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Research Paper

The Impact of Responsiveness on Patient Satisfaction: Ensuring Healthy Lives and Well-Being Through Sustainable Development Goal 3

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Abstract

Responsiveness involves emotional support, effective communication, and respect, essential to achieving Sustainable Development Goal 3. The SDG 3 aims to ensure healthy lives and promote well-being. Therefore, aligning the principles of SDG 3 with healthcare practices will create a better healthcare environment. This study examines the effect of responsiveness on patient satisfaction at the hemodialysis unit of Rumah Sakit Haji Jakarta using a quantitative cross-sectional design with primary data collection and simple regression analysis. Findings indicate that responsiveness significantly and positively affects patient satisfaction at the hemodialysis unit of Rumah Sakit Haji Jakarta. In essence, greater attentiveness and quicker responses from healthcare providers lead to higher patient satisfaction. This outcome highlights the importance of ensuring healthcare services, especially in critical care areas like hemodialysis. These findings offer valuable insights and serve as a guiding reference for healthcare providers to improve patient care quality and achieve overall patient satisfaction.

Keywords: Responsiveness; Service Quality; Patient Satisfaction; Hemodialysis; Hospital Management

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1. Introduction

Sustainable Development Goal 3 (SDG 3) focuses on ensuring healthy lives and promoting well-being for individuals of all ages, highlighting the critical role of quality healthcare services. In this context, responsiveness in healthcare especially in hemodialysis is essential for achieving SDG 3, as it significantly impacts patient satisfaction and health outcomes. By prioritizing effective communication, respect, and emotional support, healthcare providers can improve patient experiences, which in turn fosters better adherence to treatment and enhances overall health results (Kim et al., 2024). Moreover, aligning healthcare practices with SDG 3 not only meets immediate patient needs but also strengthens the health system as a whole, ensuring equitable access to essential services and advancing community health.

Hospitals play a crucial role in social and health organizations by offering comprehensive services, treating patients (curative), and preventing illnesses (preventive) in the community (Wendimagn & Bezuidenhout, 2019). The improvement and guarantee of service quality, as stated in Article 40 of Hospital Law No. 44 of 2009, in Indonesia should always be included as the hospital's priority (Kementerian Kesehatan Republik Indonesia, 2020). Several perspectives, including those of the service provider, service financier, service owner, and the patient, can be used to assess the method of patient care and the quality of health services (Dias-Trindade & Moreira, 2020).

Patients with kidney failure need hemodialysis therapy to keep their body's urea levels within normal limits while removing toxic substances due to failed kidney function. Hemodialysis is a medical device provided in a hospital to control and keep an eye on vital signs, blood pressure, blood flow, and provides data on the volume of fluid eliminated. The pump inside the hemodialysis machine functions to drain blood from the body to the dialyzer and helps drain blood back into the body.

The dialysis fluid that enters the dialyzer is also regulated by the hemodialysis machine, which helps to collect toxins from the blood. Ideally, the length of hemodialysis therapy duration in a week is 10-12 hours, twice a week, 5-6 hours per time, or until a new kidney transplant is performed. Lifelong hemodialysis machine dependency combined with regular, scheduled therapy causes changes in social, economic, and occupational roles for the patient. These impacts are stressors that have the potential to cause anxiety in hemodialysis patients (Huriani et al., 2019). Therefore, it is essential to increase hemodialysis patient satisfaction by ensuring the quality of healthcare.

As stated by the WHO (World Health Organization), the three primary goals for measuring the health systems' efficacy are financial risk reduction, population health, and patient responsiveness (National Department of Health, 2020). The responsiveness of a health system is its capacity to satisfy the population's justifiable expectations regarding the non-financial and non-medical components of the treatment process, and it is one of the dimensions of service quality. Ensuring the satisfaction of the patients with the care received is crucial. Additionally, positive doctor-patient relationships will be maintained by patient satisfaction with healthcare, and this will benefit the patient's overall health (Wang et al., 2022).

Service quality measures how effectively a service meets the client's expectations (Ramya et al., 2019). To assist service providers in identifying and improving their service delivery, researchers have developed the five characteristics of service quality which are tangibility, reliability, assurance, responsiveness, and empathy that make up the SERVQUAL paradigm (Parasuraman et al., 1985). This study made it possible for researchers to examine the impact of service quality from the client's perspective. As a result, the SERVQUAL model has gained widespread use in the analysis of patient perceptions of service quality in healthcare settings (Nguyen et al., 2021).

Initially described as a novel, complex, and unexplored idea in the World Health Report 2000, responsiveness is now acknowledged as a clearly stated core objective of any health system's six basic components framework (Shaqura et al., 2022). Responsiveness, being one of the service quality components, is respondents' statements regarding the willingness of the hospital to help and provide fast and precise service to patients. The components of responsiveness are options for healthcare providers, cleanliness, social support, respectful communication, confidentiality of information, participation in decisions about one's healthcare, clear explanations, and waiting time. Although responsiveness is not a therapeutic component, it has a good correlation with health outcomes. While responsiveness is not as expensive as other health system goals like financial fairness and health status, it does strive to increase patient satisfaction.

Patient satisfaction is a complex idea that serves as an essential indicator of the quality of healthcare delivery (Alazab et al., 2023). It is defined as a consumer's perception and attitude toward their overall experience receiving care. Patient satisfaction is also a widely acknowledged component that needs to be routinely studied to support other methods of quality assessment and assurance (Asamrew et al., 2020). To improve the capacity to deliver superior healthcare services, monitoring patient satisfaction is a crucial part of the health system's ongoing process for quality improvement.

A study by Asnawi (2019) sought to investigate the level of satisfaction experienced by patients in Terengganu Regional General Hospital when provided with high service quality. The study explained that the healthcare industry demonstrates a competitive environment as a result of the increasing number of public and private hospitals. Therefore, this requires support and cooperation from the hospital to set a good hospital image and provide patient satisfaction so that they remain loyal. Their research concluded that providing patient satisfaction is ensured by high service quality and increases their loyalty.

Unfortunately, in some cases as noted by Manzoor et al. (2019), while a lot of studies have been done on patient satisfaction and health care services in developed countries, emerging nations like Pakistan have received less attention. Over the past ten years, studies on service delivery in developing nations have rarely included health care. The need for quality health services is rising, even though it has been the subject of much academic research. This poses a challenge for health service providers, namely medical or non-medical staff and other parties to meet the needs and achieve a level of patient satisfaction.

This study contributes to the existing body of knowledge on service quality and patient satisfaction within healthcare, with a specific focus on the hemodialysis unit at Rumah Sakit Haji Jakarta. It addresses a gap in the literature by measuring the effect of responsiveness on patient satisfaction, which is a critical factor in the overall patient experience in hemodialysis settings. Hemodialysis patients usually require multiple therapies per week, leading to frequent interactions with healthcare staff, making staff responsiveness a significant determinant of their satisfaction. Responsiveness includes clear communication, caring skills, and the availability of staff to address patient concerns, all of which contribute to a patient's sense of control and involvement in their treatment.

The research aligns with Sustainable Development Goal 3 (SDG 3), which aims to ensure healthy lives and promote well-being for all individuals. By focusing on the responsiveness of healthcare services, the study seeks to improve patient satisfaction, which in turn can lead to better clinical outcomes and greater patient loyalty and commitment to their dialysis sessions. Ultimately, this can contribute to the achievement of SDG 3 by enhancing the quality of healthcare services and promoting the well-being of individuals undergoing hemodialysis treatment.

Emotional support, effective communication, and respect are critical components of responsiveness that directly impact patient satisfaction and health outcomes. This study highlights the importance of integrating responsiveness as one of the different dimensions of service quality, for better healthcare delivery. By focusing on these elements, healthcare providers can facilitate the achievement of Universal Health Coverage (UHC) and improve access to healthcare services as envisioned by Sustainable Development Goal 3 (SDG 3).

Moreover, this research provides actionable insights for healthcare providers to enhance service quality while contributing to the broader goal of improving global health outcomes. The findings suggest that addressing the non-medical aspects of care, such as patient expectations and respect for human dignity, can significantly influence overall patient satisfaction. By incorporating these dimensions into strategic planning, healthcare facilities can better meet the needs of patients and ultimately improve health system performance.

2. Methods

A cross-sectional research design with a quantitative approach was used in this study. The selected research method was used to determine the effect of service quality on patient satisfaction at the hemodialysis unit of Rumah Sakit Haji Jakarta. The study's participants comprised 145 patients at Rumah Sakit Haji Jakarta undergoing hemodialysis. Consecutive sampling was the sampling strategy employed in this study, where all participants who fulfilled the eligibility requirements were included in the research until the necessary number of respondents was reached. The study included a total of 118 respondents.

Primary data was used in this study. The ServQual (Parasuraman et al., 1985) was used by the authors to measure service quality and the KKP-2017 (Imaninda & Azwar, 2016) closed and open questionnaire was utilized to measure patient satisfaction. The dependent variable in this study was patient satisfaction, which had ten items and five aspects (finance, access, technical quality, interpersonal behavior, and physical environment), whereas responsiveness was the independent variable consisting of five items. The questionnaire used a four-point Likert scale to avoid the number of neutral or central tendencies. A Likert scale consisting of 4 points that range from strongly disagree (1) to strongly agree (4), is used for the answer response on this measure.

This study hypothesizes that responsiveness significantly influences patient satisfaction among individuals undergoing hemodialysis. Therefore, when healthcare providers are responsive, patients feel more valued, understood, and cared for, leading to higher satisfaction levels with their overall treatment experience. The Medical Faculty of UIN Syarif Hidayatullah Jakarta's Research Ethics Commission granted the study ethical permission with the number code No. b-073/f12/kepk/tl.00/11/2022: B-073/F12/KEPK/TL.00/11/2022.

Using the SPSS software, simple linear regression analysis was employed as the technique of data analysis in this study. This research uses SPSS 26. Testing of the prerequisite analysis is done to see if the developed regression model is a useful forecasting tool. The classic assumption tests carried out are normality, heteroscedasticity, multicollinearity, and linearity tests. The normality test evaluates if a dataset follows a normal distribution. The heteroscedasticity test checks for constant variance of errors across all levels of independent variables in a regression model. The multicollinearity test assesses high intercorrelation among independent variables in a regression model. The linearity test verifies a linear relationship between independent and dependent variables, which is crucial for the accuracy of many statistical tests (James et al., 2023).

3. Results and Discussion

Descriptive Analysis

Table 1. The Frequency and Distribution Table of Patient Satisfaction

No.	Patient Satisfaction Items	Strongly Agree n (%)	Agree n (%)	Disagree n (%)	Strongly Disagree n (%)
Interpersonal					
1.	I feel that the nurses treat all patients with the same treatment.	55 (46.6%)	61 (51.7%)	2 (1.7%)	0 (0%)
2.	I had a short wait to be discharged from the hospital because the administrative staff was efficient.	44 (37%)	58 (49.1%)	12 (10.5%)	4 (3.4%)
Technical Quality					
3.	The way the nurse communicated my health condition did not make me anxious.	45 (38.1%)	61 (51.8%)	9 (7.6%)	3 (2.5%)
4.	The doctor explained in detail the purpose of the health tests I underwent.	48 (40.7%)	62 (52.5%)	6 (5.1%)	2 (1.7%)
Access					
5.	I registered and received confirmation about how long I would wait.	41 (34.7%)	55 (46.6%)	18 (15.3%)	4 (3.4%)

No.	Patient Satisfaction Items	Strongly Agree n (%)	Agree n (%)	Disagree n (%)	Strongly Disagree n (%)
6.	I feel very comfortable expressing my health complaints to the doctor.	64 (54.2%)	51 (43.2%)	2 (1.7%)	1 (0.9%)
Financial Aspect					
7.	I found it very easy to handle the financial administration at this hospital.	44 (37.3%)	59 (50%)	11 (9.3%)	4 (3.4%)
8.	Given the service I received, I feel that this hospital's care cost is very affordable.	30 (25.4%)	55 (46.6%)	32 (27.1%)	1 (0.9%)
Physical Environment					
9.	I could easily find my way to other rooms because of the clear signage in this hospital.	39 (33%)	50 (42.4%)	17 (14.4%)	12 (10.2%)
10.	The waiting area of this hospital is very comfortable for me.	51 (43.2%)	59 (50%)	8 (6.8%)	0 (0%)

According to the data shown in Table 1, the hospital is seen favorably in several important categories. The majority of respondents (98.3%) agree or strongly agree that nurses treat all patients equally, that nurses' explanations of their health conditions did not cause them to feel apprehensive, and that doctors thoroughly explain the aim of medical tests (93.2%). Additionally, 97.4% of patients said they felt comfortable discussing their health issues with the doctor. This speaks positively of the hospital staff's technical and interpersonal abilities. On the other hand, patient satisfaction seems to be lower in some areas. 28% of respondents disagree or strongly disagree that the hospital's care costs are very affordable, and 13.9% of respondents said they had to wait a short time to be released. While most patients could easily find their way around the hospital (75.4%), a notable portion found the signage unclear (24.6%). These areas represent opportunities for improvement in terms of financial transparency, discharge efficiency, and wayfinding.

Table 2. Descriptive Analysis of Patient Satisfaction

	Average	Total	Median	Mode	Max	Min	Standard Deviation	Variance
Interpersonal Behaviour	3,33	785	3	3	4	1	0,66	0,44
Technical Quality	3,29	776	3	3	4	1	0,68	0,46
Access	3,32	783	3	3	4	1	0,72	0,52
Finance	3,09	729	3	3	4	1	0,76	0,58
Physical Environment	3,17	749	3	3	4	1	0,81	0,66

Table 2 view that, with a mean score of 3.33 and a standard deviation of 0.66, the interpersonal conduct component had a total score of 785. This component received the highest overall score, indicating strong performance in interpersonal interactions. The technical quality component yielded a mean score of 3.29 and a standard deviation of 3.29, totaling 776. Access also scored well, suggesting that patients feel they have good access to services or resources. The mean and standard deviation of the third dimension, access, were 3.32 and 0.72, respectively, resulting in a total score of 783. This component reflects a solid level of technical quality, though slightly lower than interpersonal conduct and access. The financial dimension yielded a mean score of 3.09 and a standard deviation of 0.76, totaling 729. This component had the lowest mean score, suggesting that financial aspects may need improvement. With a mean score of 3.17 and a total score of 749, the physical environment component was the last to be evaluated. At 0.81, this factor has the greatest standard deviation value. With the highest variability, the physical environment indicates mixed perceptions among respondents.

The scores for all components vary between a highest of 4 and a lowest of 1, with both the median and mode consistently at 3 for each dimension. The similar mean scores imply that, although interpersonal conduct and access show strengths, there are opportunities for enhancement, especially in the financial aspect and physical environment. The standard deviations indicate differing levels of agreement among respondents, particularly regarding the physical environment, where opinions are notably diverse. In summary, while interpersonal conduct and access are strong points, attention should be directed towards enhancing financial aspects and improving the physical environment to achieve a more balanced evaluation across all components.

Table 3. The Frequency and Distribution Table of Responsiveness

No.	Responsiveness Items	Strongly Agree n (%)	Agree n (%)	Disagree n (%)	Strongly Disagree n (%)
1.	Patient waiting time to receive service is less than 60 minutes.	49 (41.5%)	50 (42.4%)	18 (15.2%)	1 (0.9%)
2.	Medical staff are willing and responsive in addressing patient complaints	77 (65.2%)	40 (33.9%)	1 (0.9%)	0 (0%)
3.	The administrative staff provided satisfactory answers when I had difficulty understanding the procedure.	54 (45.8%)	59 (50%)	5 (4.2%)	0 (0%)
4.	The healthcare providers perform actions quickly and accurately	62 (52.5%)	55 (46.6%)	1 (0.9%)	0 (0%)
5.	Patient registration is done quickly and accurately.	58 (49%)	53 (45%)	6 (5.1%)	1 (0.9%)

Table 3 provides information regarding various aspects of healthcare service responsiveness. A significant majority of respondents generally agree or strongly agree with the positive statements about the responsiveness of medical staff, administrative staff, healthcare providers, and patient registration processes. Specifically, a large percentage of respondents feel that medical staff are willing and responsive in addressing complaints. Similarly, most patients find that administrative staff provide satisfactory answers, healthcare providers act quickly and accurately, and patient registration is handled efficiently.

However, there is a notable exception regarding patient waiting times. While a substantial portion of respondents agree (42.4%) or strongly agree (41.5%) that the patient waiting time to receive service is less than 60 minutes, a considerable percentage disagree (15.2%) with this statement. This suggests that waiting times may be an area where improvements could be made to enhance patient satisfaction. The consistently low percentages of "strongly disagree" responses across all items indicate that extreme dissatisfaction is rare, but addressing the waiting time issue could further improve the overall perception of responsiveness.

Table 4. Descriptive Analysis of Responsiveness

	Average	Total	Median	Mode	Max	Min	Standard Deviation	Variance
Responsiveness	3,45	2035	4	4	4	1	0,61	0,37

A total score of 2035 was obtained for responsiveness, with a mean rating of 3.45, a standard deviation of 0.61, and a variance of 0.37. This indicates a generally positive perception of responsiveness, as the average rating leans towards the higher end of the scale. Furthermore, the low standard deviation and variance suggest that the individual ratings were consistently clustered around the mean, implying a uniform experience or perception of responsiveness among the respondents of this study.

Classic Assumption Test

Table 5. Normality Test Result

	N	Kolmogorov-Smirnov Z	Asymp. Sig. (2-tailed)
X	118	1.122	0.161

The responsiveness variable's p-value of 0.161 in Table 5 suggests that the distribution is normal because the p-value is greater than 0.05. In statistical terms, a p-value greater than 0.05 implies that there is insufficient evidence to reject the null hypothesis, which posits that the data follows a normal distribution. Therefore, we can conclude that the responsiveness variable is normally distributed.

Table 6. Linearity Test Result

	N		Sig.
Y*X	118	Linearity deviation	0,140

The linearity test results, as presented in Table 6, indicate that there is no statistically significant linear relationship between variable X and variable Y. This conclusion is based on the significance value of 0.140 for variable X, which exceeds the common threshold of 0.05. Therefore, the result suggests that the relationship between variables X and Y is not linear within the context of this test. It means that the change in one variable is not associated with a constant change in the other. A non-linear relationship signifies that the variables are related, but not in a simple, linear fashion. In graphical terms, plotting the two variables on a scatterplot will not result in a straight line, but rather a curve or some other pattern.

Table 7. Heteroscedasticity Test Result

	Sig.
X	0,114

Based on the results of the performed analysis, it can be seen that the significance value of the investigated X variable is greater than 0.05, i.e. 0.114, which indicates that there are no symptoms of heteroscedasticity. This supports the validity of the regression model and ensures that the results are not biased or distorted due to unequal error variances.

Table 8. Simple Linear Regression Test Result

Hypothesis Testing	Result				Information
	t-statistics	Significance	Correlation	Determination	Hypothesis
The effect of responsiveness (X) on patient satisfaction (Y)	12,725	0,000	0,763	58,3%	Ha accepted

As shown in Table 8, patient satisfaction is significantly positively impacted by the responsiveness component. The correlation test result between the two comes back as 0.763, indicating a significant link. The test to determine patient satisfaction's relationship with responsiveness resulted in 58.3%. This indicates that the responsiveness variables account for 58.3% of the variation in patient satisfaction. It was found that the significance value was 0.000, less than 0.05. Thus, it may be said that the patient satisfaction variable (Y) is influenced by the responsiveness variable (X). In the table, the t-value of 10.089 is more than the critical t-value of 1.980. Thus, it can be said that the patient satisfaction variable (Y) is greatly influenced by the responsiveness variable (X).

The results of the regression analysis indicate a significant positive relationship between the "responsiveness" and "patient satisfaction" variables. Thus, the greater the value of responsiveness, the

more satisfied patients are at the hemodialysis unit of Rumah Sakit Haji Jakarta. This finding aligns with the study findings by [Mahmud \(2022\)](#), which shows that responsiveness had an effect on patient satisfaction at Lamadukelleng Hospital in 2017. Moreover, research at the Ebony Region General Hospital in Nigeria has also shown that responsiveness influences patient satisfaction ([Umoke et al., 2020](#)).

In this study, the aspect of service quality related to responsiveness encompasses several key factors. These include patients waiting less than 60 minutes for service, medical staff demonstrating a willingness to quickly address patient complaints, administrative staff providing satisfactory explanations when patients have difficulty understanding procedures, medical staff taking swift and appropriate actions, and patient registration being completed quickly and accurately. The findings indicate that patient satisfaction is significantly and positively influenced by the quality of responsiveness in the hospital. Therefore, it can be concluded that improved responsiveness in hospitals leads to higher levels of patient satisfaction.

The findings align with the objectives of Sustainable Development Goal 3 (SDG 3), which aims to ensure healthy lives and promote well-being for all. This connection can be explored through several key aspects. First, the study highlights that greater responsiveness in healthcare settings such as timely service, attentive medical staff, and efficient administrative processes directly correlates with higher patient satisfaction. This aligns with SDG 3's emphasis on improving health systems to provide quality care. Satisfied patients are more likely to adhere to treatment protocols, share relevant health information, and engage in preventive health measures, enhancing public health outcomes. Moreover, factors such as reduced waiting times and proactive complaint management lead to improved patient experiences, which is essential for achieving SDG 3's targets of universal health coverage and access to quality health services.

In the context of patients undergoing hemodialysis, reducing waiting times and managing complaints proactively are essential for improving satisfaction and building trust. For hemodialysis patients, who often endure long-term and complex treatment regimens, minimizing waiting times helps alleviate anxiety and convey respect for their care experience. Positive patient experiences are also linked to better adherence to treatment regimens, which is crucial for hemodialysis patients' health and well-being. By prioritizing responsiveness, healthcare facilities can enhance service delivery and contribute to healthier outcomes. The relationship between responsiveness and patient satisfaction also suggests broader implications for health outcomes. Increased patient satisfaction promotes better health-seeking behaviors, such as regular check-ups and adherence to medical advice, which is vital for addressing non-communicable diseases (NCDs) that significantly impact global mortality and relate to SDG 3.

Furthermore, the study's findings underscore the importance of equitable access to responsive healthcare services. Ensuring that all patients receive timely and effective care, regardless of their background, is essential for reducing disparities in health outcomes, which is a core principle of SDG 3. In conclusion, the positive relationship between responsiveness and patient satisfaction not only highlights the significance of service quality in healthcare. It also demonstrates how these factors contribute to achieving the broader objectives of SDG 3. Enhancing responsiveness in healthcare settings leads to improved patient experiences, better health outcomes, and progress toward universal health coverage, thus fostering a healthier society overall.

Conclusion

The results of this research shown above demonstrate a significant and positive relationship between patient satisfaction and responsiveness. To increase patient satisfaction, hospitals are advised to pay attention to their responsiveness. When healthcare practitioners execute responsiveness optimally, patient satisfaction can be maintained. Hospitals can reflect on the study's results as a guide for evaluation and continuous improvement aimed at enhancing patient satisfaction.

These findings focus on ensuring healthy lives and promoting well-being which aligns with Sustainable Development Goal 3. By enhancing responsiveness in healthcare settings, hospitals could contribute to achieving universal health coverage, not only improving patient satisfaction. It is crucial to have an emphasis on emotional support, effective communication, and respect to be able to maintain health outcomes and positive patient experiences during their stay in the hospital. Furthermore, this

research encourages future studies to explore other variables regarding health that can further enhance service quality which globally supports the goal of improving health systems.

Limitations

Due to the research focusing on hemodialysis patients, the results of this study may not widely represent the patient population within healthcare facilities. In future research, including a larger and more diverse sample will earn a more comprehensive understanding of patient satisfaction across various medical contexts. Including research samples who require additional care as a sample such as patients with heart conditions, cancer, pediatric patients or patients with surgical needs could provide unique and valuable insights in this topic area. Expanding the scope of future research will deepen the understanding of service quality and its effects on patients with various demographics. This broader approach will help improve patient care across diverse healthcare settings.

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