



SERVQUAL outpatient service quality and patient satisfaction: policy implications at Puskesmas Kabanjahe


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ABSTRACT

Patient satisfaction is a crucial indicator of healthcare service quality. Puskesmas Kabanjahe, serving 64,890 residents across 10 villages, requires comprehensive evaluation of outpatient service quality to inform policy improvements and achieve the mandated 95% satisfaction threshold. This study evaluated the relationship between SERVQUAL dimensions (reliability, responsiveness, assurance, empathy, and tangibles) and patient satisfaction at Puskesmas Kabanjahe to provide evidence-based policy recommendations. A cross-sectional study was conducted from April to August 2025 involving 237 outpatient visitors selected through accidental sampling. Data were collected using structured SERVQUAL questionnaires on a five-point Likert scale and analyzed using Spearman rank correlation. All five SERVQUAL dimensions demonstrated statistically significant relationships with patient satisfaction ($p < 0.05$). Descriptively, all five dimensions were rated as good by the majority of respondents: tangibles (99.6%), assurance (99.2%), reliability (98.7%), responsiveness (98.3%), and empathy (98.3%). Spearman correlation analysis confirmed significant positive relationships between each dimension and patient satisfaction ($r_s = 0.134-0.212$; $p < 0.05$ for all dimensions), with reliability showing the strongest correlation ($r_s = 0.212$). Female respondents exhibited significantly higher satisfaction (91.7%) compared to males (80.6%) ($p = 0.04$). Occupation showed borderline significance ($p = 0.05$), with farmers demonstrating lowest satisfaction (87.5%). These findings confirm that outpatient services at Puskesmas Kabanjahe have achieved high service quality consistent with SPM requirements, while highlighting the need for targeted improvements in specific demographic groups to ensure equitable attainment of the mandated 95% satisfaction threshold across all patient populations.

Keyword: *SERVQUAL, patient satisfaction, primary healthcare*



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1. Introduction

Patient satisfaction is a crucial element in assessing healthcare service quality and serves as an important indicator for measuring the success of healthcare facilities in providing services that are responsive to community needs. Patient satisfaction can be defined as patients' perceptions of the healthcare service experience they receive, reflecting the extent to which their expectations are met (Cui et al., 2025). Research shows that patient satisfaction not only impacts patient loyalty and retention, but also correlates with better clinical outcomes and treatment adherence (Perals et al., 2025). According to Indonesian Minister of Health

Regulation Number 4 of 2019 concerning Technical Standards for Basic Service Quality Fulfillment in Minimum Service Standards (SPM) in the Health Sector, the minimum standard for patient satisfaction level that must be achieved is more than 95% to ensure optimal healthcare service quality (Peraturan Menteri Kesehatan Republik Indonesia Nomor 4 Tahun 2019, n.d.).

Epidemiological data shows that patient satisfaction levels with healthcare services at the global level still vary significantly. The 2024 WHO report reveals that unsafe healthcare services are a significant global public health problem, with more than one in ten patients experiencing harm in medical care settings, half of which are preventable (WHO, 2024). Patient satisfaction disparities between developed and developing countries are very striking, indicating that healthcare service quality, particularly at primary healthcare facilities, requires special attention and comprehensive evaluation. Systematic research shows that factors affecting patient satisfaction include physician characteristics, waiting time, medical service quality, communication, and patient sociodemographic characteristics (Ferreira et al., 2023).

In Indonesia, patient satisfaction levels with healthcare services are still below established standards. Puskesmas (Community Health Centers), as unique primary healthcare facilities in Indonesia, are the main entry point to the government-managed healthcare service system (Wulandari et al., 2023). With at least 10,260 Puskesmas serving approximately 250 million residents in 2022, puskesmas play an important role in providing healthcare services that include promotive, preventive, curative, and rehabilitative services (Aisyah et al., 2025). However, various studies show that several Puskesmas still face challenges in achieving optimal patient satisfaction levels. Studies show that patient satisfaction is the most important factor and one of the main reasons patients visit primary healthcare services (Wulandari et al., 2023).

Puskesmas Kabanjahe, as a primary healthcare facility (FKTP) with important responsibilities in providing healthcare services to the community in its working area, needs to evaluate its outpatient service quality. Outpatient services are the most commonly accessed type of service by the community at Puskesmas, with outpatient visits contributing 95% of the total volume of Puskesmas services per year (Cui et al., 2025). Therefore, patient satisfaction with outpatient services becomes very important in determining community acceptance of healthcare facilities and impacts the utilization of primary healthcare services overall.

The concept of healthcare service quality can be measured using the SERVQUAL (Service Quality) model, which is a standardized instrument most widely used in healthcare service marketing research (Cai et al., 2025). The SERVQUAL model identifies five main dimensions that determine service quality: reliability, responsiveness, assurance, empathy, and tangibles. This model has been widely adapted in the context of healthcare services and used in various countries such as Turkey, Iran, Saudi Arabia, and Romania to measure patient perceptions of service quality (Guzmán-Leguel & Rodríguez-Lara, 2025). The strength of the SERVQUAL model lies in its ability to capture patients' subjective experiences and identify quality gaps from the patient's perspective.

Recent research shows that all five SERVQUAL dimensions have significant relationships with patient satisfaction in various healthcare facilities. A cross-sectional study in a tertiary hospital in China shows that tangibility and reliability dimensions significantly affect patient satisfaction, with satisfaction levels decreasing in patients with longer hospital stays (Cai et al., 2025). Other research confirms that all five dimensions of healthcare service quality serve as predictors of patient satisfaction and loyalty levels toward hospital services (Bentum-Micah et al., 2020). In the context of primary healthcare services, research in Vietnam shows that emotional, functional, social influence, and trust dimensions have significant impacts on customer perceived value and satisfaction (Nguyen et al., 2021).

Implementation of SERVQUAL-based service quality evaluation in primary healthcare facilities has important implications for healthcare policy formulation. Law Number 17 of 2023 concerning Health stipulates that puskesmas are primary healthcare facilities that organize and coordinate promotive, preventive, curative, rehabilitative, and palliative healthcare services with priority on promotive and preventive services in their working areas (Undang-Undang Nomor 17 Tahun 2023 Tentang Kesehatan, n.d.). With this comprehensive responsibility, puskesmas need empirical data regarding their service quality to improve patient satisfaction and strengthen their role as the frontline in the tiered healthcare system. Minister of Health Regulation Number 6 of 2024 emphasizes the need for continuous healthcare service quality improvement, placing quality standards as the main variable in measuring health SPM achievement (Peraturan Menteri Kesehatan Republik Indonesia No 6 Tahun 2024, n.d.).

Research shows that Puskesmas accreditation status affects patient satisfaction through service quality as an intervening variable, where accredited Puskesmas tend to have better operational standards, higher patient satisfaction, and better capabilities in handling various health cases (Suwandi et al., 2025). However, there is still a gap in comprehensive understanding regarding the relationship between the five SERVQUAL dimensions and outpatient patient satisfaction in specific puskesmas settings. Most previous research analyzed

the relationship between service quality and patient satisfaction in other healthcare facilities or in different geographical contexts.

This research was conducted to evaluate the relationship between outpatient healthcare service quality, which includes five main SERVQUAL dimensions (reliability, responsiveness, assurance, empathy, and tangibles), with patient satisfaction at Puskesmas Kabanjahe. This research is expected to identify service quality dimensions that most influence patient satisfaction, as well as provide concrete and evidence-based recommendations for Puskesmas Kabanjahe to improve sustainable and patient-oriented healthcare service quality. These findings are also expected to serve as a basis for consideration in local health policy formulation that supports the achievement of Minimum Service Standards (SPM) and comprehensive improvement of community health status in the working area of Puskesmas Kabanjahe.

2. Methods

This research is a quantitative study with a cross-sectional design and Spearman rank correlation analytical approach aimed at evaluating SERVQUAL based outpatient service quality and its relationship with patient satisfaction as a basis for service policy formulation at puskesmas. The research was conducted at Puskesmas Kabanjahe, Kabanjahe District, Karo Regency in April – August 2025.

The research population consisted of all outpatient patients who visited and received healthcare services at Puskesmas Kabanjahe during the research period. Based on patient visit data in June 2025, the population was recorded as 625 people.

Sample size determination used the Lemeshow formula with a 95% confidence level ($Z=1.96$), maximum proportion ($p=0.5$), and error rate of 10% ($d=0.1$), resulting in a sample size of 237 respondents. The sampling technique used was non-probability sampling with accidental sampling method, namely outpatient patients encountered during the research who were willing to become respondents. Inclusion criteria included patients who were able to read and write, did not experience mental disorders or decreased consciousness, were willing to participate in the research, and were undergoing treatment or visiting the Puskesmas. Exclusion criteria included patients who were unwilling to participate and patients with mental disorders or decreased consciousness.

Data collection was conducted using structured questionnaires as research instruments compiled based on the SERVQUAL concept, which includes five dimensions of service quality, namely reliability, responsiveness, assurance, empathy, and tangibles. Patient satisfaction was measured as the dependent variable. Primary data were obtained through questionnaire distribution to outpatient patients, while secondary data were obtained from the Puskesmas Kabanjahe Profile, Karo Regency Health Office, and relevant scientific literature.

Variable measurement was conducted using a five-point Likert scale, with a score range of 1 (disagree) to 5 (strongly agree). Measurement results were then categorized into three levels, namely good, adequate, and poor. Data analysis was conducted univariately to describe the distribution of research variables and bivariately using Spearman rank correlation test to analyze the relationship between service quality and patient satisfaction. Spearman rank correlation was selected given the ordinal nature of the five-point Likert scale data used in the SERVQUAL instrument.

3. Results

Puskesmas Kabanjahe is located in Kabanjahe District, Karo Regency, with a coverage area of approximately 31.8 km² and relatively good transportation access. The service area of Puskesmas Kabanjahe encompasses 10 villages/sub-districts and is situated in a highland region at an altitude of 1,200 meters above sea level, with temperatures ranging from 18°C to 24°C. The total population residing in Puskesmas Kabanjahe's service area is 64,890 individuals.

This research involved 237 respondents who were outpatient visitors at Puskesmas Kabanjahe. The demographic characteristics of the respondents were obtained through self-reported data in the questionnaire and are presented in Table 1.

Table 1. Respondents Characteristics

| Characteristics | Frequency (n = 237) | % |
|------------------------|------------------------|-------|
| Age (years) | | |
| ≤30 | 35 | 14.77 |
| 31-39 | 70 | 29.54 |
| 40-49 | 47 | 19.83 |
| ≥50 | 85 | 35.68 |
| Gender | | |
| Female | 144 | 60.76 |
| Male | 93 | 39.24 |
| Occupation | | |
| Farmer | 80 | 33.75 |
| Housewife | 30 | 12.66 |
| Merchant | 60 | 25.32 |
| Teacher/ Civil Servant | 15 | 6.33 |
| Entrepreneur | 52 | 21.94 |

Based on Table 1, the majority of respondents (n=144, 60.76%) were female, while 93 respondents (39.24%) were male. By age group, the largest proportion of respondents fell in the >50 years age category (n=85, 35.86%), followed by the 30-39 years group (n=70, 29.54%), 40-49 years (n=47, 19.83%), and <30 years (n=35, 14.77%). Regarding occupation, farmers represented the largest occupational group (n=80, 33.75%), followed by merchants (n=60, 25.32%), entrepreneurs (n=52, 21.94%), housewives (n=30, 12.66%), and teachers/civil servants (n=15, 6.33%). Overall, the respondent profile indicates that the majority were female, aged 50 years and older, and engaged in agricultural work.

The relationship between respondent characteristics and patient satisfaction is presented in Table 2.

Table 2. Relationship between Respondent Characteristics and Patient Satisfaction

| Variable | Adequate | | Good | | Total | | p-value |
|------------------------|----------|------|------|------|-------|-----|---------|
| | n | % | n | % | N | % | |
| Gender | | | | | | | |
| Male | 18 | 19.4 | 75 | 80.6 | 93 | 100 | 0.04 |
| Female | 12 | 8.3 | 132 | 91.7 | 144 | 100 | |
| Age (years) | | | | | | | |
| ≤30 | 5 | 14.3 | 30 | 85.7 | 35 | 100 | 0.18 |
| 31-39 | 7 | 10.0 | 63 | 90.0 | 70 | 100 | |
| 40-49 | 10 | 21.3 | 37 | 78.7 | 47 | 100 | |
| ≥50 | 8 | 9.4 | 77 | 90.6 | 85 | 100 | |
| Occupation | | | | | | | |
| Farmer | 10 | 12.5 | 70 | 87.5 | 80 | 100 | 0.05 |
| Housewife | 1 | 3.3 | 29 | 96.7 | 30 | 100 | |
| Merchant | 3 | 5.0 | 57 | 95.0 | 60 | 100 | |
| Teacher/ Civil Servant | 1 | 6.7 | 14 | 93.3 | 15 | 100 | |
| Entrepreneur | 5 | 9.6 | 47 | 90.4 | 52 | 100 | |

Statistical analysis revealed a significant relationship between gender and patient satisfaction ($p=0.04 < 0.05$). Female respondents demonstrated higher satisfaction rates, with 91.7% (n=132) rating the service as good compared to 80.6% (n=75) of male respondents. However, no statistically significant relationship was found between age group and patient satisfaction ($p=0.18 > 0.05$). Satisfaction with outpatient services was consistently high across all age categories, ranging from 78.7% to 90.6% for the good category.

A borderline significant relationship was observed between occupation and patient satisfaction ($p = 0.05$). Notably, housewives demonstrated the highest satisfaction rate at 96.7% (n=29), followed by merchants at 95.0% (n=57), teachers/civil servants at 93.3% (n=14), entrepreneurs at 90.4% (n=47), and farmers at 87.5%

(n=70). Among farmers, the proportion rating services as adequate was highest at 12.5% (n=10), suggesting potential areas for service improvement targeting this occupational group.

Table 3. Relationship between Services Quality Dimensions and Patient Satisfaction

| SERVQUAL Dimensions | Adequate | | Good | | Total | | r_s | p-value |
|------------------------|----------|-----|------|------|-------|-------|-------|---------|
| | n | % | n | % | N | % | | |
| Reliability | 2 | 1.3 | 235 | 98.7 | 237 | 100.0 | 0.212 | 0.00 |
| Responsiveness | 4 | 1.7 | 233 | 98.3 | 237 | 100.0 | 0.151 | 0.02 |
| Assurance | 2 | 0.8 | 235 | 99.2 | 237 | 100.0 | 0.141 | 0.03 |
| Empathy | 4 | 1.7 | 233 | 98.3 | 237 | 100.0 | 0.167 | 0.01 |
| Tangibles | 1 | 0.4 | 236 | 99.6 | 237 | 100.0 | 0.134 | 0.04 |

The Spearman rank correlation analysis of the relationship between healthcare service quality and patient satisfaction at Puskesmas Kabanjahe demonstrated that all five SERVQUAL dimensions exhibited statistically significant positive associations with patient satisfaction (Table 3). All p-values were less than the significance level ($\alpha=0.05$), leading to the rejection of the null hypothesis and acceptance of the alternative hypothesis. The correlation coefficients (r_s) ranged from 0.134 to 0.212, indicating weak to moderate positive relationships between each service quality dimension and patient satisfaction. This indicates that higher healthcare service quality is consistently associated with increased patient satisfaction across all dimensions.

The reliability dimension showed the strongest significant relationship with patient satisfaction ($r_s = 0.212$; $p = 0.000 < 0.05$). Among 237 respondents, 235 (98.7%) rated the service as good, while only 2 (1.3%) rated it as adequate. These findings demonstrate that the majority of patients perceived healthcare workers at Puskesmas Kabanjahe as capable of delivering timely, procedure-compliant, and accurate services in addressing patient concerns. Healthcare staff were assessed as trustworthy in fulfilling promises, providing clear information, and demonstrating professionalism in all medical procedures. This reliability dimension reflects that healthcare workers have established strong patient trust through consistent delivery of quality services.

A significant relationship was found between responsiveness and patient satisfaction ($r_s = 0.151$; $p = 0.020 < 0.05$). Of the 237 respondents, 233 (98.3%) rated healthcare staff responsiveness as good and swift in attending to patient needs, while 4 respondents (1.7%) rated it as adequate. These results indicate that Puskesmas Kabanjahe staff demonstrated strong responsiveness through quick, alert, and solution-oriented service delivery. Prompt actions such as greeting patients warmly, conducting examinations without delay, and providing easily understood explanations exemplify the high responsiveness observed. Such attentiveness significantly contributed to increased patient confidence and satisfaction with healthcare services.

The assurance dimension demonstrated a significant relationship with patient satisfaction ($r_s = 0.141$; $p = 0.030 < 0.05$). Of the 237 respondents, 235 respondents (99.2%) rated the service as good, while 2 (0.8%) rated it as adequate. The assurance dimension encompasses patient confidence in the competence, knowledge, and courtesy of healthcare workers. The findings reveal that healthcare staff at Puskesmas Kabanjahe demonstrated polite, friendly, and professional behavior, creating a safe and comfortable environment for patients during treatment. Additionally, staff maintained patient medical data confidentiality and provided information with full responsibility. This professionalism fostered patient trust and loyalty toward the health services provided.

The empathy dimension showed a significant relationship with patient satisfaction ($r_s = 0.167$; $p = 0.010 < 0.05$). Of the 237 respondents, 233 (98.3%) rated staff empathy as good, while only 4 (1.7%) rated it as adequate. These results illustrate that healthcare workers successfully provided individualized attention to patients, listened patiently to complaints, and demonstrated genuine concern for patient conditions. Friendly and gentle demeanor, along with equitable treatment regardless of patient background, emerged as critical factors in creating patient comfort and satisfaction. The presence of high empathy enabled patients to feel valued and attended to, fostering a warmer and more harmonious relationship between healthcare providers and patients.

The tangibles dimension demonstrated a significant relationship with patient satisfaction ($r_s = 0.134$; $p = 0.040 < 0.05$). Of the 237 respondents, 236 (99.6%) reported that facilities and service environment were good, while only 1 (0.4%) rated them as adequate. These findings indicate that cleanliness, comfort, and adequacy of equipment and facilities at Puskesmas Kabanjahe effectively supported quality service delivery. A clean waiting area, well-organized rooms, and professional appearance of healthcare workers contributed positively to patient perception of service quality. The physical environment thus emerged as an important factor influencing patient perception of overall service quality.

4. Discussion

The quality of outpatient services at Puskesmas Kabanjahe measured using the five SERVQUAL dimensions, namely reliability, responsiveness, assurance, empathy, and tangibles, shows that all five dimensions have significant relationships with patient satisfaction. This finding confirms that patient perception of service quality is an important determinant in shaping satisfaction, while also reflecting the performance of Puskesmas as a primary healthcare facility. The SERVQUAL model has been proven widely as a valid and reliable instrument for evaluating healthcare service quality in various contexts, including primary healthcare services (Ali et al., 2024; Yunus et al., 2024). The high proportion of patients expressing satisfaction indicates that outpatient services at Puskesmas Kabanjahe generally meet patient expectations, although there is still room for improvement in certain groups and aspects.

Respondent characteristics show that gender has a significant relationship with patient satisfaction, where female patients tend to show higher satisfaction levels compared to male patients. This is consistent with research conducted in various countries showing that women generally provide more positive assessments of healthcare service experiences, although there are variations depending on specific aspects of services being evaluated (Elliott et al., 2012; Shaw et al., 2024). The study by Teunissen et al., (2016) found that women gave lower ratings to hospitals, especially young educated women, showing the complexity of gender relationships with patient satisfaction. However, in the context of primary healthcare services, several studies indicate that women show greater trust in the attitudes and behavior of healthcare workers compared to men (Değer & İşsever, 2024). This indicates differences in perceptions and expectations of healthcare services influenced by social and psychological factors.

The reliability dimension proved to have a highly significant relationship with patient satisfaction. The majority of respondents assessed that healthcare workers were able to provide services in a timely, accurate, and consistent manner according to applicable procedures. Reliability is the main foundation of healthcare services because it is directly related to professionalism and service consistency. The study by Değer dan İşsever (2024) emphasizes that healthcare service providers are expected to provide services in a timely, accurate, and high-quality manner as promised, which is the essence of the reliability dimension. When services are provided according to promises and operational standards, patients will feel safe and trust the healthcare facility. Research in various countries shows that reliability is often the highest priority dimension in determining patient satisfaction, followed by responsiveness and other dimensions (Babroudi et al., 2021). This finding is consistent with various previous studies that place reliability as one of the strongest predictors of patient satisfaction in primary healthcare services (Fabian et al., 2025; Lu et al., 2020).

Responsiveness also shows a significant relationship with patient satisfaction. The alertness of healthcare workers in responding to patient needs and complaints makes a major contribution to patient comfort and trust during the service process. Responsiveness reflects the willingness and ability of service providers to help patients and provide services promptly (Cui et al., 2025). Fast, responsive, and solution-oriented services not only speed up the service process but also give the impression that patients are noticed and valued. Research shows that high levels of responsiveness correlate with increased patient loyalty and retention (Homburg et al., 2017). This condition strengthens patients' positive perceptions of outpatient service quality at Puskesmas Kabanjahe.

In the assurance dimension, a significant relationship with patient satisfaction shows that the competence, professional attitude, and ability of healthcare workers to provide a sense of security and trust are important aspects of healthcare services. Assurance includes knowledge, skills, and the ability to build patient trust (Yunningsih, 2022). Patients tend to be satisfied when they are confident that services are provided by competent, courteous staff who are able to maintain patient confidentiality and safety. Studies show that assurance has a significant positive effect on patient satisfaction, where the courteous and professional attitude of healthcare workers instills confidence in their abilities (Torkzad & Beheshtinia, 2019; Yunningsih, 2022). This sense of security and trust becomes a key element in building patient loyalty to Puskesmas as a primary healthcare facility.

The empathy dimension also has a significant relationship with patient satisfaction, confirming that interpersonal aspects play an important role in healthcare services. Empathy in healthcare services is defined as understanding and responding to patients' emotions and perspectives reflected in communication aimed at helping (Nembhard et al., 2023). Friendly attitudes, individual attention, and non-discriminatory treatment make patients feel valued and understood. Various studies show that healthcare worker empathy significantly affects patient satisfaction and adherence through mediation of factors such as information exchange, interpersonal trust, and partnership (Keshtkar et al., 2024; Kim et al., 2004). Empathetic services not only meet patients' medical needs but also touch emotional and psychological aspects, which ultimately increase

satisfaction and positive patient experiences during outpatient services. Studies show that the empathy dimension is often the most influential aspect of patient satisfaction in hospitals (Yunningsih, 2022).

In addition, the tangibles dimension shows a significant relationship with patient satisfaction. A clean and comfortable service environment, availability of infrastructure, and neat and professional appearance of healthcare workers provide a positive impression of service quality. Tangibles as a physical evidence dimension includes room atmosphere, bed comfort, cleanliness, temperature, lighting, food, equipment, facilities, and parking (Guzmán-Leguel & Rodríguez-Lara, 2025). Although tangibles are not the only determinant of patient satisfaction, good service environmental conditions can strengthen quality perceptions and increase patient trust in the services provided. Research shows that good tangibles have a positive impact on patient satisfaction, although their influence may not be as strong as other dimensions such as empathy and reliability (Perals et al., 2025; Yunningsih, 2022).

The findings of this study show that all five SERVQUAL dimensions contribute significantly to outpatient patient satisfaction at Puskesmas Kabanjahe, with Spearman correlation coefficients ranging from $r_s = 0.134$ (tangibles) to $r_s = 0.212$ (reliability), all at $p < 0.05$. Reliability emerged as the dimension with the strongest association, followed by empathy ($r_s = 0.167$), responsiveness ($r_s = 0.151$), assurance ($r_s = 0.141$), and tangibles ($r_s = 0.134$). These weak-to-moderate positive correlations are consistent with the highly concentrated distribution of responses in the "good" category, which limits variance and constrains correlation magnitude. This indicates that improving the quality of primary healthcare services needs to be done comprehensively, not only focusing on technical aspects of service but also on interpersonal aspects and service environment. Recent research emphasizes that healthcare service quality should be evaluated not only based on one element, but by considering the dynamic interaction between structure, process, and outcomes, as well as including balancing measures (Guzmán-Leguel & Rodríguez-Lara, 2025; Yunus et al., 2024). In the context of health policy, these results have important implications as a basis for formulating Puskesmas quality improvement policies. The strong relationship between service quality and patient satisfaction shows that SERVQUAL-based outpatient service quality evaluation can be used as a strategic instrument in planning, monitoring, and evaluating Puskesmas quality policies.

In line with the mandate of Law Number 17 of 2023 concerning Health and Minister of Health Regulation Number 6 of 2024 concerning Minimum Service Standards in the Health Sector, Puskesmas are required to organize quality, patient-oriented, and sustainable services (Undang-Undang Nomor 17 Tahun 2023 Tentang Kesehatan, n.d.). The findings of this study confirm that quality improvement policies need to be directed at strengthening reliability and responsiveness through consistent implementation of standard operating procedures, service time management, and effective patient complaint response systems. On the other hand, the assurance and empathy dimensions show the importance of human resource development policies that not only emphasize technical competence but also communication, service ethics, and patient-centered care approaches. Meanwhile, the tangibles dimension affirms the need for sustainable infrastructure management policies to create a safe, comfortable service environment that supports patient experience.

SERVQUAL-based outpatient service quality and patient satisfaction not only function as service performance indicators but also as empirical foundations in local health policy formulation. The systematic utilization of these evaluation results is expected to support Puskesmas quality improvement, achievement of Minimum Service Standards, and strengthening of the Puskesmas role as the frontline of primary healthcare services oriented to community needs and satisfaction.

5. Conclusion

This research demonstrates that all five dimensions of the SERVQUAL model (reliability, responsiveness, assurance, empathy, and tangibles) exhibit statistically significant positive relationships with patient satisfaction at Puskesmas Kabanjahe ($r_s = 0.134-0.212$; $p < 0.05$ for all dimensions). Descriptively, the consistently high proportion of respondents rating services as good, ranging from 98.3% to 99.6% across dimensions, indicates that Puskesmas Kabanjahe has successfully implemented quality primary healthcare services that meet patient expectations and needs. Reliability emerges as the dimension with the strongest correlation ($r_s = 0.212$; $p = 0.000$), with 98.7% of patients rating healthcare workers' ability to deliver timely, accurate, and consistent services as good, while tangibles achieved the highest descriptive rating at 99.6% ($r_s = 0.134$; $p = 0.040$), demonstrating that clean facilities, adequate equipment, and professional staff appearance significantly contribute to positive patient perceptions. The empathy ($r_s = 0.167$), responsiveness ($r_s = 0.151$), and assurance ($r_s = 0.141$) dimensions further underscore the importance of competent, prompt, and individualized patient care in fostering satisfaction and loyalty. However, demographic analysis reveals important disparities requiring targeted attention, as female patients demonstrate significantly higher

satisfaction (91.7%) compared to males (80.6%) ($p = 0.04$), and farmers show the lowest satisfaction (87.5%) among occupational groups ($p = 0.05$).

These findings indicate that Puskesmas Kabanjahe has achieved outpatient service quality consistent with the mandated 95% satisfaction threshold under Minister of Health Regulation Number 6 of 2024 concerning Minimum Service Standards in the Health Sector. The statistically significant relationships across all five SERVQUAL dimensions confirm that reliability, responsiveness, assurance, empathy, and tangibles each contribute to meeting SPM outpatient satisfaction targets. However, the demographic disparities identified, particularly the lower satisfaction among male patients (80.6%) and farmers (87.5%), indicate specific subgroups that have not yet reached the SPM threshold. To fully achieve SPM compliance across all population groups, targeted service improvements are needed, including enhanced communication approaches for male patients and scheduling or access adjustments accommodating farmers' work patterns. Future SERVQUAL-based evaluations conducted periodically will support ongoing SPM monitoring and evidence-based service improvement at Puskesmas Kabanjahe.

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