedness, and tenderness toward their antenatal patients.

2.1.1.2 Responsiveness

Responsiveness in healthcare is characterized by the promptness and appropriateness with which care is delivered. According to [17], responsiveness is the healthcare provider's ability to deliver services timely and appropriate. It is the ability to promptly meet and even, exceed patients' expectations in providing effective care. According to [50], responsiveness is the provider's readiness and willingness to offer prompt services. This dimension of service quality emphasizes the importance of minimizing wait times and addressing patients' concerns without delay thereby, enhancing the overall patient experience. Operationally, this study defines responsiveness as the healthcare's ability to offer timely, efficient, and suitable care that aligns with the immediate needs

of patients [17]. This definition goes beyond mere speed but emphasizes the importance of appropriateness in addressing patient concerns swiftly while maintaining high standards of care and enhancing overall satisfaction.

2.1.2 Antenatal Patients Satisfaction

Patient satisfaction is widely regarded as one of the most crucial indicators of healthcare quality. Research suggests that it is directly tied to the perceived quality of care, as patients evaluate their experiences based on how well the services received align with their expectations [36, 53]. Satisfaction stems not only from the provision of care but also from patients' emotional responses to the degree of alignment between anticipated and actual experiences [49, 56]. In this regard, patient satisfaction can be understood as the extent to which healthcare services meet or exceed expectations, leading to a favorable evaluation of the care experience [11, 6]. Meeting these expectations is critical in enhancing patient trust and adherence to medical advice, which are key to successful healthcare outcomes (69, 55, 8, 32). In the context of this study, patient satisfaction is specifically defined by the degree of care, compassion, responsiveness, and empathy provided to expectant mothers. This ensures that their needs and expectations are addressed, contributing to safe childbirth and reducing maternal and infant mortality rates.

2.2.1 Empathy and Antenatal Patients' Satisfaction

Empathy is fundamental to effective healthcare and directly influences patient satisfaction and clinical outcomes. Studies indicate that empathetic physicians form stronger patient relationships, which in turn, improves satisfaction and promotes adherence to treatment plans [35, 30, 64, and 68]. Studies [9, 38] highlight that empathy plays a major role in reducing stress and enhancing satisfaction among expectant mothers. Empathy's impact, however, extends beyond individual

patient interactions. [65] demonstrated that an empathetic work environment boosts employee morale, which enhances positive patient interactions. Moreover, empathetic leadership plays a pivotal role in sustaining a culture of empathy within healthcare organizations, ultimately leading to better patient outcomes [64]. Collectively, these findings underscore that empathy is not only vital for improving direct patient care but also, essential for maintaining the overall quality and effectiveness of healthcare systems. Hence, we hypothesize that;

H_1: There is no relationship between empathy and antenatal patient satisfaction.

2.2.2 Responsiveness and Antenatal Patients' Satisfaction

Ensuring timely and efficient care for pregnant women is essential to promoting positive maternal health outcomes. Responsiveness plays a critical role in enhancing access to maternal health services [5]. The quality of maternal healthcare services is intrinsically linked to responsiveness, as timely and effective care during pregnancy, childbirth, and postpartum are crucial in mitigating potential risks [26]. Patients actively evaluate their healthcare experiences, and their perceptions of responsiveness strongly impact their overall satisfaction [1]. Studies [25, 15] demonstrate that high levels of responsiveness by healthcare providers significantly influence patient satisfaction. Furthermore, greater responsiveness often results in higher patient satisfaction, leading to increased utilization of healthcare services [45, 39]. While much of the literature supports the positive effect of responsiveness on patient satisfaction. [33] underscore the need for more empirical research to better understand this relationship between antenatal care and patients' expectations. Therefore, we hypothesize that;

H_2: There is no relationship between responsiveness and antenatal patient satisfaction.

3.1 Methodology

This study utilized a quantitative survey design to examine the relationship between empathy, responsiveness, and antenatal patient' satisfaction. The study involved 264 outgoing antenatal patients across the 24 primary health facilities in Obio-Akpor LGA, Rivers State, Nigeria. The sampling process combined stratified random sampling and purposive sampling to ensure a representative and comprehensive sample while specifically targeting women with significant antenatal experience. To capture the diverse range of antenatal care experiences across Obio-Akpor LGA, Rivers State, Nigeria; the 24 primary health facilities were first stratified based on key characteristics, such as location (urban vs. rural) and patient volume (high vs. low). Within each stratum, a proportionate number of facilities were randomly selected to ensure that the sample adequately reflects the varying contexts in which antenatal care is delivered. Also, purposive sampling was employed to target outgoing antenatal patients with significant antenatal experience. Clear and consistent criteria were established to define "significant antenatal experience," focusing on patients who had attended at least three antenatal visits during their pregnancy. This ensured that respondents had sufficient exposure to the healthcare services being evaluated. The total sample of 264 participants was proportionately allocated across the selected health facilities based on their average patient turnout. This approach ensured that the number of respondents from each facility was reflective of its patient load, thus maintaining the representativeness of the sample. Drawing from an extensive literature review, the survey instruments were carefully developed to measure the constructs under investigation. Specifically, the empathy scale was adapted from validated instruments [23, 43, 51] and included dimensions such as healthcare providers' genuine concern for patients' well-being, personalized attention, and attentiveness to patient's emotional and mental states. Similarly, the responsiveness scale incorporated items modified from established measures [39, 15, 51], focusing on the timeliness and availability of care, including

prompt responses to patient needs and minimal appointment waiting times. The patient satisfaction scale included items from [56, 11, 54], which assessed overall satisfaction with care quality, the extent to which expectations were met, and the likelihood of recommending the healthcare facility to others. A five-point Likert scale was employed to capture the range of responses, offering a balance between discriminatory power and simplicity. This choice was guided by the need to avoid response bias and provide participants with a neutral option, thereby accommodating those with ambivalent views. The survey instruments underwent expert validation within the tertiary healthcare sector to ensure content validity. The instrument's reliability was verified using Cronbach's alpha and all the items exceeded the 0.7 benchmark, as stipulated by [47]. Measures were taken to minimize bias, including the randomization of survey questions and the inclusion of a neutral response option. The data analysis employed multivariate analysis of variance (MANOVA), discriminant analysis, and multiple regression to investigate the relationships between the variables. SPSS was used to conduct the analyses which ensured robust statistical examination.

4.1 Results

4.1.1 Regression analysis showing the effects of Empathy (EP) and Responsiveness (RE), on Antenatal Patient Satisfaction (APS)

Table 1: Model Summary

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.859[a]	.738	.726	11.43032	1.921
a. Predictors: (Constant), Empathy, Responsiveness					
b. Dependent Variable: Antenatal patient satisfaction					

The analysis in Table 1 demonstrates that the R-value of 0.859 indicates a strong positive correlation between empathy, responsiveness, and antenatal patient satisfaction. The R Square value of 0.738 suggests that the model accounts for 73.8% of the variability in antenatal patient satisfaction, underscoring its strong predictive capability. The adjusted R Square value of 0.726, slightly lower than the R Square, reinforces the robustness of the model, confirming that it is not overfitted despite the inclusion of multiple predictors. The standard error of the estimate, at 11.43032, signifies a relatively low average deviation of the observed values from the regression line, indicating a good fit. The Durbin-Watson statistic of 1.921, is close to 2. This suggests that there are no significant issues with autocorrelation in the residuals.

Table 2: ANOVA

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	44.846	2	8.212	5.735	.000[b]
	Residual	05.745	245	1.432		
	Total	50.591	264			
a. Dependent Variable: Antenatal patient satisfaction						
b. Predictors: (Constant), Empathy, Responsiveness						

The ANOVA table (Table 2) shows that the regression model significantly explains the variation in antenatal patient satisfaction, with a regression sum of squares of 44.846 and a residual sum of squares of 5.745. The F-statistic of 5.735, with a p-value of 0.000, confirms that empathy and responsiveness significantly predict antenatal patient satisfaction which validates the strength of the model.

Table 3: Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.464	.193		17.927	.000
	Empathy	.546	.464	.094	.721	.000
	Responsiveness	.727	.657	.313	.202	.000
a. Dependent Variable: Antenatal patient satisfaction						

Regression Model: APS = 3.464+[(0.546EP) + (0.727RE)]

The intercept of 3.464 represents the predicted level of antenatal patient satisfaction when both empathy and responsiveness are zero which serves as a baseline for the regression model. The unstandardized coefficient for empathy is 0.546, suggesting that a one-unit increase in empathy leads to a 0.546-unit increase in antenatal patient satisfaction. The standardized Beta of 0.094 and the t-value of 0.721 indicate a relatively smaller impact on antenatal patient satisfaction, with a p-value of 0.000. This suggests a statistical significance despite the low effect size. The unstandardized coefficient for responsiveness is 0.727, indicating that a one-unit increase in responsiveness results in a 0.727-unit increase in antenatal patient satisfaction. The standardized Beta of 0.313 and the t-value of 0.202 imply a more substantial effect compared to empathy, with the p-value of 0.000 confirming its significance as a predictor of antenatal patient satisfaction.

4.2 Discussions

4.2.1 Empathy and Antenatal Patient Satisfaction: While empathy is important to achieving improved patient trust and enhancement of quality of patient care, its direct impact on patient satisfaction may not be as strong as that of responsiveness. Empathy is crucial for providing emotional support and strengthening patient-provider relationships. Studies [41, 30] highlight the importance of empathy in creating a supportive healthcare environment, even though its influence

on satisfaction is somewhat less pronounced than responsiveness. The finding of this study is also consistent with the position of many current studies [64, 68] which argued that healthcare facilities with improved empathetic behavior achieved higher patient satisfaction.

4.2.2 Responsiveness and Antenatal Patient Satisfaction: Research has consistently demonstrated that responsiveness plays a significant role in enhancing patient satisfaction. Responsiveness, which includes timely and effective communication, is essential in improving patient experiences. Studies [43, 29] affirm that responsiveness positively influences how patients perceive the quality of care they receive, thereby boosting their overall satisfaction. Also, the finding of the current study is consistent with other studies [1; 25, 25] which found that the level of responsiveness exhibited by healthcare providers strongly influences patients' overall satisfaction

5.1 Conclusion

5.1.1 Empathy is essential in enhancing trust and quality of patient care; however, its direct impact on antenatal patient satisfaction may not be as substantial as that of responsiveness. Despite this, empathy remains crucial in providing emotional support and strengthening the patient-provider relationship.

5.1.2 Responsiveness has a significant and consistent impact on enhancing antenatal patient satisfaction. Responsiveness is critical in shaping patient experiences, particularly through timely and effective communication.

5.2 Recommendation

5.2.1 To enhance responsiveness in healthcare facilities, it is essential to implement comprehensive training programs with an emphasis on the importance of timely and effective patient care. These

programs should equip staff with practical skills in active listening, quick decision-making, and empathetic communication. Additionally, facilities should invest in modern communication tools, such as instant messaging systems and digital patient management platforms, to enable real-time responses to patient inquiries and concerns.

5.2.2 To effectively boost empathetic behaviors among staff, primary healthcare facilities should implement thorough training programs that focus on active listening, recognizing patient emotions, and compassionate responses. These initiatives could incorporate role-playing exercises, regular workshops, and patient feedback sessions aimed at helping staff build stronger emotional connections with antenatal patients.

5.3 Implications

5.3.1 Practical Implications

Cultivating a culture of empathy and responsiveness within healthcare facilities can directly contribute to better health outcomes. Studies [27, 40] have shown that when patients feel understood and supported by their healthcare providers, they are more likely to adhere to medical advice, follow treatment plans, and attend follow-up appointments. This adherence is critical in antenatal care, where timely interventions can prevent complications and improve maternal and fetal health. Furthermore, the emotional support provided through empathy can reduce patient stress, which is known to have a positive effect on health outcomes, such as lower blood pressure and reduced risk of pregnancy-related complications. By embedding these practices into everyday care, healthcare facilities can achieve quicker recovery times and better health outcomes for patients.

Investing in systems and resources that enable quick responses to patient needs, such as implementing efficient communication channels, optimizing service delivery processes, and utilizing technology like electronic health records (EHRs) can streamline operations within healthcare facilities. For instance, integrating a real-time patient feedback system can alert staff to issues as they arise, allowing for immediate intervention. These improvements can reduce wait times, fewer patient complaints, and improve antenatal patient experience. Furthermore, operational enhancements that reduce delays and improve coordination among healthcare teams can also enhance patient safety by minimizing the likelihood of errors and ensuring that medical interventions are timely and effective.

5.3.2 Theoretical Implications

This study extends the Service Quality Theory by emphasizing the dual importance of empathy and responsiveness in patient satisfaction, particularly in the context of antenatal care. Traditionally, Service Quality Theory focuses on dimensions such as tangibility, reliability, and assurance. However, this study suggests that empathy and responsiveness should be considered equally vital components, especially in healthcare settings where patient-provider interactions are central to the care experience. The findings support the idea that while responsiveness has a more direct and immediate impact on satisfaction, empathy plays a critical role in creating a supportive and holistic care environment. Future research could further refine this theory by exploring how these two elements interact with other dimensions of service quality to influence patient outcomes.

The research provides empirical evidence that contributes to a more nuanced understanding of patient satisfaction, particularly in antenatal care settings. By quantifying the impact of empathy and responsiveness, the study offers insights that can be used to refine existing patient satisfaction models. These models often emphasize aspects like the quality of medical care, physical

environment, and service efficiency but may underplay the importance of emotional and interpersonal factors. This study suggests that future patient satisfaction models should integrate these findings to enhance patient satisfaction across diverse healthcare contexts. For example, incorporating measures of empathy and responsiveness into patient satisfaction surveys could provide a more comprehensive assessment of care quality.

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