



## The Relationship Between Service Quality and Patient Satisfaction in RSGM-P UNSRAT Outpatient Unit

Jean Siska Roma Tairas<sup>1,a)</sup>, Greta Jane Pauline Wahongan<sup>2,b)</sup>, Erwin Gidion Kristanto<sup>3,c\*)</sup>

<sup>1</sup>Public Health Postgraduate Program Sam Ratulangi University, Manado 95115, Indonesia

<sup>2</sup>Parasitology Departement Faculty of Medicine Sam Ratulangi University, Manado 95163, Indonesia

<sup>3</sup>Forensic & Medicolegal Departement Faculty of Medicine Sam Ratulangi University, Manado 95163, Indonesia

<sup>a</sup>jeantairas@unsrat.ac.id\*; <sup>b</sup>gretapaula@unsrat.ac.id; <sup>c</sup>erwinkristanto@unsrat.ac.id\*

### ABSTRACT

*This study analyses the relationship between service quality and patient satisfaction in the Outpatient Unit of the Dental and Oral Teaching Hospital of Universitas Sam Ratulangi (RSGM-P UNSRAT). The study employed a quantitative approach with a cross-sectional design conducted from January to September 2024. Two hundred outpatients, selected through purposive sampling, participated in this study. Data were collected using a SERVQUAL-based questionnaire covering five dimensions of service quality: tangibles, reliability, responsiveness, assurance, and empathy. The analysis included univariate, bivariate, and multivariate methods. The results revealed that most patients (55%) were satisfied with the services. Bivariate analysis showed a significant relationship between all dimensions of service quality and patient satisfaction ( $p < 0.05$ ). Multivariate analysis identified the assurance dimension as the most dominant factor influencing patient satisfaction, with an odds ratio of 5.334. This study concludes that service quality is significantly related to patient satisfaction, with assurance being the most influential dimension. The study recommends regular patient satisfaction surveys to improve service quality and training for healthcare providers to enhance their competencies and practical communication skills.*

**Keywords:** Assurance, Patient Satisfaction, Quality Dimensions, SERVQUAL, Satisfaction Survey

### 1. INTRODUCTION

Health encompasses physical, mental, and social well-being, rather than simply the absence of illness. Oral health plays a vital role in supporting individuals' social and economic activities (President of Indonesia, 2023; Ministry of Health, 2015). The quality of dental and oral health services significantly influences accessibility, effectiveness, and patient safety, which ultimately lead to patient satisfaction. This satisfaction reflects the level of patient pleasure with the services provided, enhancing the hospital's image and loyalty

(Waty, et al., 2022). The SERVQUAL model outlines five dimensions of service quality: Tangibles, reliability, responsiveness, assurance, and empathy (Sadaningsih, et al., 2022).

Maintaining high service quality in the evolving healthcare landscape is essential for patient satisfaction and institutional credibility. The SERVQUAL framework, with its dimensions of reliability, tangibles, assurance, responsiveness, and empathy, has become a widely recognized model for assessing and improving service quality in various settings,

\*Erwin G. Kristanto.

Tel.: +6281513982277

Email: [erwinkristanto@unsrat.ac.id](mailto:erwinkristanto@unsrat.ac.id)



including dental healthcare. High-quality services ensure safety, accessibility, and effectiveness, enhancing patient trust, satisfaction, and institutional performance while supporting hospital accreditation efforts.

This study analyzed the relationship between service quality and patient satisfaction in the Outpatient Unit of RSGM-P UNSRAT. A quantitative cross-sectional design was applied from January to September 2024. The population included patients receiving treatment at RSGM-P UNSRAT, with a sample of 200 patients selected through purposive sampling based on inclusion criteria such as being  $\geq 18$  years old and having received at least one treatment. Data were collected using a questionnaire based on the SERVQUAL framework.

The univariate analysis indicated that over 50% of patients were satisfied with the service quality. Bivariate analysis showed significant associations between patient satisfaction and all SERVQUAL dimensions ( $p < 0.05$ ). Multivariate analysis revealed that assurance was the most dominant factor influencing satisfaction, with an odds ratio of 5.334. Innovations in applying SERVQUAL in dental healthcare included personalized follow-ups, digital queue systems, and enhanced communication tailored to patient needs.

This study concludes that service quality, guided by SERVQUAL, is significantly related to patient satisfaction, with assurance being the most influential factor. The findings underscore the critical role of service quality in strengthening hospital accreditation by meeting patient-centred care standards. Regular satisfaction surveys, adoption of innovative SERVQUAL practices, and further research into other factors affecting service quality are recommended to drive continuous improvement and support accreditation benchmarks.

In North Sulawesi, challenges in accessing and improving the quality of dental and oral health services remain (President of Indonesia, 2020). The Dental and Oral Hospital of Sam Ratulangi University (RSGM-P UNSRAT) is the only hospital in the region that achieved accreditation in early 2023. Enhancing service

quality and patient satisfaction at RSGM-P UNSRAT is crucial for improving the hospital's accreditation status and advancing healthcare services in the area.

Previous studies have examined the relationship between service quality and patient satisfaction in general and specialized hospitals (Hastuti et al., 2017; Pasalli & Patattan, 2021). However, research on dental and oral healthcare services remains highly limited, particularly in teaching hospitals such as RSGM-P UNSRAT in North Sulawesi. This is significant because RSGM-P UNSRAT is the only regional hospital accredited in 2023. Challenges in accessibility and improving the quality of dental and oral healthcare services in North Sulawesi further highlight the need for a more specific study to understand the relationship between SERVQUAL dimensions and patient satisfaction within this local context.

Previous studies have emphasized the importance of each SERVQUAL dimension in influencing patient satisfaction, with varying dominance of dimensions depending on institutional or regional contexts (Sadaningsih et al., 2022; Waty et al., 2022). Studies by Hastuti et al. (2017) and Pasalli and Patattan (2021) identified dimensions such as responsiveness and tangibles as dominant factors in specific general hospital settings. However, this study demonstrates that assurance is the most influential dimension at RSGM-P UNSRAT, with an odds ratio of 5.334, highlighting a unique contextual difference compared to previous research.

This study addresses the research gap by offering a SERVQUAL-based analysis within the context of a dental teaching hospital in a region with limited access to quality services. The uniqueness of this research lies in the implementation of innovations such as digital queue systems, personalized communication, and patient-centred approaches, which have not been widely explored in similar contexts. Moreover, the emphasis on enhancing service quality to support hospital accreditation adds a practical dimension relevant to addressing regional challenges.

Thus, this study not only enriches the SERVQUAL literature but also provides concrete guidance for hospital managers in similar areas to sustainably improve patient satisfaction and service quality.

## 2. METHODS

This research employed a cross-sectional design with a quantitative approach to collect data on patient satisfaction and service quality at the Dental and Oral Teaching Hospital of UNSRAT, Outpatient Unit, from January to September 2024. Ethical feasibility for the study was approved by the Ethics Committee of Prof. Dr. R. D. Kandou General Hospital under ethical clearance number 167/EC/KEPK-KANDOU/VIII/2024.

The study population comprised all outpatients who received treatment during the research period, with the sample size determined using the Slovin formula and a purposive sampling technique. Based on the Slovin formula, the sample size was 193 respondents, with the inclusion criteria being individuals aged 18 years or older, present at the research site, willing to participate, and having received treatment at least once at RSGM-P UNSRAT. Exclusion criteria included respondents who did not complete the questionnaire fully.

Sampling and questionnaire distribution were conducted from June to August 2024. To minimize sampling bias, participants were selected based on the criteria outlined in the journal. Samples that did not meet the inclusion criteria were excluded. Of the 202 participants who completed the questionnaire, 2 did not meet the inclusion criteria (under 18 years old). Consequently, these 2 participants were excluded from the study by omitting their data from the analysis. No participants failed to complete the questionnaire.

The sample size, calculated using the Slovin formula, totalled 193 respondents. The inclusion criteria required participants to be at least 18 years old, present at the research location, willing to participate, and to have received at least one treatment at RSGM-P UNSRAT. The exclusion criterion was incomplete questionnaire responses

The independent variables in this study were service quality dimensions (Tangibles, assurance, responsiveness, reliability, and empathy), while patient satisfaction was the dependent variable. The research instrument was a questionnaire using a Likert scale (1–5), adapted from previously validated questionnaires (Akbar, et al., 2019) and guidelines from the Ministry of Administrative and Bureaucratic Reform (KemenPANRB, 2017). The questionnaire was re-tested for validity and reliability before use. Data analysis involved processes of editing, coding, tabulating, entry, and cleaning, followed by univariate, bivariate, and multivariate analyses.

## 3. RESULT AND DISCUSSION

A total of 200 respondents completed the informed consent and questionnaire. Respondent characteristics were described based on age, gender, education, and occupation as follows: the majority of respondents were aged 20–25 years, totaling 81 respondents (40.5%), most were female (141 respondents or 70.5%), the majority had a high school or equivalent educational background (96 respondents or 48%), and the largest group of respondents were students, totaling 85 respondents (42.5%). This information is presented in Table 1 and Table 2.

**Tabel 1. Distribution of Respondent Characteristics (Age and Gender)**

Characteristic	n	%
<b>Age</b>		
<20 y.o	16	8
20-25 y.o	81	40.5
26-30 y.o	32	16.0
31-35 y.o	14	7.0
36-40 y.o	7	3.5
41-45 y.o	4	2.0
46-50 y.o	11	5.5
51-55 y.o	9	4.5
56-59 y.o	4	2.0
≥60 y.o	22	11.0
<b>Sex</b>		
Male	59	29.5
Female	141	70.5

Respondent characteristics based on the type of services received revealed that the majority underwent dental scaling, with 60 respondents

(30%). Other prevalent services included tooth extraction (17%), prosthetic treatment (18%), and orthodontic treatment (16.5%). These characteristics are presented in Table 3.

This table illustrates the distribution of respondents based on age and gender. Most respondents were aged 20–25 (40.5%), predominantly female (70.5%).

This indicates that most patients at RSGM-P UNSRAT belong to the younger age group, likely students or college attendees. This demographic tends to have high expectations for service quality, mainly speed and convenience. As a result, the hospital needs to focus on improving fast and efficient services to meet the needs of this group.

The high number of female respondents reflects greater attention from women to dental and oral health. Hospital services can be tailored with a more female-friendly approach, such as providing special facilities or considering their preferences in service delivery.

### 3.1 Univariate Analysis

The research results of univariate analysis for each research variable are presented in Table 4.

**Tabel 2. Distribution of Respondent Characteristics (Education and Occupation)**

Characteristic	n	%
<b>Education</b>		
Elementary School	4	2
Middle School	5	2.5
High School	96	48
Diploma 3	1	0.5
Bachelor's Degree	88	44
Master's Degree	3	1.5
Doctorate	1	0.5
Physician	2	1
<b>Occupation</b>		
BUMN	2	1
Housewife	23	11.5
Private Employee	28	14
Student	85	42.5
Retiree	6	3
Nurse	1	0.5
Farmer	1	0.5
PNS	12	6
Military/Police	1	0.5
Entrepreneur	26	13
Others	15	7.5

Most respondents have a high school education or equivalent (48%) and work as students (42.5%). Respondents with a high school education have a different understanding of healthcare services than those with higher education. The implication is that hospitals need to use simple and informative communication to ensure that all patients, regardless of their educational background, understand the services they receive. The occupation as students aligns with the age data of most respondents, aged 20–25 years. This group seeks services that meet their needs, such as affordable and efficient dental care. RSGM-P UNSRAT could consider promotional programs or special care packages for students to enhance their satisfaction

**Tabel 3. Distribution of Respondent Characteristics (Type of Service)**

Characteristic	n	%
<b>Service Type</b>		
Consultation	5	2.5
Check-up	5	2.5
Gingival Curettage	4	2.0
Dental Scaling	60	30.0
Dental Filling	5	2.5
Tooth Extraction	34	17.0
Cavity Prevention	8	4.0
Aphthous Ulcer Treatment	7	3.5
Alveolectomy Treatment	1	0.5
Sensitive Teeth Treatment	1	0.5
Denture Treatment	36	18.0
Gum Treatment	1	0.5
Orthodontic Treatment	33	16.5

The most common service received by respondents is teeth scaling (30%), followed by dentures (18%), tooth extraction (17%), and orthodontic treatment (16.5%). The dominance of teeth scaling as a service indicates that it is the primary need of patients at RSGM-P UNSRAT. The hospital needs to ensure the availability of equipment, skilled medical staff, and sufficient time to meet the demand for this service. Dentures and orthodontic treatment are significant services that indicate a patient's need for long-term solutions to aesthetic and functional dental issues. RSGM-P UNSRAT can enhance dental training and update technology to support these services and make them more effective and efficient



Table 4 outlines the characteristics of respondents based on responsiveness, with the majority classified as satisfied, totaling 103 respondents (51.5%). Similarly, for assurance, the majority of respondents were categorized as satisfied, totaling 112 respondents (56%). Regarding Tangibles, most respondents were also categorized as satisfied, totaling 105 respondents (52.5%). Furthermore, in terms of empathy, the majority of respondents were classified as satisfied, totaling 110 respondents (55%). In terms of reliability, most respondents were categorized as satisfied, totaling 106 respondents (53%). Lastly, for overall patient satisfaction, the majority of respondents were classified as satisfied, totaling 110 respondents (55%).

**Tabel 4. Univariate Analysis**

Characteristic	n	%
Responsiveness		
Satisfied	103	51.5
Less Satisfied	97	48.5
Assurance		
Satisfied	112	56
Less Satisfied	88	44
Tangibles		
Satisfied	105	52.5
Less Satisfied	95	47.5
Empathy		
Satisfied	110	55
Less Satisfied	90	45
Reliability		
Satisfied	106	53
Less Satisfied	94	47
Patient Satisfaction		
Satisfied	110	55
Less Satisfied	90	45

This table illustrates the number and percentage of respondents who are satisfied and dissatisfied with each dimension of service quality (physical evidence, reliability, responsiveness, assurance, empathy). Overall, the majority of respondents are satisfied with all dimensions.

The majority of respondents (51.5%) are satisfied with the responsiveness of healthcare staff. This dimension covers how quickly staff respond to patient needs, such as providing information and handling requests. Satisfaction with responsiveness reflects that the staff at RSGM-P UNSRAT are pretty responsive in

providing services. However, with nearly half of the respondents (48.5%) feeling dissatisfied, there is room for improvement, especially regarding service speed. The implication is that the hospital needs to improve patient wait times by digitalizing the queue system or increasing the number of medical staff. Training staff on quick and proactive communication with patients' needs could also enhance responsiveness perception.

The assurance dimension shows the highest level of satisfaction compared to other dimensions. This can be interpreted as patients feeling more confident and comfortable when served by professional, polite staff who can provide precise information. The hospital needs to improve staff training in professional ethics and communication skills, ensuring that each patient receives adequate information about their care.

The empathy dimension also holds an important position, showing that patients value personal attention from staff, such as listening to their needs or providing solutions to complaints. The implication is that specialized training emphasizing a humanistic approach to healthcare services is needed.

Perception of hospital facilities, cleanliness, and staff appearance (physical evidence) is generally good, but there is room for improvement. The hospital can enhance the comfort of physical facilities through renovation or routine maintenance and ensure staff wear uniforms in line with hospital standards.

Fifty-three per cent of respondents are satisfied with the reliability, which includes the consistency and accuracy of the services provided. Satisfaction with this dimension indicates that most patients trust the staff's ability to deliver services as expected. However, nearly half of the respondents feel dissatisfied, which may be due to a mismatch between expectations and experience. The implication is that the hospital can strengthen its Standard Operating Procedures (SOPs) to ensure service consistency. Increased monitoring and evaluation of the service process can minimize errors or inaccuracies in service delivery.

### 3.2 Bivariate Analysis

The bivariate analysis examined the “Relationship between Tangibles, Responsiveness, Empathy, Assurance, and Reliability with Patient Satisfaction” using the Chi-Square test. This can be observed in Table 5.

**Tabel 5. Bivariate Analysis**

No	Variable	P-value
1	Responsiveness	0,000
2	Assurance	
3	Tangibles	
4	Empathy	
5	Reliability	

Table 5 shows that tangibles, responsiveness, empathy, assurance, and reliability are associated with Patient Satisfaction, with a significance value ( $p = 0.000 < 0.05$ ). Accordingly, the hypothesis stating that “there is a relationship between tangibles, responsiveness, empathy, assurance, and reliability with patient satisfaction in the Outpatient Unit of the Dental and Oral Hospital at Universitas Sam Ratulangi” is accepted.

The responsiveness dimension significantly correlates with patient satisfaction ( $p < 0.05$ ). This means that the faster and more responsive the hospital staff provides services, the higher the likelihood that patients will feel satisfied. It proves that patients highly value the speed of response from medical staff, such as handling requests promptly and providing clear explanations when needed.

The assurance dimension is also significantly related to patient satisfaction ( $p < 0.05$ ). This dimension includes the competence, politeness, and ability of staff to provide a sense of security to patients. Assurance is one of the aspects most valued by patients. They feel more satisfied when confident that the medical staff has sufficient expertise and provides polite treatment.

Physical evidence also shows a significant relationship with patient satisfaction ( $p < 0.05$ ). This dimension includes the hospital's physical facilities, cleanliness, and staff appearance. The condition of the physical facilities, environmental cleanliness, and professional

appearance of the staff directly affect the patient experience.

The empathy dimension has a significant relationship with patient satisfaction ( $p < 0.05$ ). This dimension involves the personal attention provided by staff to patients, such as listening to their needs and showing care. Patients feel more satisfied when hospital staff show genuine concern for their physical and emotional needs.

Reliability shows a significant relationship with patient satisfaction ( $p < 0.05$ ). This dimension includes consistency and accuracy in service delivery. Patients are satisfied if their service is consistent and meets their initial promises or expectations.

This table confirms that all service quality dimensions significantly correlate with patient satisfaction. This indicates that patient satisfaction is not solely dependent on one dimension but results from the interaction of various service aspects. Hospitals need to adopt a holistic approach to improve all service dimensions simultaneously. Although assurance and empathy contribute more significantly, other dimensions like responsiveness, reliability, and physical evidence remain important for providing a comprehensive service experience.

### 3.3 Multivariate Analysis

The independent variable with the most significant (dominant) influence on the dependent variable was tested using logistic regression. The results of the multivariate analysis are presented in Table 6.

**Tabel 6. Multivariate Analysis**

Variable	B	P-value	OR
Assurance	1.674	0.002	5.334
Tangibles	1.255	0.020	3.507
Empathy	1.692	0.005	5.432

Table 6 indicates that assurance is the most influential (dominant) variable on the dependent variable, with the smallest significance value of 0.002. The OR (Odds Ratio) for the dominant variable is 5.334.

This study found that assurance is the most dominant dimension of service quality in influencing patient satisfaction, while

reliability and responsiveness have a lower impact.

This can be explained by the fact that patients often seek certainty about the quality of the service they receive, especially in healthcare settings, which involve high risks and uncertainties. Assurance gives patients confidence that they will receive care that meets the expected standards.

However, even though reliability and responsiveness are theoretically critical dimensions of service quality, our findings show that both have a minor influence on patient satisfaction in the Outpatient Unit of the Sam Ratulangi University Dental and Oral Health Teaching Hospital. One possible explanation is the characteristics of patients in this outpatient unit with dental and oral health issues that may not require a quick response or very high service reliability compared to inpatient or emergency services. Patients may prioritize other aspects, such as trust in medical staff and the comfort of procedures, reflected in the assurance dimension.

External factors such as shorter wait times in the outpatient unit or adequate facility quality may also affect patient satisfaction, making reliability and responsiveness less dominant. These findings provide important insights for hospital managers to focus more on elements that can enhance a sense of safety and certainty for patients while also considering the specific context of outpatient services in optimizing service quality.

This finding suggests that patient satisfaction is most dominantly influenced by the factor referred to as assurance, which is 5.334 times more associated with patient satisfaction in the Outpatient Unit of the Dental and Oral Hospital at Universitas Sam Ratulangi.

### 3.4 Discussions

The study results indicate that the majority of respondents were aged 20–25 years, female, had a high school or equivalent education, were students, and underwent dental scaling treatment. This respondent profile provides a general overview of the typical characteristics of patients visiting the outpatient unit.

The univariate and bivariate analyses showed that most respondents were satisfied with the responsiveness of the healthcare providers at RSGM-P UNSRAT. The aspects of service quality related to responsiveness assessed in this study included the duration of treatment, the speed of the treatment process, the service process by staff, and the willingness of medical personnel to explain the patient's health condition.

The study revealed that 51.5% of respondents were satisfied with the responsiveness of healthcare providers at RSGM-P UNSRAT. The Chi-square test showed a significance value of  $p < 0.05$ , indicating that responsiveness is associated with patient satisfaction. However, the logistic regression test revealed a significance value of  $p > 0.05$ , indicating that responsiveness is not a dominant variable influencing patient satisfaction at RSGM-P UNSRAT.

This finding is supported by a study by (Supartiningsih, 2017) which concluded, based on regression analysis, that responsiveness does not significantly contribute to increasing outpatient satisfaction at Sarila Husada Sragen Hospital. These findings suggest that while responsiveness is an important aspect of healthcare service, it is not the sole factor determining the level of patient satisfaction.

A study by Marmeam et al. presented different findings, showing that both bivariate and multivariate tests found that the responsiveness variable is significantly associated with outpatient satisfaction. The study revealed that patients who perceived a high level of responsiveness were three times more likely to feel satisfied compared to those who perceived low responsiveness (Marmeam, et al., 2018). Similar results were reported by (Repi, et al., 2024) stating that responsiveness is associated with patient satisfaction in both bivariate and multivariate tests conducted in the emergency unit of RSU GMIM Kalooran Amurang. Good responsiveness by staff increased the likelihood of patient satisfaction in the emergency unit by 8.789 times compared to poor responsiveness (Repi, et al., 2024).

The univariate and bivariate analyses showed that the majority of respondents were

satisfied with the assurance provided by RSGM-P UNSRAT. The study revealed that 56% of respondents were satisfied with the assurance provided by RSGM-P UNSRAT. The Chi-square test showed a significance value of  $p < 0.05$ , indicating that assurance is associated with patient satisfaction.

The logistic regression analysis indicated that patient satisfaction is most dominantly influenced by assurance, with good assurance increasing the likelihood of satisfaction by five times. This means that assurance, or the certainty that services will be provided by competent and polite staff, has a stronger influence compared to other service quality dimensions in determining patient satisfaction levels. This study assessed the assurance dimension through four questions. Respondents were asked to evaluate their satisfaction regarding benefits received, the courteous behavior of staff, dentists' explanations about safe treatments, the dentists' adequate skills, and the hospital's good reputation in the community.

The logistic regression analysis highlights the importance of the assurance dimension in influencing patient satisfaction. This indicates that patients highly value the assurance that they will receive professional and safe services. This finding aligns with the study by Yuliani et al. (2022), which showed that patients tend to have higher satisfaction levels when the assurance provided is of good quality. Patient satisfaction can be significantly enhanced by improving staff's ability to deliver prompt and accurate services (Yuliani et al., 2022). In light of this, hospitals need to pay special attention to enhancing staff competencies, providing effective communication training, and implementing clear standard operating procedures to ensure service quality (Yuliani et al., 2022; Ahmad et al., 2021)

The study results show that patient satisfaction is most dominantly influenced by the assurance dimension. These findings indicate that patients highly value the certainty of the quality of care they will receive. Feeling safe and trusting that they will be treated by competent and professional healthcare providers are key factors in determining their satisfaction levels for hospitals, these findings

have significant implications. Hospitals need to focus more on efforts to improve the competence of healthcare providers, provide effective communication training, and develop clear and consistent standard operating procedures.

Univariate and bivariate analyses revealed that the majority of respondents were satisfied with the tangible evidence of healthcare services provided at RSGM-P UNSRAT. The tangible aspects of service quality examined in this study included hospital facilities, staff uniforms, and the billing process.

The study showed that 52.5% of respondents were satisfied with the tangible evidence at RSGM-P UNSRAT. The Chi-square test indicated a significance value of  $p < 0.05$ , demonstrating that tangible evidence is associated with patient satisfaction. Logistic regression analysis further showed a significance value of  $p < 0.05$ , confirming that tangible evidence at RSGM-P UNSRAT is a variable influencing patient satisfaction, with a likelihood of 3.5 times higher satisfaction. These results suggest that patients experience higher satisfaction levels when they perceive tangible evidence at RSGM-P UNSRAT positively.

This finding is supported by a study by Anisah et al., which stated that a p-value below 0.05 for all variables (tangible, responsiveness, reliability, assurance, and empathy) indicates that these variables are significantly associated with outpatient satisfaction at Puskesmas Binjai Kota in 2021. This demonstrates that all five variables collectively contribute to patient satisfaction levels (Anisah et al., 2022).

Additionally, research by Marmeam et al. supports this study, showing that patient satisfaction is influenced by tangible evidence, and patients are three times more likely to feel satisfied when tangible evidence is of good quality (Marmeam et al., 2018). Another study further corroborates these findings, reporting that patients achieve the highest satisfaction levels when tangible evidence is adequately available in the outpatient installation of RSUP Prof. Dr. R. D. Kandou. The likelihood of patient satisfaction was 586 times higher when



patients perceived tangible evidence as good (Putera et al., 2023)

Univariate and bivariate analyses revealed that the majority of respondents were satisfied with the empathy shown by staff at RSGM-P UNSRAT. The aspects of service quality related to empathy assessed in this study included the duration of dental consultations and examinations, staff listening to patients' opinions, staff addressing patients' needs, and their attentiveness to the cost of services borne by patients.

The study showed that 55% of respondents were satisfied with the empathy displayed by the staff at RSGM-P UNSRAT. The Chi-square test indicated a significance value of  $p < 0.05$ , demonstrating that empathy is associated with patient satisfaction. Logistic regression analysis further revealed a significance value of  $p < 0.05$ , confirming that empathy at RSGM-P UNSRAT is a variable influencing patient satisfaction, with a likelihood of increasing patient satisfaction by five times. This finding indicates that the better the patient's perception of staff empathy at RSGM-P UNSRAT, the higher the level of patient satisfaction.

This result is also supported by Gultom et al. (2021), who found that the empathy variable was significantly associated with outpatient satisfaction among BPJS patients at Rumah Sakit Bhayangkara Tk III Tebing Tinggi. An odds ratio of 8.24 indicates that patients who receive services with a high level of empathy are 8.24 times more likely to feel satisfied compared to those who receive services with a low level of empathy (Gultom et al., 2021).

Univariate and bivariate analyses showed that the majority of respondents were satisfied with the reliability of staff at RSGM-P UNSRAT. The aspects of service quality related to reliability assessed in this study included the need for patients to schedule appointments in advance without delaying their visits, fulfillment of patient expectations and needs by dentists, patients' understanding of dentists' explanations, and all services being performed correctly without incurring high costs.

The study found that 53% of respondents were satisfied with the reliability of staff at

RSGM-P UNSRAT. The Chi-square test revealed a significance value of  $p < 0.05$ , indicating that reliability is associated with patient satisfaction. However, logistic regression analysis showed a significance value of  $p > 0.05$ , suggesting that reliability is not a dominant variable influencing patient satisfaction at RSGM-P UNSRAT.

A similar study by Sondakh and colleagues found that the positive and significant influence of reliability on consumer satisfaction was not proven. The p-value for the reliability variable was 0.286, exceeding 0.05, indicating that consumer satisfaction was not significantly influenced by reliability. This was evident from the significance value being much higher than the regression coefficient. Therefore, it can be concluded that while reliability has a positive influence, it is not significant in determining consumer satisfaction at the Motoling Barat District Health Center (Sondakh et al., 2019).

Additionally, research by Lokan et al. (2023) revealed that the public's primary focus is on high-quality healthcare services. Their study noted that providing quality healthcare services often requires significant costs. However, bivariate analysis in this study demonstrated that patients were satisfied with the reliability of hospital staff, including the aspect that dental care services at RSGM-P UNSRAT do not require high costs. This finding contradicts Lokan et al.'s assertion, even though reliability was not found to be a dominant variable influencing patient satisfaction in the multivariate analysis of this study.

The multivariate analysis results show that the variables of responsiveness and reliability did not achieve a significance value of less than 0.05 in the logistic regression test, meaning that these two variables are not dominant factors influencing patient satisfaction at RSGM-P UNSRAT. The variables of tangibles, empathy, and assurance were found to have a significant impact on patient satisfaction in the logistic regression test, with assurance being the most dominant factor.

This may be due to several reasons. First, patient satisfaction is determined by good attention and communication from the staff or

medical personnel at RSGM-P UNSRAT. Services that address patients' needs (empathy), the availability of supporting facilities (tangibles), and the behavior and skills of the staff or medical personnel (assurance) are key factors in increasing patient satisfaction.

Second, there are other factors affecting the service quality dimensions studied, which may explain why the variables of responsiveness and reliability did not significantly impact patient satisfaction at RSGM-P UNSRAT. Socio-cultural factors and the diversity of sample characteristics are examples of other factors that could influence patient satisfaction. Outlier factors should also be considered. This means that other factors affecting patient satisfaction should be measured. One such factor is the performance of services at RSGM-P UNSRAT, which includes the systems, mechanisms, and stages of healthcare services at the hospital (Mamuaya, et al., 2023). Another factor that could affect patient satisfaction is employee job satisfaction, as it is essential for staff to provide good service to increase both the quality of service and patient satisfaction. Employee satisfaction can be observed through motivation, workload, and the working environment at RSGM-P UNSRAT (Supit, et al., 2024).

Another possible reason is that in this study, the variables were not measured adequately or did not have a significant impact in the multivariate analysis. This could be due to variation in the measurement or the complexity of interactions between these variables (Sekeon, et al., 2024).

This study has several limitations. For instance, a cross-sectional design was used, which means that causal relationships could not be measured directly. Additionally, the sample was limited to patients who visited during a specific period, so generalizing the findings requires caution. The study also only measured five dimensions of service quality, while many other factors could influence patient satisfaction.

## CONCLUSION

Based on the research conducted at the Dental and Oral Hospital of Universitas Sam

Ratulangi, it can be concluded that there is a relationship between service quality (Tangibles, reliability, responsiveness, assurance, and empathy) and patient satisfaction in the outpatient unit of RSGM-P UNSRAT. The most dominant factor influencing patient satisfaction in the outpatient unit of the Dental and Oral Hospital of Universitas Sam Ratulangi Manado is the assurance dimension of service quality.

## ADVISE

The dental and oral hospital is encouraged to conduct regular patient satisfaction surveys to obtain a larger sample size. Additionally, RSGM-P UNSRAT should carry out periodic evaluations (every 3, 6, and 12 months) to identify areas needing improvement. Future researchers are advised to adopt different study designs, such as investigating the gap between service expectations and realities, as well as other factors influencing patient satisfaction at RSGM-P UNSRAT.

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