



THE IMPACT OF RELIABILITY ON PATIENT SATISFACTION IN THE UNIT OF HEMODIALYSIS AT HAJJ HOSPITAL JAKARTA

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Abstract

Healthcare services quality in the modern era has become a central concern for both public and private healthcare sectors. Healthcare services are evaluated based on several key dimensions including tangibility, responsiveness, reliability, assurance, and empathy. Among these dimensions, reliability plays a crucial role in ensuring that healthcare services are delivered accurately and consistently. This study intends to investigate the impact of reliability on patient satisfaction among patient satisfaction in the unit of hemodialysis at Hajj Hospital Jakarta. It is hypothesized that service reliability has a positive impact on the level of hemodialysis patient satisfaction. The study used a cross-sectional study design and a quantitative research method. All patients undergoing hemodialysis at Hajj Hospital Jakarta were included in the target population. A consecutive sampling technique was used to carry out the sampling procedure, resulting 118 participants in total. Data collection was carried out through a structured questionnaire over a one-month period. The collected data were analyzed utilizing SPSS 26 software to perform simple linear regression. The results of this study show that the impact of reliability on hemodialysis patient satisfaction at Hajj Hospital Jakarta is statistically significant and positive.

Keywords: *reliability, patient satisfaction, hemodialysis, hospital management.*

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INTRODUCTION

Hemodialysis is a kidney replacement therapy for individuals with CKD (Chronic Kidney Disease) (Sun, 2024). In this condition, there is a decrease in the glomerular filtration rate (GFR) with a GFR below 60 milliliters per minute/1.73 meters. Hemodialysis in CKD patients is important to prolong and maintain kidney function. Therefore, patients with CKD need therapy to prevent complications and even death (Dept. Kesehatan RI, 2008). The results of the 2018 basic health research show that 3.8 out of every 1000 people (0.38% population) in Indonesia have chronic kidney disease. Additionally, around 60% must undergo dialysis (Andita et al., 2024; Riset Kesehatan Dasar Kementrian Kesehatan, 2018). Hemodialysis is carried out in the long term, requiring patient perseverance and the role of people around them to carry out routine (Dept. Kesehatan RI, 2008).

The quality of healthcare services has long been a significant concern for both private entities and individual providers of public healthcare worldwide. According to Senić & Marinković (2013), the integrity and competitiveness of a country's healthcare system are assessed based on the quality of services it delivers. Parasuraman et al. (1985) define service quality as the gap between customer expectations and their perceptions of the service after it has been delivered. When customer perceptions exceed their expectations, the level of customer satisfaction increases. This theory is applied in this study in a hospital setting to evaluate patient satisfaction. Kotler & Keller (2022) state that in a consumer-oriented healthcare system, where healthcare services are commodified and driven by patient demand, patients should be the primary evaluators of service quality (tangibility, responsiveness, reliability, assurance, and empathy) (Al Hayek et al., 2021). Therefore, to enhance service quality, healthcare providers must identify the key dimensions of healthcare service quality and prioritize those aspects that patients perceive as most important (Darzi et al., 2023).

One aspect of the health sector is the quality of health services that can be measured by several indicators, one of which is patient satisfaction (Asamrew et al., 2020). One of the key elements that determines a healthcare facility's performance is patient satisfaction (Seran et al., 2024). Patient satisfaction measures how satisfied patients are with the healthcare they receive from their providers (Sulistiyowati et al., 2024). Patients will be satisfied when the services they receive meet or exceed their expectations. Conversely, dissatisfaction will arise when the outcomes do not meet patients' expectations (Rahmadani et al., 2021). Patient satisfaction becomes a primary concern in delivering healthcare services to enhance the quality and effectiveness of care.

Diverse financial mechanisms, health

policies, the organization of the nation's health system, and other comparable factors all have an impact on how different healthcare providers measure and assess patient satisfaction in different nations (Gavurova et al., 2021). On the other hand, a lot of factors related to patient satisfaction can be measured using the PSQ-18 (Hayes et al., 2015; Le et al., 2019; Wagner et al., 2018). PSQ-18 or Patient Satisfaction Questionnaire which was developed by Grogan, Conner, Norman, Willits, and Porter in 2009 has 5 factors to measure which are doctors, nurses, access, appointments, and facilities (Sinuraya et al., 2017). To better align the measurements with services in Indonesia, a modified version of the PSQ-18, known as the KKP-17, was developed by Imaninda & Azwar (2016). KKP-17 assesses patient experiences in hospitals through five key aspects. Interpersonal behavior examines how doctors, nurses, and hospital staff interact with patients, focusing on empathy, attentiveness, and respect. Technical quality and professionalism measure the competence of healthcare providers, including their accuracy in diagnosis, clarity in explanations, and adherence to medical standards. Accessibility and convenience evaluate the ease of accessing healthcare services, covering appointment scheduling, waiting times, and overall hospital efficiency (Ala & Chen, 2022). Financial aspects assess patient perceptions of medical costs, fairness in pricing, ease of payment processes, and clarity regarding insurance coverage. Lastly, the physical environment looks at the hospital's cleanliness, comfort, availability of essential facilities, and ease of navigation. Together, these five dimensions provide a comprehensive understanding of patient satisfaction and highlight areas for improvement in healthcare services (Imaninda & Azwar, 2016).

Reliability is one of the dimension variables of service quality. It is the hospital's ability to provide services as promised accurately and dependably (Das & Brindha, 2022). The reliability aspect includes accuracy in giving explanations on using certain tools, the ability to serve based on what is promised to patients, implementing easy service procedures and providing education regarding health. The author hypothesizes that patient satisfaction can be influenced positively and significantly by the reliability aspect. This means that higher patient satisfaction can be achieved if the services provided by the hospital are more reliable.

This study aims to examine the impact of reliability on hemodialysis patient satisfaction. Data collection was done in the hemodialysis unit of Hajj Hospital Jakarta, one of the islamic hospitals in Indonesia. The hospital's vision is to become the

leading Islamic teaching hospital with international standards by 2026 (Hidayat et al., 2024). In line with this vision, the present study could serve as a reference for Hajj Hospital

Jakarta to assess and improve service quality in order to enhance patient satisfaction, particularly among hemodialysis patients. Furthermore, this research may also broaden the readers' understanding of the various dimensions of patient satisfaction and service quality.

The results of other studies that support this study, such as Silitonga's (2022) study with respondents of patients undergoing hemodialysis at Datu Beru Takengon Regional Hospital, stated that the results of the bivariate analysis of his study showed an influence of reliability on hemodialysis patient satisfaction (Silitonga et al., 2022). Additionally, a study by Setianingsih & Susanti (2021) demonstrated a strong positive and significant impact on patient satisfaction in Hospital "S". Meanwhile, another study conducted by Adhikarsa (2020) on patients in the hemodialysis unit at Tugurejo District Hospital, Semarang, stated that the reliability dimension was not related to patient satisfaction.

METHODS

The study used a cross-sectional study design and a quantitative research method. The dependent and independent variables are collected at the same time or period, meaning that each subject is observed only once and can be measured according to their condition at a specific point in time. Cross sectional research is used to describe the data or variables and characteristics being tested. The chosen research method will be used by the author to determine the impact of physical evidence on the satisfaction of hemodialysis patients at Haji Hospital in Jakarta.

The research was conducted at Haji Hospital Jakarta, located at East Jakarta City of Indonesia. Data collection took place from November 2022 to December 2022. This study's population consists of 145 hemodialysis patients at Haji Hospital Jakarta. In this study, the sample taken includes 118 hemodialysis patients at Haji Hospital Jakarta. This study's inclusion criteria are hemodialysis patients who have experienced services at Haji Hospital Jakarta and are willing to be respondents. Consecutive sampling is used in this research as the sampling technique.

Satisfaction of hemodialysis patients at Haji Hospital Jakarta is an engagement variable in this research while the independent variable is reliability. In this research, the data used are primary data. Data were collected using research instruments in the form of questionnaires designed in closed-ended and open-ended formats. In the closed-ended format, respondents select options based on the provided statements. The format used for closed-ended questions is a Likert scale, allowing respondents to choose options that represent scores on the scale. Scores are determined using numerical values from one to four, assessed as strongly disagree, disagree, agree, and strongly agree. On the other hand,

open-ended statements provide respondents with the opportunity to share and express their opinions freely without options regarding suggestions for improving service quality at Hajj Hospital Jakarta.

To measure individual satisfaction, an instrument from Imaninda and Azwar (2016) was used, which is a modified version of the PSQ-18 translated into Indonesian and published in the UGM Psychology Journal as KKP-17. This instrument consists of 5 dimensions and 10 items. To measure reliability, the ServQual (Service Quality) instrument adopted from Parasuraman A., Zeithaml V., and Berry L. (1985) was utilized. This instrument consists of 2 statement items related to reliability aspects. In this study, simple linear regression analysis will be used as the data analysis technique with assistance from SPSS version 26 software.

RESULTS AND DISCUSSION

Descriptive Analysis of Research Variables

Table 1. Reliability Variable Descriptive Analysis

	Total	Average	Min	Max	Mode	Median	Variance	Standard Deviation
Reliability	821	3.48	1	4	4	4	0.36	0.60

The reliability obtained a mean score of 3.48 with a total score of 812, as well as SD 0.60 and 0.36 as the variance value.

Table 2. Patient Satisfaction Variable Descriptive Analysis

	Total	Average	Min	Max	Mode	Median	Variance	Standard Deviation
Technical Quality	776	3.29	1	4	3	3	0.68	0.46
Physical Environment	749	3.17	1	4	3	3	0.66	0.81
Financial Factors	729	3.09	1	4	3	3	0.58	0.76
Interpersonal Behavior	785	3.33	1	4	3	3	0.44	0.66
Access	783	3.32	1	4	3	3	0.52	0.72

Based on Table 2, interpersonal behavior obtained the highest overall score of 785, with an average of 3.33 and a standard deviation of 0.66. Meanwhile, the technical quality component obtained a total score of 776, with an average of 3.29 and a standard deviation of 0.29.

The accessibility component recorded a total score of 783 with an average of 3.32 and a standard deviation of 0.72. Meanwhile, the financial aspect obtained a total score of 729 with an average of 3.09 and a standard deviation of 0.76. Likewise, the physical environment, as the last component, obtained a total score of 749 with an average of 3.17 and the highest standard deviation of 0.81.

Moreover, an analysis of the maximum and minimum scores across all five aspects indicates that each received a maximum score of 4 and a minimum score of 1. Additionally, both the median and mode for all aspects consistently yielded a value of 3.

Table 3. Normality Test

	N	Kolmogorov-Smirnov Z	Asymp. Sig. (2-tailed)
X	118	1.122	0.361

Table 3 shows that the p-value of the physical evidence variable is 0.361, indicating a normal distribution because the p-value > 0.05.

Table 4. Linearity Test

Y*X	Linearity Deviation	Sig.
		0.060

Variable X (reliability) and variable Y (patient satisfaction) are known to have a linear connection based on the linearity test findings displayed in Table 4, which provided a significance value of 0.060, which is greater than 0.05.

Table 5. Heteroscedasticity Test

X	Sig.
	0.890

According to the analysis findings, the variable X under study has a significance value of 0.890, which is higher than 0.05. This suggests that heteroscedasticity is not present.

Table 6. Simple Linear Regression Test

Hypothesis Testing	Result			Description	
	Determination	Correlation	t statistics	Significance	Hypothesis
The Effect of Reliability (X) on Patient Satisfaction (Y)	28.8%	0.537	6.853	0.000	H _a accepted

With a correlation test result of 0.537, which indicates a strong association between the two, Table 6 indicates that the reliability variable significantly and positively affects patient satisfaction. 28.8% is the outcome of the reliability and patient satisfaction test.

A significant result of 0.000 < 0.05 suggests that the reliability variable (X) has an impact on patient satisfaction (Y). This influence is further supported by the calculated t value of 6.853, which exceeds the critical t value of 1.980.

The results of other studies that support this study, such as Silitonga's (2022) study with respondents of patients undergoing hemodialysis at Datu Beru Takengon Regional Hospital, stated that the results of the bivariate analysis of his study showed an influence of reliability on hemodialysis patient satisfaction ($\alpha = 0.00 < 0.05$). Additionally, a study by Setianingsih & Susanti (2021) demonstrated a strong positive and significant impact on patient satisfaction in Hospital "S" ($\alpha = 0.021 < 0.05$). Meanwhile, another study conducted by Adhikarsa (2020) on patients in the hemodialysis unit at Tugurejo

District Hospital, Semarang, stated that the reliability dimension was not related to patient satisfaction ($\alpha = 0.095 > 0.05$).

CONCLUSION

Reliability (X) has a favorable and considerable impact on patient satisfaction (Y), according to the data analysis results and the discussion that was given. The study's findings suggest that one of the key elements that hospitals should consider in their attempts to improve patient happiness is their capacity to supply physical amenities. Patient satisfaction may also be increased by improving healthcare service providers' performance in this area. The study's conclusions can be used as a guide for hospitals to carry out assessments or ongoing improvement initiatives meant to raise patient satisfaction by determining the hospital's performance levels, especially with regard to the factors covered.

The author recognizes that this study has certain limitations, which may stem from both internal and external factors. Notably, the scope of the research is confined to a single hospital in Jakarta, with a limited range of variables examined in connection to patient satisfaction. Despite these limitations, the results are expected to provide useful insights and guidance for healthcare providers in improving patient satisfaction quality.

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