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Original Research Article

The Role of Empathy in Shaping Patient Loyalty: A SERVQUAL Study at Lambung Mangkurat Medical Centre Clinic

ABSTRACT

Service quality is a key determinant of patient satisfaction and revisit intention in primary healthcare settings. This study aimed to analyze the association between SERVQUAL dimensions tangibles, reliability, responsiveness, assurance, and empathy and revisit intention at the Lambung Mangkurat Medical Centre (LMMC) Clinic in Banjarbaru. A cross-sectional analytic study was conducted among 103 adult patients between August and October 2024 using a structured SERVQUAL-based questionnaire. Data were analyzed using univariate statistics, Chi-square/Fisher's Exact tests, and multivariate logistic regression with backward Wald selection. Overall levels of satisfaction were high, with more than 87% of respondents reporting satisfaction across all service quality dimensions. Revisit intention was reported by 93.2% of respondents. Bivariate analysis showed that assurance (P = 0.014) and empathy (P = 0.009) were significantly associated with revisit intention, whereas tangibles, reliability, and responsiveness were not. In the multivariate model, only empathy remained significantly associated with revisit intention (adjusted OR = 0.073; 95% CI: 0.013–0.420; P = 0.003). These findings suggest that interpersonal aspects of care, particularly empathy, may play a more important role than structural service characteristics in encouraging patients to reuse healthcare services.

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INTRODUCTION

Lambung Mangkurat Medical Centre (LMMC) Clinic has operated since 2018 as a primary healthcare provider for students and the wider academic community of Universitas Lambung Mangkurat, with service units in Banjarmasin and Banjarbaru. Both clinics achieved Paripurna accreditation from the

Primary Healthcare Facility Accreditation Institute (LAFKESPRI) in 2024, reflecting the institutional commitment to standardized, high-quality, and patient safety-oriented services.[1] In Indonesia, strengthening primary healthcare is increasingly recognized as essential to achieving universal health coverage, yet persistent challenges in infrastructure, human resources, and service delivery continue to affect the quality of care at first-level facilities. Recent Indonesian studies have also shown that service quality remains a key determinant of patient satisfaction and future service use in primary care.[2]

A study in Bondowoso primary healthcare found that assurance was the main service dimension requiring improvement, while reliability and responsiveness were identified as dimensions that needed to be maintained at a good standard.[2] In Puskesmas Wiyung, Surabaya, service quality was reported to influence revisit intention through patient satisfaction, emphasizing the strategic role of perceived quality in sustaining service use.[3] Likewise, a study at Bontonompo 2 Primary Health Center in South Sulawesi showed that service quality significantly affected outpatient satisfaction, with responsiveness and empathy identified as areas still requiring improvement.[4] These findings suggest that although access to primary care has expanded, the quality of service delivery remains a critical issue across Indonesian primary healthcare settings.[5]

Despite this accreditation achievement, operational challenges remain evident. One of the most pressing concerns is the significant fluctuation in patient visits over the past few months. Internal clinic records indicate that total visits reached 624 in October 2023, increased sharply to 931 in November 2023, and declined to 579 in December 2023. The downward trend continued in early 2024, with 298 visits in January, 288 in February, and 374 in March.[1,6] Such variability raises concerns about the stability of service utilization, operational efficiency, and the long-term sustainability of healthcare delivery within the university setting. However, fluctuations in patient visits at LMMC Banjarbaru indicate that maintaining service quality and encouraging continued utilization remain important managerial concerns. As the frontline healthcare facility within the university environment, LMMC is expected not only to meet accreditation standards but also to deliver service experiences that encourage patient trust, satisfaction, and reuse.[1,7,8]

From a conceptual standpoint, access to healthcare may be understood through the Tanahashi model, which explains service coverage as a progression from availability, accessibility, acceptability, contact, and effective coverage. This framework is useful for understanding that utilization is not determined solely by the physical presence of services, but also by whether services are reachable, acceptable, and ultimately effective for the population served. However, the present study does not operationalize or measure Tanahashi dimensions directly. Instead, Tanahashi is used only as a background conceptual lens to illustrate why access and service use may still remain suboptimal even when facilities are formally available.

In this study, the empirical analysis focuses specifically on service quality using the SERVQUAL framework.[9,10] While the Tanahashi model provides the broader conceptual rationale for why a health service is accessed and utilized, it is not used in this study as an operational measurement framework. Instead, the present study evaluates service experience empirically through the SERVQUAL model, which translates service quality into measurable dimensions relevant to patient perceptions and revisit intention. Thus, Tanahashi serves as a conceptual background on healthcare access, whereas SERVQUAL functions as the specific analytical framework used in this study.

The SERVQUAL model is widely used to assess service quality through five dimensions: tangibles, reliability, responsiveness, assurance, and empathy.[11,12] In healthcare, these dimensions are particularly relevant because patient decisions to return to a facility are influenced not only by physical infrastructure, but also by the perceived consistency, timeliness, competence, safety, and interpersonal quality of the care received.[3,13] Indonesian primary-care studies have demonstrated that SERVQUAL-based assessments can identify practical service gaps and dimensions that most strongly influence satisfaction and repeat utilization. Therefore, SERVQUAL provides an appropriate analytical framework for evaluating patient perceptions of service quality and their association with reuse intention in the LMMC Banjarbaru setting.[2]

Although accreditation status reflects compliance with quality standards, it does not automatically guarantee stable service utilization. An empirical evaluation is needed to identify the enabling and inhibiting factors that influence patients' intention to reuse services. However, research examining determinants of healthcare access and service quality in university-based primary care clinics remains limited, particularly in the Indonesian context. Based on this background, the present study was conducted to analyze the relationship between SERVQUAL dimensions tangibles, reliability, responsiveness,

assurance, and empathy and reuse intention among patients attending LMMC Banjarbaru Clinic. By positioning Tanahashi only as a conceptual background and SERVQUAL as the main analytical framework, this study is expected to provide a more focused understanding of how perceived service quality shapes the intention to reuse primary healthcare services in a university-based clinic setting.

METHODS

Study Design

This study employed an analytical observational design, using a cross-sectional approach, to examine determinants of healthcare service reuse at the LMMC Clinic Banjarbaru. The study was conducted between July 2024 and January 2025, encompassing ethical approval, instrument development and validation, data collection, and statistical analysis. Field data collection was conducted from August 1 to October 30, 2024, at the LMMC Clinic. This study adopted an implementation-oriented perspective, emphasizing service quality dimensions as practical determinants of healthcare reuse.

Population and Sampling

The study population consisted of all adult patients who received healthcare services at LMMC Clinic during the data collection period (August–October 2024). Participants were selected using a nonprobability purposive sampling approach. Respondents were intentionally recruited based on criteria relevant to the study objectives. Inclusion criteria: Patients who received healthcare services at LMMC Clinic during August–October 2024; Aged between 19 and 60 years; and Willing to participate and provide written informed consent. Exclusion criteria: Patients under 19 years of age, patients unable to complete the questionnaire independently, and Patients who declined participation. The minimum sample size was calculated using the Slovin formula, with a 10% margin of error. Based on the estimated patient population during the study period, a minimum sample of 100 respondents was required. A 10% margin of error was considered acceptable given the exploratory nature of the study.

Study Variables

This study applied the SERVQUAL framework to examine the association between service quality dimensions and revisit intention at LMMC Clinic. Revisit intention was treated as the dependent variable, while tangibles, reliability, responsiveness, assurance, and empathy were included as independent variables in logistic regression analysis. All variables were measured using a structured Likert-based questionnaire and subsequently dichotomized based on predetermined cut-off scores to enable binary logistic regression modelling (Table 1).

Research Instrument

Data were collected using a structured, self-administered questionnaire developed based on existing literature on healthcare access and service quality and adapted to the LMMC Clinic context. All questionnaire items were measured using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Prior to data collection, the instrument underwent validity and reliability testing using a pilot sample outside the main study population. Construct validity was assessed using Pearson product–moment correlation, and reliability was evaluated using Cronbach's alpha coefficient. The instrument was considered acceptable if the correlation coefficient exceeded the critical R-value and Cronbach's alpha was ≥ 0.70.

Table 1. Operational definitions of study variables

Variable	Definition	Cut off
Revisit Intention	The respondent's willingness to reuse healthcare services at LMMC Clinic in the future.	Score < 42 = Not Interested; ≥ 42 = Interested
Tangibles	Physical evidence of service quality, including facilities, equipment, and staff appearance.	Score < 12.5 = Not Satisfied; ≥ 12.5 = Satisfied
Reliability	Ability of healthcare providers to deliver services accurately, consistently, and as promised.	Score < 12.5 = Not Satisfied; ≥ 12.5 = Satisfied
Responsiveness	Promptness and willingness of staff to	Score < 12.5 = Not

Variable	Definition	Cut off
	assist patients and respond to their needs.	Satisfied; ≥ 12.5 = Satisfied
Assurance	Knowledge, competence, courtesy, and ability of staff to build trust and ensure patient safety.	Score < 12.5 = Not Satisfied; ≥ 12.5 = Satisfied
Empathy	Individualized attention, concern, understanding, and emotional engagement provided to patients.	Score < 12.5 = Not Satisfied; ≥ 12.5 = Satisfied

RESULT AND DISCUSSION

Respondents in this study were patients who visited the LMMC Clinic, totalling 103, with the characteristics presented in Table 2.

Table 2. Characteristics of respondents

Characteristics	Frequency	Percentage
Sex		
Male	45	43.7
Female	58	56.3
Age (Years)		
19-30	66	64.1
31-45	25	24.3
45-60	12	11.7
Visit Frequency (time)		
1	30	29.1
2-3	42	40.8
4-5	15	14.6
> 5	16	15.5

Table 2 shows that most respondents were female (56.3%), while 43.7% were male. The age distribution was concentrated in early adulthood: 19–30 years (64.1%), followed by 31–45 years (24.3%) and 45–60 years (11.7%). Regarding clinic utilization, the most frequently reported visit category was 2–3 visits (40.8%), followed by 1 visit (29.1%), >5 visits (15.5%), and 4–5 visits (14.6%). This profile suggests that LMMC primarily serves a relatively young and active university population; in similar outpatient settings, younger adults often report higher service use when access is convenient, and care is perceived as responsive to their daily needs, which can shape loyalty intentions through perceived value and satisfaction pathways.[14]

The respondent profile also provides an important contextual explanation for the very high level of satisfaction observed in this study. Most respondents were young adults and repeat users of the clinic, which may indicate prior familiarity with the service system, staff, and access procedures. In university-based primary care settings, this type of user profile may contribute to more stable expectations and a greater tendency to evaluate services positively when access is convenient and communication is clear. In practical terms, the high proportion of respondents with 2–3 visits or more suggests that many participants were not first-time users, but individuals who had already formed service perceptions through previous encounters. This pattern may partially explain why satisfaction levels were consistently high across all SERVQUAL dimensions.

From an implementation perspective, these findings suggest that LMMC Clinic may already have adequate baseline performance in the structural and procedural dimensions of service delivery. When a clinic has reached this threshold, differences in future utilization may no longer be strongly determined by physical facilities alone, but rather by how patients interpret interpersonal care and relational experience. Therefore, the descriptive results in this study should not be viewed merely as indicators of general satisfaction, but also as evidence that the clinic has achieved a relatively favourable starting position from which patient loyalty can be strengthened through more person-centred strategies.

Table 3 shows that the overall satisfaction across the SERVQUAL dimensions was consistently high. The proportion of respondents reporting satisfaction was 87.4% for tangibles, 90.3% for reliability, 91.3% for responsiveness, 91.3% for assurance, and 92.2% for empathy. In parallel, revisit intention was reported by 93.2% of respondents. High satisfaction in most domains is commonly interpreted as an early

marker of service "fit" with users' expectations, and prior outpatient studies show that perceived quality often contributes to loyalty both directly and indirectly.[15–17]

Table 3. Distribution of dependent and independent variables

Variable	Satisfied n (%)	Not Satisfied n (%)
Tangibles	90 (87.4)	13 (12.6)
Reliability	93 (90.3)	10 (9.7)
Responsiveness	94 (91.3)	9 (8.7)
Assurance	94 (91.3)	9 (8.7)
Empathy	95 (92.2)	8 (7.8)
Revisit Intention	96 (93.2)	7 (6.8)

The very high satisfaction across all domains, along with very high revisit intention, suggests a potential "ceiling effect," in which most respondents cluster in the satisfied/positive categories. In this context, statistical tests may have limited power to detect associations for some dimensions because the "not satisfied" group is small in each domain, and the "no revisit intention" group is very small (6.8%, n=7). This is a common challenge in loyalty/intention studies in high-performing facilities.[18–20]

Bivariate analysis was conducted to determine the relationships between each independent variable tangibles, reliability, responsiveness, assurance, and empathy and the dependent variable reuse of health clinics. The chi-square test was used, with several variables requiring Fisher's exact test because they did not meet the chi-square test criteria. The results of the test between each independent variable and the dependent variable are presented in Table 4.

Table 4. Association between service quality dimensions and revisit intention

Variable	P-value	Interpretation
Tangibles	0.214	No Association
Reliability	0.137	No Association
Responsiveness	0.114	No Association
Assurance	0.014	Associated
Empathy	0.009	Associated

Bivariate testing results (Chi-square / Fisher exact as applicable) in Table 4 show that there is no association between tangibles (P = 0.214), reliability (P = 0.137), and Responsiveness (P = 0.114) with revisit intention. However, the Assurance (P = 0.014) and Empathy (P = 0.009) show the association with revisit intention. In patient-facing health services, "assurance" (competence, trust, safety, clarity of explanations) and "empathy" (individual attention, feeling heard, emotional support) often operate as the most proximal drivers of confidence and relational loyalty especially when basic operational elements (cleanliness, equipment, time accuracy) are already perceived as adequate.[21–23] Evidence from outpatient and clinic-based research indicates that perceived service quality components can influence loyalty intentions through trust and satisfaction mechanisms, with interpersonal dimensions frequently emerging as salient predictors when baseline facility quality is acceptable.[24,25]

The absence of statistically significant associations for tangibles, reliability, and responsiveness does not necessarily indicate that these dimensions are unimportant in healthcare delivery. Instead, these findings may suggest that these domains had already reached a relatively acceptable baseline level in the clinic, resulting in limited variability between respondents. In such circumstances, structural and operational service dimensions may function more as minimum expected standards rather than differentiating factors that determine revisit intention. Patients may notice these dimensions mainly when they are poor, but once they are perceived as adequate, they may no longer serve as the primary reason for returning to the clinic.

By contrast, assurance and empathy may operate at a more personal and relational level, making them more sensitive determinants of patient loyalty. In primary care, patients often evaluate not only whether they received treatment, but also whether they felt safe, respected, understood, and adequately informed. This distinction is particularly relevant in university-based clinics, where patients may seek not only curative services but also reassurance, trust, and continuity of care. Thus, the bivariate findings support the view that although infrastructure and responsiveness remain necessary elements of quality,

loyalty may be more strongly shaped by confidence-building and emotionally responsive interactions.

Multivariate analysis was conducted using binary logistic regression with the backward Wald method. Multivariate analysis was performed using binary logistic regression with the backward Wald method to identify service quality dimensions independently associated with revisit intention at LMMC Clinic. The final model is presented in Table 5.

Table 5. Final logistic regression model of factors associated with LMMC Clinic reuse

Variable	Adjusted OR	95% CI	P Value
Empathy	0.073	0.013-0.420	0.003

The final model at table 5 shows that after controlling for other variables, only empathy remained significantly associated with LMMC Clinic reuse (adjusted OR = 0.073; 95% CI: 0.013–0.420; p = 0.003). This finding indicates that empathy is the only SERVQUAL dimension that maintains an independent relationship with clinic reuse in the final model. This result is consistent with contemporary healthcare service research, which shows that interpersonal dimensions often outweigh structural service components in predicting loyalty behaviours. Lin & Yin[14] demonstrated that emotional interaction quality significantly influences patient loyalty through satisfaction and perceived value pathways. Similarly, Sharka et al.[26] found that relational care dimensions were stronger predictors of revisit intention than physical facility attributes.

The finding that empathy remained significantly associated with revisit intention after adjustment suggests that interpersonal aspects of care may be more influential than structural service dimensions in shaping patient loyalty in this setting. This pattern is relevant in the Indonesian primary healthcare context, where several studies have shown that relational dimensions of service quality remain important determinants of patient experience. A study at Bontonompo 2 Primary Health Centre, South Sulawesi, found that although overall patient satisfaction was high, responsiveness and empathy were still identified as dimensions requiring improvement, indicating that interpersonal care remains a persistent quality gap in Indonesian primary care.[4]

Likewise, a study at Wiyung Health Centre, Surabaya, reported that service quality influenced revisit intention through patient satisfaction, emphasizing that patient perceptions of care quality remain central to continued use of primary healthcare services.[3] In contrast, a study across several Lumajang Regency Health Centres found that responsiveness, rather than empathy, was significantly associated with revisit intention, while empathy was not statistically significant.[27] Taken together, these regional findings suggest that the specific SERVQUAL dimension most strongly linked to revisit intention may vary across settings, but they consistently reinforce the importance of patient-centered service quality in Indonesian primary care.[28]

From a practical perspective, the present findings imply that empathy should not be addressed only as an abstract professional value, but as a trainable service competency. Actionable strategies for LMMC Clinic may include: (1) structured training on empathic communication and active listening for all frontline staff; (2) brief role-play sessions using common clinic scenarios, such as explaining diagnoses, responding to anxious patients, and handling repeated questions; (3) feedback-based supervision using patient comments or short post-visit assessments; and (4) integration of empathy indicators into routine service evaluation and staff performance review.

These recommendations are supported by Indonesian evidence showing that structured communication training can strengthen patient-centered interaction skills among healthcare workers. A recent Indonesian training program reported that 96% of participants were satisfied with the communication training and expressed willingness to apply the skills in daily clinical practice, supporting the feasibility of embedding such interventions in institutional development plans.[29] Similarly, a quasi-experimental study in Bekasi Regency Hospital found that a three-day Carl Rogers–based empathy training improved important affective subdimensions of empathy among nurses, particularly empathic concern, while reducing personal distress.[30] Earlier evidence from Bandung also showed that responding empathically training improved doctors' empathic response skills, indicating that empathy-oriented training can be strengthened through practical and behaviour-based learning approaches.[28]

Accordingly, the implication of this study is not merely that empathy is statistically significant, but that it represents a service dimension that can be operationalized, taught, monitored, and improved. For LMMC Clinic, this means that quality improvement efforts should move beyond infrastructure and

procedural efficiency alone and include targeted capacity building in empathic communication. In a clinic where baseline satisfaction is already high, small improvements in how patients feel heard, respected, and personally understood may produce meaningful gains in revisit intention and long-term patient loyalty.

This study applies a structured SERVQUAL framework and multistage logistic regression modelling to identify the most influential determinant of revisit intention. The stepwise modelling approach strengthens internal analytical validity. Taken together, the findings indicate that revisit intention at LMMC Clinic is shaped less by structural adequacy alone and more by the interpersonal quality of service delivery. This distinction is important because it suggests that accreditation and operational readiness, although essential, may not be sufficient to ensure long-term service reuse. What appears to sustain loyalty is the patient's experience of being understood, reassured, and personally valued during the care encounter.

However, several limitations should be acknowledged. First, the cross-sectional design limits causal inference. Second, the highly skewed outcome distribution (93.2% reporting revisit intention) may reduce discriminatory power and inflate standard errors. Third, the study was conducted in a single institutional clinic, limiting external generalizability. From a managerial perspective, LMMC Clinic should prioritize empathy-centred service training, structured communication protocols, and patient experience reinforcement programs to strengthen sustainable revisit intention.

CONCLUSION

This study showed that, among the five SERVQUAL dimensions, empathy was the only dimension that remained significantly associated with revisit intention after adjustment for other service quality variables. This finding indicates that, in the context of LMMC Clinic, patients' willingness to reuse services is influenced not only by adequate facilities or technical service delivery, but also by whether they feel heard, understood, and personally cared for during the healthcare encounter. For LMMC Clinic specifically, these results suggest that strengthening empathetic, patient-centered communication may be one of the most effective strategies to sustain patient loyalty and encourage continued service utilization.

Therefore, a practical recommendation is for the clinic to implement brief and structured empathy-oriented training for frontline staff, supported by simple patient feedback monitoring as part of routine quality improvement. Future studies should involve larger and more diverse samples, include other first-level healthcare facilities for comparison, and examine additional variables such as patient trust, waiting time, and continuity of care to better understand factors influencing revisit intention in primary healthcare settings.

AUTHOR'S CONTRIBUTION STATEMENT

Iskandar was contributed to conceptualization, Methodology, Writing, and Original draft preparation; Gusti Muhammad Perdana Putera was contributed to Writing, Reviewing, and Editing manuscript; Ayu Riana Sari Azwari was contributed to Software, Validation, and Data Analysis; Hapsari Lintang Sekartaji was contributed to Writing, Reviewing and Editing manuscript; Eko Suhartono was contributed to Data curation, Visualization, Investigation, and Supervision.

CONFLICTS OF INTEREST

No author of this paper has a conflict of interest, including specific financial interests, relationships, and/or affiliations relevant to the subject matter or materials included in this manuscript.

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