

Original Research**Factors Influencing Patient Satisfaction with Nursing Services in the Private Inpatient Health****Sri Wahyuni^{1*}, Arif Widodo², Vinami Yulian³**^{1,2,3} Postgraduate Nursing Program, Muhammadiyah University of Surakarta, Indonesia**ABSTRACT**

Background: *Quality health services are every patient's hope, and understanding the factors that influence patient satisfaction with health services at private hospitals in Surakarta is important to improve the patient experience and overall quality of care. This research will provide valuable insights for hospital management and nursing staff in designing more effective interventions to improve services provided and patient satisfaction. This study aims to determine the factors that influence patient satisfaction with nursing services in inpatient rooms at private hospitals in Surakarta.*

Method: *This research uses a quantitative approach with a cross-sectional design. The research sample consisted of 90 patients treated in inpatient wards who met the specified inclusion criteria. Data was collected using a structured questionnaire that measures the quality of nursing services and patient satisfaction. Data analysis was carried out using the multiple linear regression method to determine the influence of each variable on overall patient satisfaction.*

Results: *Hospital nursing services in Surakarta have a significant effect on patient satisfaction with $p < 0.05$, from the five dimensions, namely reliability, physical evidence, empathy, responsiveness, and assurance. All sizes have a significant effect ($p < 0.05$) on the level of satisfaction. This occurs when patients have a good (fairly good) perception of hospital nursing services in Surakarta.*

Conclusion: *The five dimensions of hospital nursing services in Surakarta, consisting of reliability, concrete evidence, empathy, responsiveness, and assurance, have a major impact on patient satisfaction in hospitals in Surakarta. Thus, it follows that patient satisfaction can be raised by hospitals providing high-quality nursing care.*

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INTRODUCTION

A hospital is a type of healthcare facility that offers emergency, outpatient, and full personal health services. Regulation number 43 of 2016 issued by the Republic of Indonesia's Minister of Health provides crucial guidelines for Minimum Hospital

Service Standards, which serve as an essential reference for defining the service quality standards that every hospital in Indonesia must adhere to. Quality service is the expectation of every recipient of health services, and consequently, all healthcare workers bear the responsibility to deliver high-quality services to the community (Weiss & Tappen, 2019). The nursing profession is pivotal in ensuring quality services, as nurses are the health professionals who most frequently interact with patients and their families (Nursalam, 2018).

Patient satisfaction is one of the elements that affect how well hospital services are provided, particularly the nursing services that deal directly with patients. Patient satisfaction with overall health services will be significantly impacted by nursing services. Patient satisfaction and dissatisfaction are related to the nurse's ability to provide comfort and fulfil the patient's needs, both biological and psychological, in the nursing service process (Agritubella, 2018).

Patient satisfaction not only has a beneficial influence on patients as service recipients but also has a favourable impact on hospitals as service providers. Patient satisfaction will increase patient compliance with care and treatment. Patient satisfaction with nursing care has a significant impact on patient satisfaction with medical services as a whole. Research conducted by Butar-Butter & Simamora, (2016) shows that an important factor in patient satisfaction is a nurse's attention. As the accompanying table illustrates, many patients experience this from the moment they check into the hospital until the completion of their care.

Research conducted by Abdullah et al., (2017) interprets patient satisfaction as an indicator of good or bad service in a hospital; good service in terms of health services will prove that the hospital will be of good quality. An accurate level of patient satisfaction is very necessary to improve the quality of care services. Because health services are becoming an increasingly competitive market, studying patient experiences can certainly help practitioners better include the patient's perspective in providing services and increase patient satisfaction. The Republic of Indonesia Minister of Health Regulation Number 43 of 2016 about Minimum Hospital Service Standards, the standard indicator for customer satisfaction for inpatient services, should ideally be $\geq 90\%$.

Patient satisfaction is also input and material for the evaluation and planning of hospital management and nursing management to improve the quality of nursing services (El-Nagger et al., 2013). Patient satisfaction with nursing services reflects the real fulfilment of patient needs and expectations, which are real criteria for evaluating service quality (Mulugeta et al., 2019). Patients who are satisfied with their nursing service tend to maintain a strong rapport with nurses, adhere to medical advice, and have better health results (Dzomeku et al., 2013).

Based on data on patient satisfaction achievements at one of the private hospitals in Surakarta in 2022, it was found that many patients were dissatisfied with nursing services, including responsiveness, assurance, physical evidence, empathy, and reliability as described in Table 1, which have been reported in the research (Butar-Butter & Simamora, 2016). Researchers are interested in conducting research on the analysis of factors that influence patient satisfaction with nursing services at one of the private hospitals in Surakarta based on the background description provided above in order to learn more from the perspective of nursing services and patients.

MATERIALS AND METHOD

This research is a quantitative cross-sectional approach, Data was collected simultaneously to analyze the elements that affect patient satisfaction with nursing services in the inpatient room. Multiple linear regression data analysis techniques are used in this study. The amount of influence that exists between the independent and dependent variables is measured using regression analysis. Multiple linear regression refers to a regression in which there is more than one independent variable or dependent variable.

Simple linear regression is used when there is just one independent variable and one dependent variable. The population in this study used patients who were hospitalised, with a total of 116 patients, and the respondents used were 90 respondents with a simple random sampling technique. The instrument used is a questionnaire containing mutual service coverage and patient satisfaction with cleaning services. The variables in this research are nursing services and patient satisfaction.

RESULTS

Table 1 illustrates the demographic distribution of respondents who filled out the questionnaire hospitals, totaling 90 people. The majority were women, comprising 56 respondents (62.2%). Regarding educational background, most respondents had completed middle school/junior high school (27 respondents or 30%), followed by college/graduate (23 respondents or 25.6%), high school/vocational education (20 respondents or 22.2%), elementary school (14 respondents or 15.6%), and 6 respondents (6.7%) who had not attended school. In terms of job characteristics, most respondents were private sector employees (27 respondents or 30%), followed by housewives (IRT-Ibu Rumah Tangga) with 19 respondents (21.1%), others with 16 respondents (17.8%), unemployed individuals with 9 respondents (10%), and civil servants/military/police (PNS/TNI/POLRI) with 16 respondents (17.8%).

Table 1. Characteristics of Respondents

Variable	Frequency (N)	Percentage (%)
Gender		
Male	34	37.8
Female	56	62.2
Education		
No school	6	6,7
elementary school	14	15.6
Middle/Junior High School	27	30.0
SMA/SMK	20	22.2
Academy/Series	23	25.6
Work		
Doesn't work	9	10.0
Housewife (IRT)	19	21.1
Private	27	30.0
Laborer	14	15.6
PNS/TNI/POLRI	5	5,6
Other	16	17.8

Univariate Analysis

Univariate analysis results from data processing in the form of statistical descriptions of research variables, as explained in the table that follows.

Table 2. Description of Research Changeables

Changeable	Frequency (N)	Percentage (%)
Dimensions of Nursing Services Reliability		
Good	53	58.9
Bad	37	41.1
Real		
Good	48	53.3
Bad	42	46.7
Empathy		
Good	41	45.6
Bad	49	54.4
Responsiveness		
Good	50	55.6
Bad	40	44.4
Guarantee		
Good	59	65.6
Bad	31	34.4
Patient Satisfaction		
Satisfied	54	60.0
Not satisfied	36	40.0

The univariate test findings demonstrate that the nursing services' quality dimensions are reliability, physical evidence, empathy, responsiveness, and assurance of patient perceptions of nursing services in private hospitals in Surakarta are mostly good, while the degree of contentment among patients is mostly satisfactory.

Bivariate Analysis

Table 3. Rank-Spearman Correlation Quality of Service and Patient Satisfaction

Variable	Satisfaction	
Nursing Services	Correlation coefficient	0.918
	signature. (2-tail)	0.001
	N	90

In Table 3 above, it can be seen that the correlation between the quality of nursing care and patient satisfaction is 0.918. At a significant level obtained $0.05 < p = 0.0001$ so $p < 0.05$ which suggests that there is a significant relationship between the quality of nursing services consisting of *reliability*, real evidence, empathy, responsiveness, and guarantee of patient satisfaction in private hospitals in Surakarta.

Table 4. Rank-Spearman Correlation Dimensions of Service Quality and Patient Satisfaction

Quality of Service Dimensions	Satisfaction	
Reliability	coefficient of correlation	0.734
	signature. (2-tail)	0.001
	N	90

	Quality of Service Dimensions	Satisfaction
Real	coefficient of correlation	0.759
	signature. (2-tail)	0.001
	N	90
Empathy	coefficient of correlation	0.776
	signature. (2-tail)	0.001
	N	90
Responsive	coefficient of correlation	0.687
	signature. (2-tail)	0.001
	N	90
Guarantee	coefficient of correlation	0.725
	signature. (2-tail)	0.001
	N	90

The analysis conducted on the relationship between different dimensions of service quality (reliability, tangibles, empathy, responsiveness, and assurance) and patient satisfaction yielded significant findings. Below are the summarised results:

1. Reliability and Patient Satisfaction: The Spearman rank correlation test showed a weak but significant positive relationship ($\rho = 0.734$, $p < 0.001$) between reliability and patient satisfaction.
2. Tangibles (Real Evidence) and Patient Satisfaction: Similarly, a weak but significant positive relationship ($\rho = 0.759$, $p < 0.001$) was observed between tangibles and patient satisfaction.
3. Empathy and Patient Satisfaction: The analysis revealed a weak but significant positive relationship ($\rho = 0.776$, $p < 0.001$) between empathy and patient satisfaction.
4. Responsiveness and Patient Satisfaction: The Spearman rank correlation test indicated a weak but significant positive relationship ($\rho = 0.687$, $p < 0.001$) between responsiveness and patient satisfaction.
5. Assurance and Patient Satisfaction: Lastly, a weak but significant positive relationship ($\rho = 0.725$, $p < 0.001$) was found between assurance and patient satisfaction.

Overall, the correlation testing demonstrated that all dimensions of service quality (reliability, tangibles, empathy, responsiveness, and assurance) have a significant connection with patient satisfaction, with p-values below 0.05. This suggests that improvements in these dimensions can positively impact patient satisfaction levels.

Multivariate Analysis Assumption Tests

Normality

The normality of the residuals was tested using the one-sample Kolmogorov-Smirnov test. The results are presented in the table below:

Table 5. Residual Normality Test

Variable	Kolmogorov-Smirnov	p-value
Nonstandard Residues	0.051	0.200

The p-value of 0.200 is greater than 0.05, indicating that the residuals follow a normal distribution. Hence, the data used in this research can be considered to follow a normal distribution.

Linearity Test

The linearity test results are shown in the table below:

Table 6. Linearity Test

Variable	Linearity of p-values	Information
Real	0.001	Linear
Reliability	0.001	Linear
Responsiveness	0.001	Linear
Guarantee	0.001	Linear
Empathy	0.001	Linear

The p-values for all variables are less than 0.05, indicating that each variable is linearly related to the dependent variable.

Heteroscedasticity Test

The results of the heteroscedasticity test are presented in the following table:

Table 7. Heteroscedasticity Test

Variable	t-value	p-value	Information
Reliability	-0.949	0.346	Free of heteroscedasticity
Real	-0.848	0.400	Free of heteroscedasticity
Empathy	-0.050	0.961	Free of heteroscedasticity
Responsiveness	1.776	0.080	Free of heteroscedasticity
Guarantee	-0.008	0.993	Free of heteroscedasticity

The p-values are all greater than 0.05, indicating that the model is free from heteroscedasticity.

Multicollinearity Test

The results of the multicollinearity test are shown in the table below:

Table 8. Multicollinearity Test

Variable	Tolerance	VIF	Information
Reliability	0.514	1.946	Free of Multicollinearity
Real	0.558	1.791	Free of Multicollinearity
Empathy	0.456	2.191	Free of Multicollinearity
Responsiveness	0.588	1.701	Free of Multicollinearity
Guarantee	0.533	1.876	Free of Multicollinearity

The VIF values are all less than 10, indicating no multicollinearity issues.

Impact of Service Quality on Patient Satisfaction Simultaneous Test

The simultaneous effect of service quality on patient satisfaction was assessed using the F-test. The results are presented in the table below:

Table 9. F-test Results for Nursing Service Quality on Patient Satisfaction

	Sum of Squares	df	Mean Square	F	Sig.
Regression	9,865,109	5	1,973,022	83.248	0.001
Residual	1,990,847	84	23,701		
Total	11,855,956	89			

The F-value of 83.248 is greater than the F-table value of 2.3, with a p-value of less than 0.05. This indicates that the quality of nursing services significantly influences patient satisfaction at private hospitals in Surakarta.

Partial Influence of Service Quality Dimensions

The partial influence of each dimension of service quality on patient satisfaction was assessed using multiple linear regression. The results are shown in the table below:

Table 10. Multiple Linear Regression Summary

Dimensions	Coefficient	t-value	t-table	p-value
Reliability	0.828	3.374	2.00	0.001
Real	0.966	4.693	2.00	0.001
Empathy	0.939	3.979	2.00	0.001
Responsiveness	0.716	2.684	2.00	0.009
Guarantee	1.369	3.671	2.00	0.001

The regression equation based on the results is:

Table 10 above allows for the display of the estimated regression equation.:

$$Y = 0.828 I_1 + 0.966 I_2 + 0.939 I_3 + 0.716 I_4 + 1.369 I_5$$

All dimensions (reliability, real evidence, empathy, responsiveness, and guarantee) have significant effects on patient satisfaction, as indicated by t-values greater than the t-table value of 2.00 and p-values less than 0.05. Among these, the guarantee variable has the largest coefficient (1.369), indicating it has the most dominant influence on patient satisfaction.

DISCUSSION

According to Muninjaya (2015), there are five dimensions of health service quality. Tangibles (physical appearance of the service), Reability (reliability), Responsiveness (responsiveness in providing services), assurance (service guarantee), and empathy (understanding customer desires). Service quality is a central point for service companies because it can influence customer satisfaction. Customer satisfaction arises when service quality is good. Service quality in five dimensions, namely: tangible (physical evidence), reliability, responsiveness, guarantee, and empathy (individual attention) (Kotler et al., 2019).

The results of the research show that in each univariate dimension, patients have a fairly good perception of nursing services at private hospitals in Surakarta. This means that this dimension is most often ignored by patients regarding the dimension of service quality provided by nurses in private hospitals in Surakarta. Based on the results of this research, there is a clear alignment with previous studies, including those conducted by Simanullang et al., (2021), Mutmainnah et al., (2021), Lampus et al., (2023), and Manzoor et al., (2021). Each of these studies offers valuable insights into the perception of nursing services and the overall patient experience in healthcare settings.

The research by Simanullang et al., (2021) revealed that the five dimensions of nursing service quality, according to patients' perceptions, were rated as fairly good at Harapan Pematang Siantar Hospital. This aligns with the SERVQUAL model, which evaluates service quality based on five dimensions: tangibility, reliability, responsiveness, assurance, and empathy. The study supports the notion that comprehensive assessment across these dimensions can yield positive feedback if the healthcare institution maintains a balanced focus on each aspect.

Similarly, the research conducted by Mutmainnah et al., (2021) further corroborates the positive perception of nursing services, emphasizing patient satisfaction and the quality of care. The findings can be interpreted through the Patient-Centred Care (PCC) model, which prioritizes the patient's preferences, needs, and values. The positive results suggest that a patient-centered approach in nursing care leads to higher satisfaction and perceived quality.

Lampus et al., (2023) also found similar outcomes, with patients reporting favorable responses to the quality of nursing services. This research highlights the importance of continuous quality improvement (CQI) in healthcare services. By regularly assessing and enhancing nursing practices, hospitals can sustain high levels of patient satisfaction and service quality.

Additionally, Manzoor et al., (2021) identified that the perception of nursing service quality was significantly positive, echoing the results of the other studies. This study reinforces the Human Caring Theory proposed by Jean Watson, which emphasizes the importance of caring in nursing. The positive perceptions reported by patients indicate that the humanistic aspects of care are being effectively implemented.

The consistency of positive perceptions across these studies indicates a strong correlation between structured, empathetic, and patient-centered nursing practices and higher levels of patient satisfaction. This alignment suggests that hospitals adopting comprehensive service quality frameworks, such as SERVQUAL, and emphasizing patient-centered care can achieve favorable outcomes in patient satisfaction. Moreover, the continuous quality improvement approach highlighted by Lampus et al., (2023) underscores the dynamic nature of healthcare service provision, where regular feedback and iterative improvements are crucial.

The findings of Manzoor et al., (2021) further illustrate the impact of incorporating humanistic and empathetic principles into nursing care, leading to enhanced patient experiences. In conclusion, the results of the current research, in harmony with previous studies, underscore the effectiveness of multi-dimensional quality assessment and patient-centered approaches in nursing services. Hospitals should continue to prioritize these theoretical frameworks and practical strategies to maintain and improve the quality of care and patient satisfaction.

The Influence of Tangible (Physical Evidence) on Patient Satisfaction

Real (visible tangible evidence), meaning physical evidence, which includes physical facilities, the appearance of personnel, equipment, and supplies provided; in this case, according to Parasuraman (2001), is a part or dimension of service quality that is the company's ability to demonstrate its existence. Includes facilities and infrastructure provided to external parties, in which there are modern and adequate assessments, good and clean physical facilities, physical facilities that support activities, and neat and polite employees. The results of the study showed that physical (tangible) evidence had a significant effect ($p < 0.05$) on patient satisfaction at private hospitals in Surakarta. In this way, patients have an assessment of services that include physical facilities that suit their needs and are modern facilities that can support technical health service activities; apart from that, employees and medical personnel also appear to have a neat and clean environment.

The results of this research align with the findings of Meilana (2017), Herawati and Qomariyah (2015), and Tri (2013), which indicate that partial testing of physical evidence (tangible) has a significant effect on patient satisfaction. These studies support the SERVQUAL model's emphasis on tangibility as a critical dimension of service quality. Tangible aspects, such as the physical environment, equipment, and appearance of personnel, play a crucial role in shaping patients' perceptions and satisfaction levels.

However, this is in contrast to the findings of Tores (2015), who reported that tangible elements did not have a significant effect on patient satisfaction in his partial tests. This discrepancy could be attributed to differences in the study context, sample population, or measurement methods. The variation in results highlights the need for a nuanced understanding of how tangible factors influence patient satisfaction.

It underscores the importance of considering contextual and demographic factors when evaluating the impact of physical evidence in healthcare settings. Overall, these findings suggest that while tangibility is generally an important factor in patient satisfaction, its significance may vary depending on specific circumstances. Therefore, healthcare providers should strive to maintain high standards of physical evidence while also being mindful of the unique needs and expectations of their patient population.

The Effect of Reliability on Patient Satisfaction

Reliability or dependability is something that concerns the consistency of performance and its interrelationships, which means that companies are required to provide the right service at the right time. The results of this study show that reliability, which is part of the service quality dimension, can give patients confidence to want to use health services at private hospitals in Surakarta. As part of the service quality dimension, reliability is crucial as it represents the outcome of the service process itself, as experienced by the patient. According to Parasuraman (2001), reliability is the ability to deliver services as promised, dependably, accurately, and consistently.

This includes service accuracy, timeliness, sincerity in serving consumers, and trustworthiness in service delivery. Research by Manzoor et al., (2019) and Simanullang et al., (2021) supports this view, highlighting that reliability is a fundamental factor for any agency or institution, particularly hospitals, which strive to provide the best possible service. The findings from these studies underscore the importance of maintaining high reliability standards in healthcare settings. Consistent and accurate service delivery not only enhances patient satisfaction but also builds trust and credibility, which are essential for patient loyalty and the overall reputation of the institution. Therefore,

healthcare providers must prioritize reliability to ensure they meet patient expectations and uphold their commitment to high-quality care.

The Effect of Responsiveness on Patient Satisfaction

One of the advantages of service in the perception of patients in this case is responsiveness or speed in responding to the wishes/willingness of officers and entrepreneurs to help customers and provide services quickly, as well as listening to and resolving patient complaints (Kaltiainen & Hakanen, 2022). Which includes accuracy of service, speed of service in helping patients and providing time for patients.

The research results showed that this responsiveness was influential and had a positive relationship with patient satisfaction ($p < 0.05$). The nursing services at Surakarta Regional Hospital were indeed able to provide patient satisfaction. The results of this research are in line with research conducted by Meilana (2017), and Herawati and Qomariyah (2015), which proves that partial responsiveness has a significant effect on customer loyalty. Apart from that, research results that responsiveness has an influence on patient satisfaction were also found in this research (Mutmainnah et al., 2021; Purwantiningsih et al., 2022).

The Effect of Guarantees on Patient Satisfaction

The concept of guarantee, which revolves around the employee's capacity to foster confidence and trust in the commitments made to consumers, entails several crucial components, including the employee's expertise, the sense of ease experienced by consumers during interactions, the courteous demeanour of the employee, and the quality of their work. The findings of this study underscore the significant influence ($p < 0.05$) of guarantees on patient satisfaction within private hospitals in Surakarta. This emphasizes that patient satisfaction is intricately linked to the ability of service quality to provide assurances to patients, thereby fostering their trust and comfort throughout the healthcare experience.

These results are consistent with research conducted by Tri (2013), which similarly identified guarantees as a service quality variable lacking significant influence on customer relationship management. Moreover, the alignment with the findings of Rensiner et al., (2018) suggests that factors such as insurance-related concerns may contribute to patient dissatisfaction, potentially eroding the trust and confidence established by guarantees in the service context. These insights highlight the multifaceted nature of patient satisfaction and underscore the importance of instilling trust and confidence through robust service guarantees in healthcare delivery.

The results of this study indicate that guarantees have a significant influence ($p < 0.05$) on patient satisfaction. This proves that patient satisfaction is influenced by one of the service quality factors, namely the quality of service, which can provide guarantees to patients and give confidence to patients to provide comfort for their trust in private hospitals in Surakarta in every service.

The Impact of Empathy on Patient Satisfaction

Namely the willingness of medical personnel and nurses in private hospitals in Surakarta to give further thought to providing individualised care to patients, which includes service to individual patients, personal attention of medical personnel and nurses to patients, provision of complete medicines, and medical personnel and nurses who can act as a personal advisor, understand the needs of patient complaints, and put the patient's interests first.

The significant effect of empathy or concern, as indicated by the results ($p < 0.05$), suggests that it plays a crucial role in patient satisfaction within private hospitals

in Surakarta. However, despite this finding, it is possible that a majority of patients still feel dissatisfied, as evidenced by the nearly equal distribution between satisfaction and dissatisfaction shown in the bivariate analysis. This indicates a complex relationship between the provision of empathy and overall patient satisfaction, suggesting that while empathy is important, other factors may also contribute to patient perceptions of quality care.

The overall F test, encompassing all five service quality factors, further underscores the significance of these dimensions in influencing patient satisfaction ($p < 0.05$), emphasizing the importance of a comprehensive approach to service quality in healthcare delivery. These findings align with theoretical concepts such as patient-centered care, which emphasizes the importance of understanding and addressing patient needs and concerns to enhance satisfaction and overall healthcare outcomes.

The effect of service quality on patient satisfaction

The quality of service in general service organizations such as health services in private hospitals in Surakarta, is the goal of every customer or patient to get the best service, in this case being able to provide satisfaction for them. Thus, customer satisfaction will arise if the service quality is good. Based on Kotler et al., (2019) service quality consists of five dimensions, namely: tangible (physical evidence), reliability, responsiveness, guarantee, and empathy (individual attention).

In the dimension of service quality based on patient satisfaction in answering satisfied or dissatisfied based on the results of data collection, 70.25% of the entire sample studied answered satisfied, while the remaining 29.75% answered dissatisfied. The results of this study prove that the average level of patient satisfaction at private hospitals in Surakarta is quite satisfactory in the sense of a moderate level of satisfaction, as evidenced by the average overall patient satisfaction score, with the highest score being 4. The average score is 1.92 (rounded by 2), which is the median value.

The partial influence of each dimension is only tangibles (tangible proof), responsiveness (responsiveness), and assurance (guarantee), which have a significant influence in this research, while reliability (reliability) and empathy (individual attention) do not have a significant influence. The results of this study demonstrate that all dimensions of service quality—physical evidence, responsiveness, assurance, reliability, and empathy—have a significant impact on patient satisfaction in private hospitals in Surakarta. This is evidenced by the partial test (t-test) results showing significant t values ($p < 0.05$) for each criterion and by the simultaneous test (F test), which also showed significance ($p < 0.05$). These findings align with the research conducted by Herawati and Qomariyah (2015) and Erviana (2013), which similarly concluded that these dimensions collectively have a positive effect on patient satisfaction.

Additionally, Purba et al., (2023) support these results, reinforcing the importance of a holistic approach to service quality in healthcare. Theoretical concepts such as the SERVQUAL model underline that a comprehensive assessment of service quality, covering all five dimensions, is crucial for achieving high patient satisfaction. This study's results highlight that private hospitals must consistently deliver on all these aspects to ensure patients' expectations are met and their experiences are positive. This comprehensive approach not only improves patient satisfaction but also enhances the overall reputation and reliability of healthcare institutions.

CONCLUSION

The five dimensions of hospital nursing services in Surakarta consisting of reliability, concrete evidence, empathy, responsiveness, and assurance have a major impact on patient satisfaction in hospitals in Surakarta. Thus, it follows that patient satisfaction can be raised by hospitals providing high-quality nursing care; it can be concluded that the quality of nursing services in hospitals will be able to increase patient satisfaction.

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REFERENCE

- Abdullah, S., Kousar, R., Azhar, M., Waqas, A., & Gilani, S.A. (2017). Nurses' and Patients' Perceptions Regarding Nurses' Caring Behavior and Patient Satisfaction at Sir Ganga Ram Hospital, Lahore, Pakistan. *International History of Medicine*, *1*(5), 145. [://doi.org/10.24087/IAM.2017.1.5.145](https://doi.org/10.24087/IAM.2017.1.5.145)
- Agritubella, S. (2018). Patient Comfort and Satisfaction in the Nursing Service Interaction Process at Petala Bumi Regional Hospital. *Endurance Journal*, *3*, 42. <https://doi.org/10.22216/jen.v3i1.2040>
- Aditama, (2002), *Hospital Administration Management*, second edition, Jakarta, UI
- Butar-butur, J., & Simamora, RH (2016). The Relationship between the Quality of Nursing Services and the Satisfaction Level of Inpatients at Pandan Regional Hospital, Central Tapanuli Regency. *Indonesian Nursing Journal*, *6*(1), Article 1. <https://doi.org/10.31258/jni.6.1.50-63>
- Dzomeku, V.; Atinga, B.-E.; Perekuu, T.; Mantey, RE In-patient satisfaction with nursing care: A case study at Kwame Nkrumah University of Science and Technology hospital. *Int. J. Res. Med. Health Sci.* 2013, *2*, 19–24.
- El-Nagger, N., Ahmed, S.M.A., Elsayed, L., & Khamis, H.M.A. (2013). Patient satisfaction regarding nursing services provided at various hospitals in Makkah Al Mukramah. *Journal of Life Sciences*, *10*, 421–429.
- Ghozali, I. (2017). *Multivariate applications with the IBM SPSS 23 program* (8th Edition). Univ Publishing Agency. Diponegoro Press.
- Hasan, I. (2022). *Analysis of Research Data with Statistics* (Second Edition). Literary Earth
- Kaltiainen, J., & Hakanen, J. (2022). Fostering adaptive task and performance through employee well-being: The role of servant leadership. *BRQ Business Research Quarterly*, *25*(1), 28–43. <https://doi.org/10.1177/2340944420981599>
- Kotler, P., Keller, K. L., Brady, M., Goodman, M., & Hansen, T. (2019). *Marketing management* (4th European ed.). Pearson.

- Lampus, CSV, Umboh, A., & Manampiring, AE (2023). Analysis of Factors that Influence the Level of Patient Satisfaction in the Inpatient Installation of RSUP Prof. Dr. RD Kandou Manado. *Journal of Medical Scope*, 4(2), Article 2. <https://doi.org/10.35790/msj.v4i2.44825>
- Manzoor, F., Wei, L., & Asif, M. (2021). Intrinsic Rewards and Employee Performance Using Employee Motivation Mediation Mechanisms. *Frontiers in Psychology*, 12, 563070. <https://doi.org/10.3389/fpsyg.2021.563070>
- Manzoor, F., Wei, L., Hussain, A., Asif, M., & Shah, SIA (2019). Patient Satisfaction with Health Services; Application of Doctor Behavior as a Moderator. *International Journal of Environmental Research and Public Health*, 16(18), 3318. <https://doi.org/10.3390/ijerph16183318>
- Mutmainnah, U., Ahri, RA, & Arman. (2021). Analysis of factors related to the quality of health services on the satisfaction of inpatients at RSUP. Dr Wahidin Sudirohusodo Makassar 2020. *Public Health Journal*
- Mulugeta, H.; Wagnew, F.; Dessie, G.; Biresaw, H.; Habtewold, TD Patient satisfaction with nursing care in Ethiopia: A systematic review and meta-analysis. *BMC Nurs.* 2019, 18, 27. [CrossRef] [PubMed] Muslim, 2(1), Article 1. <https://doi.org/10.52103/jmch.v2i1.488>
- Muninjaya, 2. (2015). The relationship between the quality of health services. *Journal of Nursing*, 1-7
- Nursalam. (2020). *Nursing Science Research Methodology: A Practical Approach 5th Edition*. South Jakarta: Salemba Medika
- Nursalam, N. (2014). *Nursing Management: Applications in Professional Nursing Practice (4th Edition)*. Salemba Medika.
- Purba, E., Putriana, A., & Pasaribu, A. (2023). Factors that Influence Health Services on Inpatient Satisfaction at RSUD DR. RM Djoelham Binjai 2022. *Imelda Scientific Journal of Health Recording and Information (JIPIKI)*, 8, 77–86. <https://doi.org/10.52943/jipiki.v8i1.1137>
- Purwantiningsih, EH, Hastuti, ASO, & Mahayanti, A. (2022). Factors Associated with Patient Satisfaction with Nursing Services in the Inpatient Room at Panti Rapih Hospital, Yogyakarta. *I Care Nursing Journal STIKes Panti Rapih*, 3(2), Article 2. <https://doi.org/10.46668/jurkes.v3i2.168>
- Rensiner, R., Azwar, V., & Putra, A. (2018). Analysis of Service Quality Factors on Outpatient Satisfaction at Dr. Achmad Darwis. *Andalas Health Journal*, 7, 1. <https://doi.org/10.25077/jka.v7i0.817>

- Romliyadi, Isrizal (2022). Analysis of factors related to the level of patient satisfaction in nursing services in hospitals in 2022. *Lentera 'Aisyiyah Health Journal* Vol 5, No 2, December 2022, 644-652
- Simanullang, LF, Amirah, A., & Aini, N. (2021). Analysis of Factors That Influence Nursing Services and Inpatient Satisfaction at Harapan / Pematangsiantar Hospital. *Journalal Asian Multicultural Research for Medical and Health Sciences Studies*, 2(2), Article 2. <https://doi.org/10.47616/jamrmhss.v2i2.111>
- Weiss, S. A., Tappen, R. M., & Grimley, K. (2019). *Essentials of nursing leadership & management*. FA Davis.
- Yan, M., Zhi, M., Xu, Y., Hu, L., & Liu, Y. (2022). Inpatient Satisfaction with Nursing Services and Its Impact Factors in a Chinese Tertiary Hospital: A Cross-Sectional Study. *International Journal of Environmental Research and Public Health*, 19(24), 16523. <https://doi.org/10.3390/ijerph192416523>