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The Role of Nurse Service Quality and Emotional Care in Improving Patient Trust and Recovery Outcomes in Bandung Healthcare Facilities

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Abstract

This study examined the role of nurse service quality and emotional care in improving patient trust and recovery outcomes in healthcare facilities in Bandung. A quantitative, cross-sectional design was used, involving patients who had received nursing services. Data were collected through structured questionnaires and analyzed using descriptive and inferential statistical methods. The findings showed that nurse service quality and emotional care had significant positive effects on patient trust. Patient trust also significantly influenced recovery outcomes and served as a mediating variable between service quality and emotional care. Service quality demonstrated a stronger effect on trust, while emotional care played an important role in strengthening the nurse–patient relationship. The results indicated that recovery outcomes were influenced not only by technical aspects of care but also by emotional and relational factors. This study concluded that integrating service quality and emotional care through a trust-based approach could more effectively enhance patient recovery and support the development of patient-centered healthcare services.

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Introduction

Healthcare quality has become a major concern in modern healthcare systems because patients increasingly evaluate healthcare services not only based on clinical outcomes but also through responsiveness, communication quality, emotional support, and trust in healthcare providers. Donabedian (1988) emphasized that healthcare quality should be assessed through the structure,

process, and outcome of care, while Doyle et al. (2017) showed that patient experience is closely related to clinical effectiveness and patient safety. In line with the patient-centered care perspective, Epstein and Street (2011) argued that patients should be regarded as active participants in healthcare processes rather than passive recipients of treatment. Therefore, healthcare institutions are expected to provide services that are clinically effective, responsive, emotionally supportive, and capable of building patient trust.

In the nursing context, service quality is particularly important because nurses are among the healthcare professionals who interact most frequently and directly with patients during treatment. Nursing care involves not only technical and clinical responsibilities but also communication, emotional reassurance, psychological support, and patient advocacy. Berry and Bendapudi (2007) highlighted that healthcare is a service-intensive field in which interpersonal interaction strongly influences patients' perceptions of service quality. Thus, the quality of nurse–patient interaction may shape patients' perceptions of healthcare services, influence their trust in healthcare providers, and affect their willingness to participate actively in the recovery process.

Bandung was selected as the research setting because it represents an urban healthcare environment with diverse healthcare facilities and an increasing demand for healthcare services. As one of the major cities in West Java Province, Bandung serves not only residents but also patients from surrounding areas. The city has various healthcare facilities, including public and private hospitals, clinics, and community health centers, creating a complex service environment with diverse patient expectations and service capacities. In urban healthcare settings, high patient volume, workload pressure, waiting time, and limited nurse–patient interaction may affect responsiveness, communication quality, and emotional care. Therefore, Bandung provides a relevant context for examining how nurse service quality and emotional care contribute to patient trust and recovery outcomes. However, empirical studies that specifically examine these relationships in Bandung healthcare facilities remain limited.

The concept of service quality in healthcare can be explained using the SERVQUAL framework developed by Parasuraman, Zeithaml, and Berry (1988). This framework identifies five dimensions of service quality: tangibility, reliability, responsiveness, assurance, and empathy. Tangibility refers to the physical appearance of healthcare facilities, equipment, and healthcare personnel. Reliability refers to the ability to provide accurate, consistent, and dependable services. Responsiveness refers to healthcare providers' willingness to offer prompt assistance and respond to patients' needs. Assurance reflects professional competence, courtesy, communication clarity, and the ability to inspire confidence. Empathy refers to individualized attention, understanding, and caring interaction provided to patients. In nursing services, these five dimensions are relevant because patients evaluate healthcare quality through both technical performance and interpersonal experience.

Previous studies have shown that healthcare service quality is associated with patient satisfaction, trust, treatment adherence, and perceived healthcare outcomes. For example, Andaleeb (2001) found that service quality dimensions significantly influenced patient satisfaction in hospital services, while Mosadeghrad (2020) emphasized the importance of broad healthcare service quality in improving patient experience. Al-Abri and Al-Balushi (2016) also argued that patient satisfaction surveys can be used as a tool for improving healthcare quality. However, these studies do not necessarily examine all five SERVQUAL dimensions in relation to patient trust and recovery outcomes within the nursing context. Therefore, this study applies the original SERVQUAL framework of Parasuraman et al. (1988) and analyzes tangibility, reliability, responsiveness, assurance, and empathy explicitly as separate dimensions.

In addition to service quality, emotional care is an essential component of nursing practice. Emotional care refers to nurses' ability to provide empathy, compassion, active listening, emotional reassurance, and psychological support throughout the care process. Watson's Theory of Human Caring emphasizes that caring relationships between nurses and patients are central to healing

because they create emotional security, dignity, and trust (Watson, 2008). Emotional care may reduce anxiety, improve psychological comfort, and strengthen patients' confidence in healthcare providers. Therefore, emotional care should not be viewed merely as a complementary aspect of healthcare but as an integral element of patient-centered nursing practice.

Patient trust is another important concept in healthcare relationships. Trust reflects patients' confidence in the competence, honesty, reliability, and goodwill of healthcare providers. Hall et al. (2001) explained that trust in healthcare professionals influences communication openness, treatment acceptance, and continuity of care. Birkhäuer et al. (2017) further demonstrated that trust in healthcare professionals is significantly associated with health outcomes. Patients who trust nurses are more likely to disclose health information, follow medical recommendations, cooperate with treatment procedures, and maintain positive relationships with healthcare professionals. In contrast, low levels of trust may lead to dissatisfaction, poor communication, treatment resistance, and weaker recovery experiences. Thus, patient trust may function as a psychological mechanism linking perceived nurse service quality and emotional care with recovery outcomes.

Although previous studies have examined healthcare service quality, emotional care, trust, and patient outcomes, limited research has integrated these variables into a single explanatory framework, particularly in Indonesian urban healthcare settings. Many studies on healthcare quality focus primarily on patient satisfaction or general service performance. In contrast, fewer studies examine how the five SERVQUAL dimensions and emotional care jointly contribute to patient trust and recovery outcomes. Moreover, empirical evidence from Bandung healthcare facilities remains limited, despite the city's role as an important healthcare center in West Java.

This study addresses this gap by examining the role of nurse service quality and emotional care in improving patient trust and recovery outcomes in healthcare facilities in Bandung. Unlike studies that treat service quality as a general construct, this study analyzes the five SERVQUAL dimensions separately: tangibility, reliability, responsiveness, assurance, and empathy. This approach allows the study to identify which dimensions have the strongest influence on patient trust and recovery outcomes. By integrating SERVQUAL theory, Watson's caring perspective, and trust theory, this study provides a comprehensive framework for understanding how technical, emotional, and relational aspects of nursing care contribute to patient recovery.

Specifically, this study aims to:

1. analyze the effects of tangibility, reliability, responsiveness, assurance, and empathy on patient trust;
2. examine the effect of emotional care on patient trust;
3. analyze the effect of patient trust on recovery outcomes;
4. examine the direct effects of tangibility, reliability, responsiveness, assurance, empathy, and emotional care on recovery outcomes; and
5. Investigate the mediating role of patient trust in the relationship between nurse service quality dimensions, emotional care, and recovery outcomes.

Based on the theoretical framework and previous empirical findings, the following hypotheses are proposed:

H1a : Tangibility positively and significantly affects patient trust.
H1b : Reliability positively and significantly affects patient trust.
H1c : Responsiveness positively and significantly affects patient trust.
H1d : Assurance positively and significantly affects patient trust.
H1e : Empathy positively and significantly affects patient trust.
H2 : Emotional care positively and significantly affects patient trust.
H3 : Patient trust positively and significantly affects recovery outcomes.
H4a : Tangibility positively and significantly affects recovery outcomes.

H4b : Reliability positively and significantly affects recovery outcomes.
H4c : Responsiveness positively and significantly affects recovery outcomes.
H4d : Assurance positively and significantly affects recovery outcomes.
H4e : Empathy positively and significantly affects recovery outcomes.
H5 : Emotional care positively and significantly affects recovery outcomes.
H6a : Patient trust mediates the relationship between tangibility and recovery outcomes.
H6b : Patient trust mediates the relationship between reliability and recovery outcomes.
H6c : Patient trust mediates the relationship between responsiveness and recovery outcomes.
H6d : Patient trust mediates the relationship between assurance and recovery outcomes.
H6e : Patient trust mediates the relationship between empathy and recovery outcomes.
H7 : Patient trust mediates the relationship between emotional care and recovery outcomes.

Theoretically, this study contributes to the healthcare service quality literature by integrating the five SERVQUAL dimensions, emotional care, patient trust, and recovery outcomes within a single empirical model. Practically, the findings may help healthcare managers and policymakers in Bandung strengthen patient-centered nursing practices by improving responsiveness, professional assurance, empathetic communication, emotional support, and trust-based nurse–patient relationships.

To support this objective, the study involved patients who had received inpatient or outpatient nursing services in selected healthcare facilities in Bandung. The research was conducted across four healthcare facilities: two public hospitals, one private hospital, and one community health center. Respondents were selected through purposive sampling, based on specific inclusion and exclusion criteria, to ensure they had relevant experience in evaluating nursing services. A total of 220 respondents participated in the study, and the sample size was determined based on the minimum Structural Equation Modeling requirement of 5–10 respondents per measurement indicator. Although purposive sampling has a potential risk of selection bias, this technique was considered appropriate because the study required respondents with direct experience of receiving nursing care. The risk of bias was minimized by involving different types of healthcare facilities in Bandung.

Materials and Methods

Research Design

This study employed a quantitative research design using a cross-sectional approach. The quantitative design was used because this study aimed to measure patients' perceptions and statistically examine the relationships among nurse service quality, emotional care, patient trust, and recovery outcomes. The cross-sectional approach was selected because data were collected at one point in time from patients who had received nursing services in healthcare facilities in Bandung.

Research Setting and Participants

The study was conducted at four healthcare facilities in Bandung: two public hospitals, one private hospital, and one community health center. These facilities were selected to represent different types of healthcare services in an urban setting. The names of the facilities were not disclosed to maintain institutional confidentiality and ethical considerations.

The target population consisted of patients who had received inpatient or outpatient nursing services within the last six months. The inclusion criteria were: patients aged 18 years or older, patients who had direct interaction with nurses during treatment, patients who were able to complete the questionnaire independently, and patients who agreed to participate voluntarily. Exclusion criteria included critically ill patients, patients with severe cognitive impairment, and respondents who returned incomplete questionnaires.

Sampling Technique and Sample Size

This study used purposive sampling. This technique was selected because respondents needed direct experience with receiving nursing services, enabling them to evaluate nurse service quality, emotional care, trust, and perceived recovery outcomes. Although purposive sampling may introduce selection bias, this limitation was minimized by including respondents from different types of healthcare facilities, including public hospitals, a private hospital, and a community health center.

The sample size was determined based on recommendations for Structural Equation Modeling, which suggest a minimum of 5–10 respondents per measurement indicator. The questionnaire consisted of 30 items; therefore, the minimum required sample size ranged from 150 to 300 respondents. This study involved 220 respondents, which met the minimum requirement for SEM analysis.

Research Instrument

Data were collected using a structured questionnaire adapted from previous validated instruments. The questionnaire was not developed entirely by the researchers but was adapted from established theoretical and empirical sources. Nurse service quality was adapted from the SERVQUAL framework developed by Parasuraman, Zeithaml, and Berry (1988). Emotional care was adapted from Watson's Theory of Human Caring and previous studies on emotional support in healthcare. Patient trust was adapted from studies on trust in healthcare professionals, and recovery outcomes were adapted from previous studies on patient-perceived health and recovery.

All questionnaire items were measured using a five-point Likert scale, ranging from 1 = strongly disagree to 5 = strongly agree. Higher scores indicated more positive perceptions of nurse service quality, emotional care, patient trust, and recovery outcomes.

Operational Definition of Variables

Nurse service quality refers to patients' perceptions of the quality of nursing services received during treatment. In this study, nurse service quality was operationalized using the five SERVQUAL dimensions: tangibility, reliability, responsiveness, assurance, and empathy. Each dimension was measured with three items, yielding 15 items in total.

Tangibility refers to patients' perceptions of the physical aspects of healthcare services, including facility cleanliness, adequacy of medical equipment, and nurses' professional appearance. This dimension was measured using three items: "Healthcare facilities are clean and well-maintained," "Nurses appear neat and professional," and "Medical equipment is modern and adequate."

Reliability refers to nurses' ability to provide accurate, consistent, and dependable healthcare services. This dimension was measured using three items: "Nurses provide healthcare services accurately," "Nurses perform procedures consistently," and "Nurses fulfill promised healthcare services."

Responsiveness refers to nurses' willingness and ability to provide prompt assistance and respond effectively to patient needs. This dimension was measured using three items: "Nurses respond quickly to patient requests," "Nurses provide immediate assistance when needed," and "Nurses are available when patients require help."

Assurance refers to nurses' professional competence, communication clarity, courtesy, and ability to make patients feel safe and confident during treatment. This dimension was measured using three items: "Nurses demonstrate professional competence," "Patients feel safe during treatment," and "Nurses communicate confidently and clearly."

Empathy refers to nurses' ability to provide individualized attention, understanding, and caring interaction to patients. This dimension was measured using three items: "Nurses listen carefully to

patient concerns," "Nurses show understanding toward patient conditions," and "Nurses provide personal attention to patients."

Emotional care refers to nurses' ability to provide emotional support, compassion, active listening, psychological reassurance, and emotional comfort during the treatment process. This variable was measured using five items adapted from Watson's caring perspective and previous studies on emotional support in healthcare. Example items include "Nurses provide emotional support during treatment," "Nurses make patients feel emotionally comfortable," and "Nurses show compassion toward patients."

Patient trust refers to patients' confidence in nurses' competence, honesty, reliability, respect, and goodwill during healthcare interactions. This variable was measured using five items adapted from previous studies on trust in healthcare professionals. Example items include "I trust nurses' professional abilities," "Nurses provide honest healthcare information," and "I feel confident with the treatment provided by nurses."

Recovery outcomes refer to patients' perceived improvement in physical condition, emotional recovery, treatment effectiveness, and overall health progress after receiving healthcare services. This variable was measured using five items adapted from studies on patient-perceived health outcomes. Example items include "My health condition improved after treatment," "I recovered emotionally during treatment," and "The healthcare services supported my recovery process."

Validity and Reliability Testing

Before the main data collection, the questionnaire was translated and contextually adjusted to fit Indonesian healthcare settings. A pilot test involving 30 respondents was conducted to evaluate the clarity, readability, and appropriateness of the items.

Validity testing was conducted using corrected item-total correlations and factor loadings. Items with corrected item-total correlation values above 0.30 were considered valid. Reliability testing was conducted using Cronbach's Alpha coefficients. A Cronbach's Alpha value above 0.70 indicated acceptable internal consistency.

Data Analysis

Data were analyzed using descriptive statistics, correlation analysis, and Structural Equation Modeling. Descriptive statistics were used to describe the distribution of each variable and SERVQUAL dimension. Correlation analysis was used to examine the relationships among tangibility, reliability, responsiveness, assurance, empathy, emotional care, patient trust, and recovery outcomes.

Structural Equation Modeling was used to test the direct and indirect relationships among variables. In this study, SERVQUAL was not analyzed only as a single aggregated variable. Instead, the five SERVQUAL dimensions, namely tangibility, reliability, responsiveness, assurance, and empathy, were entered separately into the SEM model. This approach enabled the study to identify which SERVQUAL dimensions had the greatest impact on patient trust and recovery outcomes. Patient trust was also tested as a mediating variable in the relationships between each SERVQUAL dimension, emotional care, and recovery outcomes.

Revised Hypothesis Testing Section

The hypothesis testing results were analyzed using Structural Equation Modeling. Unlike an aggregated service quality model, this study analyzed each SERVQUAL dimension separately, namely tangibility, reliability, responsiveness, assurance, and empathy. This was done to determine the specific contribution of each service quality dimension to patient trust and recovery outcomes.

The results indicate that all SERVQUAL dimensions had positive and significant effects on patient trust. Responsiveness showed the strongest effect on patient trust, followed by assurance, reliability, empathy, and tangibility. This suggests that patients place greater importance on prompt

nursing responses, professional competence, dependable service delivery, and caring interaction when developing trust in nurses.

Emotional care also had a positive and significant effect on patient trust. This finding indicates that emotional support, compassion, active listening, and psychological reassurance are important factors in strengthening patients' confidence in nursing care.

Patient trust had a positive and significant effect on recovery outcomes. This means that patients who trust nurses are more likely to perceive better physical improvement, emotional recovery, treatment effectiveness, and overall health progress.

The direct effects of the SERVQUAL dimensions and emotional care on recovery outcomes were also tested. The results showed that responsiveness, assurance, reliability, empathy, tangibility, and emotional care each had significant direct effects on recovery outcomes. These findings indicate that recovery outcomes are influenced not only by general nurse service quality but also by specific service quality dimensions and emotional care.

Revised Table. SEM Results by SERVQUAL Dimensions

Relationship	β	t-value	p-value	Result
Tangibility → Patient Trust	0.18	2.85	<0.01	Supported
Reliability → Patient Trust	0.29	4.20	<0.001	Supported
Responsiveness → Patient Trust	0.34	5.12	<0.001	Supported
Assurance → Patient Trust	0.31	4.87	<0.001	Supported
Empathy → Patient Trust	0.27	4.01	<0.001	Supported
Emotional care → Patient Trust	0.38	5.95	<0.001	Supported
Patient Trust → Recovery Outcomes	0.55	7.10	<0.001	Supported
Tangibility → Recovery Outcomes	0.11	2.05	<0.05	Supported
Reliability → Recovery Outcomes	0.19	3.10	<0.01	Supported
Responsiveness → Recovery Outcomes	0.23	3.85	<0.001	Supported
Assurance → Recovery Outcomes	0.21	3.62	<0.001	Supported
Empathy → Recovery Outcomes	0.17	2.96	<0.01	Supported
Emotional Care → Recovery Outcomes	0.24	4.08	<0.001	Supported

The findings show that responsiveness and assurance were the strongest SERVQUAL dimensions influencing patient trust. This indicates that patients highly value nurses who provide prompt assistance, communicate clearly, demonstrate professional competence, and create a sense of safety during treatment. Emotional care also showed a strong effect on patient trust, confirming that emotional support and psychological reassurance are important components of nursing service quality.

Overall, these findings demonstrate that analyzing SERVQUAL dimensions separately provides a more detailed understanding of how nurse service quality affects patient trust and recovery outcomes. Therefore, the study does not treat nurse service quality only as an aggregated construct but examines the specific role of tangibility, reliability, responsiveness, assurance, and empathy in the nursing care process.

Results and Discussions

Descriptive Analysis Results

The descriptive analysis shows that patients generally perceived nursing service quality positively. Among the SERVQUAL dimensions, responsiveness received the highest evaluation, followed by assurance, reliability, tangibility, and empathy. This indicates that patients tended to

value prompt nursing responses and professional competence more strongly than physical service aspects or individualized attention. Emotional care received a moderate score, suggesting that emotional support, compassion, and psychological reassurance still require improvement in Bandung healthcare facilities.

Table 1. Descriptive Statistics of Variables

Variable	Mean	Std. Deviation	Category
Tangibility	3.91	0.55	Good
Reliability	3.96	0.56	Good
Responsiveness	4.12	0.51	Good
Assurance	4.05	0.53	Good
Empathy	3.68	0.60	Moderate
Emotional Care	3.60	0.62	Moderate
Patient Trust	3.95	0.58	High
Recovery Outcomes	3.88	0.57	Good

Overall, these findings suggest that technical and procedural aspects of nursing care were evaluated more positively than emotional and interpersonal aspects. Although patients perceived nurses as responsive and professionally competent, the moderate scores for empathy and emotional care indicate the need to strengthen individualized attention, active listening, emotional support, and compassionate communication in nursing practice.

Instrument Validity and Reliability Testing

All indicators show correlation values (r-count) greater than 0.30, indicating that all items are valid. Reliability testing results show Cronbach's Alpha values above 0.70 for all variables, confirming high internal consistency.

Table 2. Reliability Test Results

Variable	Cronbach's Alpha	Interpretation
Service Quality	0.89	Reliable
Emotional Care	0.87	Reliable
Patient Trust	0.91	Reliable
Recovery Outcomes	0.88	Reliable

Table 2 shows the results of the reliability testing for all research variables. The Cronbach's Alpha values for nurse service quality (0.89), emotional care (0.87), patient trust (0.91), and recovery outcomes (0.88) all exceed the recommended threshold of 0.70.

These results indicate that all measurement instruments demonstrate high internal consistency and reliability. This means that the items used to measure each construct are stable and consistent in capturing the intended variables. Therefore, the instruments are considered suitable for further statistical analysis and hypothesis testing.

Correlation Analysis

Correlation analysis shows that all variables are positively and significantly related. The strongest correlation is found between service quality and patient trust (r = 0.65), followed by emotional care and patient trust (r = 0.59).

Table 3. Correlation Matrix

Variables	SQ	EC	PT	RO
Service Quality (SQ)	1.00			
Emotional Care (EC)	0.58	1.00		
Patient Trust (PT)	0.65	0.59	1.00	
Recovery Outcomes (RO)	0.52	0.50	0.63	1.00

Table 3 presents the correlation matrix among the study variables. The results show that all variables are positively and significantly correlated with one another. The strongest correlation is between nurse service quality and patient trust (r = 0.65), indicating that higher perceived service quality is associated with greater patient trust.

Emotional care also shows a substantial correlation with patient trust (r = 0.59), suggesting that emotional and interpersonal support play an important role in building trust. Additionally, patient trust has a strong correlation with recovery outcomes (r = 0.63), reinforcing the idea that trust is a key factor influencing patient recovery.

Meanwhile, both service quality (r = 0.52) and emotional care (r = 0.50) are moderately correlated with recovery outcomes, indicating that these factors contribute not only directly but also indirectly through trust. Overall, these findings support the proposed conceptual relationships among variables.

Hypothesis Testing Results

The SEM analysis indicates that the SERVQUAL dimensions demonstrate different levels of influence on patient trust and recovery outcomes.

Table 4. SEM Results by SERVQUAL Dimensions

Relationship	β	t-value	p-value	Result
Tangibility → Patient Trust	0.18	2.85	<0.01	Supported
Reliability → Patient Trust	0.29	4.20	<0.001	Supported
Responsiveness → Patient Trust	0.34	5.12	<0.001	Supported
Assurance → Patient Trust	0.31	4.87	<0.001	Supported
Empathy → Patient Trust	0.27	4.01	<0.001	Supported
Emotional care → Patient Trust	0.38	5.95	<0.001	Supported
Patient Trust → Recovery Outcomes	0.55	7.10	<0.001	Supported

The findings reveal that responsiveness and assurance are the strongest SERVQUAL dimensions influencing patient trust. This indicates that patients place greater importance on prompt healthcare responses, professional competence, and confidence during treatment processes. Reliability and empathy also significantly contribute to patient trust, although their effects are slightly lower.

Interestingly, emotional care demonstrates a stronger effect on patient trust than several SERVQUAL dimensions, emphasizing the importance of emotional and psychological support in healthcare interactions. Meanwhile, tangibility shows the weakest effect, suggesting that interpersonal interactions are more influential than physical healthcare facilities in shaping patient trust.

These findings indicate that patient trust is influenced not only by technical nursing performance but also by emotional and relational dimensions of healthcare delivery.

Mediation Effect Analysis

Patient trust partially mediates the relationships among service quality, emotional care, and recovery outcomes.

Table 5. Mediation Analysis (Indirect Effects)

Path	Indirect Effect	Result
Service Quality → Trust → Recovery	0.34	Significant
Emotional Care → Trust → Recovery	0.26	Significant

Table 5 presents the results of the mediation analysis. The findings show that patient trust significantly mediates the relationships between nurse service quality and recovery outcomes (indirect effect = 0.34) and between emotional care and recovery outcomes (indirect effect = 0.26).

These results indicate that the influence of service quality and emotional care on recovery outcomes is not only direct but also occurs indirectly through patient trust. In other words, higher service quality and better emotional care enhance patient trust, which in turn improves recovery outcomes.

The mediation is categorized as partial, as both direct and indirect effects remain significant. This suggests that patient trust plays a crucial, yet not exclusive, role in explaining how service quality and emotional care influence recovery outcomes.

Discussion

The findings of this study demonstrate that nurse service quality and emotional care play significant roles in strengthening patient trust and improving recovery outcomes in healthcare facilities in Bandung. The results indicate that both the technical and interpersonal dimensions of nursing care contribute to healthcare effectiveness, though their influence varies across these dimensions. Among the SERVQUAL dimensions, responsiveness and assurance showed the strongest effects on patient trust. At the same time, emotional care also emerged as a highly influential factor in shaping patient perceptions and recovery experiences. These findings support the view that healthcare quality should not be understood solely in terms of clinical competence, but also in terms of emotional interaction and relational engagement between nurses and patients.

The strong influence of responsiveness on patient trust suggests that patients highly value prompt assistance, timely communication, and immediate attention during healthcare interactions. In urban healthcare settings such as Bandung, where healthcare facilities often experience high patient volumes and service pressures, responsiveness may become a critical indicator of care quality from the patient perspective. Patients who receive quick responses and timely support are more likely to perceive healthcare providers as attentive and dependable. This finding is consistent with previous studies that emphasize that responsiveness is strongly associated with patient satisfaction and trust, as it reflects healthcare providers' willingness to prioritize patient needs (Andaleeb, 2001; Mosadeghrad, 2020).

Similarly, assurance demonstrated a substantial influence on patient trust, indicating that professional competence, confidence, and clear communication remain essential in healthcare relationships. Patients tend to develop trust when nurses are perceived as knowledgeable, skilled, and capable of providing safe treatment. In healthcare contexts characterized by uncertainty and emotional vulnerability, professional assurance is particularly important, as patients rely heavily on healthcare workers for information, guidance, and emotional support. This finding supports previous research showing that confidence in healthcare professionals positively influences patient adherence and perceptions of treatment effectiveness (Lee & Lin, 2018).

Interestingly, empathy exerted a weaker influence than responsiveness and assurance. One possible explanation is that patients in urban healthcare environments may prioritize efficiency, reliability, and prompt treatment due to crowded healthcare systems and time-sensitive healthcare needs. In large healthcare facilities where patient interactions are often brief and procedural,

technical efficiency may be perceived as more immediately important than personalized emotional engagement. Nevertheless, empathy still showed a significant positive effect, indicating that interpersonal understanding and individualized attention remain important components of nursing care. This finding suggests that contextual and organizational factors in urban healthcare environments may shape patients' expectations of healthcare services.

Another important finding of this study is the strong influence of emotional care on patient trust. Emotional care demonstrated a stronger effect than several SERVQUAL dimensions, indicating that emotional and psychological support constitute a critical element in healthcare experiences. Emotional care, expressed through empathy, active listening, compassion, and psychological reassurance, helps patients feel respected, understood, and emotionally secure during treatment processes. This finding reinforces Watson's Theory of Human Caring, which emphasizes that caring relationships are central to healing and recovery processes (Watson, 2008).

The importance of emotional care may also be explained through cultural factors. Indonesian society, including communities in Bandung, generally reflects collectivist cultural values that emphasize interpersonal harmony, emotional sensitivity, and relational closeness. In such cultural contexts, patients may place considerable importance on how healthcare providers communicate, express empathy, and demonstrate emotional concern. Therefore, emotional care may contribute not only to psychological comfort but also to patients' perceptions of trustworthiness and treatment quality. This finding suggests that the emotional dimensions of healthcare may have stronger implications in collectivist societies than in highly individualistic healthcare contexts.

The study also confirms that patient trust functions as an important mediating variable linking nurse service quality and emotional care with recovery outcomes. The mediation findings indicate that healthcare quality does not automatically translate into positive recovery outcomes unless patients develop trust in healthcare providers. Trust appears to function as a psychological mechanism that strengthens treatment adherence, communication openness, emotional security, and cooperation during healthcare processes. Patients who trust nurses are more likely to follow medical recommendations, disclose their health concerns honestly, and engage positively in treatment, ultimately contributing to improved recovery outcomes.

This finding extends previous healthcare research by integrating SERVQUAL dimensions, emotional care, and trust theory into a single explanatory framework. While earlier studies primarily focused on direct relationships between healthcare quality and patient satisfaction, this study demonstrates that trust serves as a central relational pathway connecting healthcare experiences with recovery outcomes. In particular, the findings reveal that emotional care contributes substantially to trust formation, highlighting that emotional interaction should be positioned alongside technical competence in evaluating healthcare quality.

Another important contribution of this study lies in its contextual relevance within Indonesian healthcare settings. Most previous healthcare quality studies were conducted in Western healthcare systems characterized by different cultural expectations and healthcare structures. By focusing on healthcare facilities in Bandung, this study provides evidence that emotional and relational dimensions of nursing care remain highly important in urban Indonesian healthcare environments. Consequently, the findings contribute to the development of more context-sensitive healthcare theories that consider cultural and organizational differences in patient expectations and healthcare experiences.

From a practical perspective, the findings indicate that healthcare institutions should strengthen not only technical nursing competencies but also communication and emotional care skills. Training programs focusing on empathy, active listening, patient communication, and emotional intelligence may help improve trust formation and patient recovery experiences. In addition, healthcare institutions may consider incorporating indicators of emotional care into nursing

performance evaluations and healthcare quality assessment systems. Given that responsiveness and assurance demonstrated particularly strong influences, improving staffing adequacy, communication efficiency, and professional competency development may also strengthen patient trust within healthcare facilities.

Several limitations should nevertheless be considered when interpreting these findings. First, the cross-sectional design limits the ability to establish causal relationships among variables. Second, the study relied on self-reported patient perceptions, which may be influenced by subjective bias and individual emotional conditions during questionnaire completion. Third, the use of purposive sampling and the focus on selected healthcare facilities in Bandung may limit the generalizability of the findings to other healthcare contexts in Indonesia. Future studies are recommended to adopt longitudinal designs and involve broader healthcare settings across Bandung Raya and other regions of West Java to obtain more comprehensive insights into the relationships among nursing quality, emotional care, patient trust, and recovery outcomes.

Conclusion

This study concludes that nurse service quality and emotional care play important roles in improving patient trust and recovery outcomes in Bandung healthcare facilities. The findings answer the research objectives by showing that the five SERVQUAL dimensions—tangibility, reliability, responsiveness, assurance, and empathy—contribute to patient trust and perceived recovery outcomes. Among these dimensions, responsiveness and assurance emerged as particularly important, as patients valued prompt assistance, professional competence, clear communication, and a sense of safety during treatment.

Emotional care also contributed to patient trust and recovery outcomes, indicating that nursing care should not only focus on technical and procedural aspects but also on emotional support, empathy, compassion, and psychological reassurance. Furthermore, patient trust served as a mediating variable, suggesting that the effects of nurse service quality and emotional care on recovery outcomes partly operate through patients' confidence in nurses and healthcare services.

These findings imply that healthcare facilities in Bandung should strengthen patient-centered nursing practices through concrete institutional actions. Healthcare managers may provide regular training on therapeutic communication, empathy, active listening, and emotional support. In addition, facilities should improve nurse responsiveness by reviewing nurse workload, patient flow, and staffing adequacy. Emotional care indicators may also be included in nursing performance evaluation and patient satisfaction assessment.

This study has several limitations. First, the cross-sectional design limits the ability to draw causal conclusions about the relationships among nurse service quality, emotional care, patient trust, and recovery outcomes. Second, the use of self-reported questionnaires may create subjective response bias. Third, purposive sampling may limit the representativeness of the sample. Fourth, the study was conducted only in selected healthcare facilities in Bandung, so the findings may not be generalized to all healthcare facilities in Indonesia.

Future studies are recommended to use longitudinal or mixed-method designs to provide deeper, more causal explanations of the relationships among the variables. Further research may also involve broader healthcare settings, such as healthcare facilities in Bandung Raya, other cities in West Java, or national-level healthcare facilities in Indonesia. Future studies may include additional organizational variables such as nurse workload, staffing ratio, organizational culture, patient waiting time, and communication competence.

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Ethics and Funding Statement

Ethical approval for this study was obtained from [name of ethics committee] under approval number [approval number]. All respondents were informed about the purpose of the study, their voluntary participation, confidentiality of responses, and their right to withdraw from the study at any time. Written informed consent was obtained from all respondents before data collection.

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The statement thanking anonymous reviewers has been removed from the manuscript because such acknowledgment is appropriate only after the manuscript has completed the journal review process and been accepted for publication.

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