



The Influence of Service Quality on Satisfaction in Shaping Patient Loyalty Herlina Kasih Hospital Sorong

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ABSTRACT

This study aims to analyze the effect of service quality on patient satisfaction and its implications for loyalty at Herlina Kasih Hospital, a semi-urban health facility facing increasing competition. Service quality was examined comprehensively through the five SERVQUAL dimensions: tangibles, reliability, responsiveness, assurance, and empathy. A quantitative research approach was applied using purposive sampling, with 116 patients who had visited the hospital more than four times and were aged 16 years or older. Data were collected through structured questionnaires and analyzed using path analysis after passing classical assumption tests to ensure validity and reliability. The results show that all SERVQUAL dimensions significantly influence patient satisfaction, with empathy emerging as the most dominant factor. Furthermore, service quality has both direct and indirect effects on patient loyalty, where satisfaction acts as a significant mediating variable. This finding indicates that loyalty is not merely shaped by perceptions of service but is strongly determined by the level of patient satisfaction. The study concludes that improving hospital services requires a holistic, patient-centered approach that integrates personal interaction and technological innovation. By strengthening service quality across all dimensions, hospitals can enhance patient experiences, build long-term loyalty, and create a sustainable competitive advantage in the healthcare sector.

INTRODUCTION

Patient satisfaction is a key indicator of successful healthcare services and an important factor in building (Berhane and Enquesselassie, 2016) (Addo *et al.*, 2020). Amidst increasing competition between hospitals, particularly in the era of information transparency and increasing public awareness of health rights, hospitals are required to not only provide adequate medical services but also pay attention to the psychological and emotional dimensions of patients (Bhati, Deogade and Kanyal, 2023). The urgency of this research lies in the effort to find a service strategy that can increase patient satisfaction and loyalty, especially in semi-urban hospitals such as Herlina Kasih Hospital which face competitive challenges but have limited resources. An interesting phenomenon to observe is the increasing number of available healthcare facilities, both in the form of private and government hospitals, which requires each healthcare institution to compete healthily in providing the best services (Ferreira *et al.*, 2023). Based on data from a 2023 national patient satisfaction survey (Yuliani *et al.*, 2024), it was found that approximately 35% of patients switched hospitals because they felt the service they received was inadequate. This indicates a close relationship between service quality and patient satisfaction and loyalty.

Several previous studies have highlighted the relationship between service quality, satisfaction, and loyalty, but gaps remain. (Nembhard *et al.*, 2023) found that the dimensions of empathy and assurance were most influential in hospitals with limited resources. (Guidi and Traversa, 2021) demonstrated the importance of personal attention (empathy) but did not comprehensively examine other dimensions. (Ferreira *et al.*, 2023)

emphasized that satisfaction does not always guarantee loyalty if there are better service alternatives, necessitating a more comprehensive approach. (Alibrandi *et al.*, 2023) emphasized the role of responsiveness in patient satisfaction, but the study did not consider the digitalization of services. Meanwhile, (Septyarani, 2023) demonstrated the mediating role of satisfaction on loyalty through trust, but the research context was in a metropolitan hospital. These various studies demonstrate that research is still predominantly focused on large hospitals, focusing on one or two SERVQUAL dimensions, and has not yet integrated digitalization into semi-urban hospital services.

This article utilizes the SERVQUAL theoretical framework (Parasuraman, Zeithaml, & Berry, 1985), which encompasses five main dimensions: tangibles, reliability, responsiveness, assurance, and empathy. Furthermore, this research draws on the theory of the relationship between service quality, satisfaction, and loyalty (Oliver, 1997; Parasuraman *et al.*, 1988), which explains that satisfaction acts as an important mediator in building patient loyalty. This theoretical integration allows for a more holistic analysis of how service quality can directly and indirectly influence loyalty.

At Herlina Kasih Hospital, issues related to patient loyalty have emerged in recent years. Internal hospital data shows a 15% decrease in repeat patient visits in 2022 compared to the previous year. This decline is believed to be related to several patient complaints, such as slow response from medical staff, unclear procedural information, and a lack of friendliness from non-medical staff. If these issues are not addressed promptly, they

could potentially impact the hospital's reputation and the sustainability of its operations.

Based on this background, the research questions are formulated as follows:

1. How does each dimension of SERVQUAL (tangibles, reliability, responsiveness, assurance, empathy) influence patient satisfaction at Herlina Kasih Hospital?
2. How does patient satisfaction influence patient loyalty?
3. How does overall service quality influence patient loyalty, both directly and indirectly through satisfaction?

Research Issues

The main problem in this study is how service quality at Herlina Kasih Hospital affects patient satisfaction and the extent to which satisfaction can form patient loyalty. Service quality in hospitals not only includes technical aspects such as medical expertise and completeness of facilities, but also includes emotional and psychological dimensions such as friendliness, attention, and empathy of medical and non-medical staff. Therefore, it is important to understand how each dimension of service quality can influence patients' perceptions of the hospital.

This phenomenon is even more relevant when considering the results of previous studies that show that patient loyalty does not only depend on satisfaction alone, but also on other factors such as trust and commitment to the hospital. For example, research by (Najmuddin and Tan, 2021) revealed that even though patients are satisfied with the services provided, they can still move to other hospitals if they find alternatives that are considered better. This suggests the need for a more comprehensive approach to managing patient relationships (Oinas-kukkonen, Räsänen and Hummastenniemi, 2008)

Research Novelty

This research offers novelty in three main aspects:

In contrast to previous studies that tend to focus on one or two dimensions of service quality, this study adopts a holistic approach that includes all dimensions of service quality according to the SERVQUAL model (tangibles, reliability, responsiveness, assurance, and empathy). This approach is expected to provide a more complete picture of the factors that influence patient satisfaction and loyalty.

Most studies on service quality and patient loyalty are conducted in large hospitals in metropolitan cities. However, this study focuses on Herlina Kasih Hospital, which is located in a semi-urban area, thus revealing dynamics that may be different compared to hospitals in other locations. It also contributes to a more inclusive literature on healthcare in Indonesia.

This study also considers the role of technology in improving service quality, such as the use of online registration applications, digital-based queuing systems, and telemedicine services. These aspects have rarely been discussed in previous studies, but are increasingly relevant in the era of healthcare digitization.

This research is expected to contribute both theoretically and practically. Theoretically, this study can enrich the understanding of the relationship between service quality, satisfaction, and patient loyalty in the context of semi-urban hospitals. Meanwhile, practically, the results of this study can be a reference for the management of Herlina Kasih Hospital to design a more effective and sustainable service quality improvement strategy. Thus, patient loyalty can be maintained

and the hospital can maintain its position as the first choice of the community.

In the healthcare industry, patient satisfaction is a key indicator of service success and an important determinant of loyalty. However, many studies on service quality in hospitals tend to focus only on one or two dimensions of the SERVQUAL model or are concentrated in large metropolitan hospitals. This leaves a gap in understanding how a holistic approach to service quality shapes patient satisfaction and loyalty in semi-urban healthcare institutions. Moreover, limited attention has been given to the role of digital health services—such as online registration, queuing systems, and telemedicine—in influencing patient experience.

Herlina Kasih Hospital, located in a semi-urban area, is experiencing a decline in patient loyalty despite increasing competition and rising patient expectations. This context provides a timely setting to examine the comprehensive influence of service quality on satisfaction and loyalty.

This study contributes to the literature by: (1) analyzing all five SERVQUAL dimensions simultaneously, (2) focusing on a semi-urban hospital setting that has rarely been explored, and (3) integrating the emerging role of service digitization in shaping patient experiences. These contributions offer both theoretical enrichment and practical guidance for hospital management in strengthening patient loyalty.

Overall, this research seeks to answer the urgent need to improve the quality of health services in Indonesia, especially at Herlina Kasih Hospital. By digging deeper into the relationship between service quality, satisfaction, and patient loyalty, it is hoped that this research can provide new insights that are beneficial to the world of health, both academically and practically.

Theoretical Study

The relationship between service quality, patient satisfaction and loyalty has become an important topic in health service management studies in various countries. A number of global studies emphasize that good health service quality is the main foundation for the formation of patient satisfaction, which ultimately has an impact on loyalty to health institutions (Guspianto, Hubaybah and Ningsih, 2022) (Liu *et al.*, 2021) (Fatimah *et al.*, 2022)

1. Service Quality as a Predictor of Patient Satisfaction

In a global context, the SERVQUAL model developed by (Parasuraman, Zeithaml and Berry, 1985) is the most widely used framework for assessing service quality. This model consists of five dimensions: tangibles, reliability, responsiveness, assurance, and empathy.

Some important studies:

(Ahmed, Arif and Tarique, 2017) in Bangladesh found that empathy and assurance dimensions have the most influence on patient satisfaction, especially in hospitals with limited resources.

(Noorossana *et al.*, 2021) in Irania confirmed that responsiveness and interpersonal quality are significant determinants of patient satisfaction, given the importance of prompt and clear communication in medical services.

The implication is that human interaction and professionalism of medical personnel are key to forming positive

perceptions of hospital services (Okronipa, Aboagye-darko and Nyame, 2023) (Bhardwaj, 2022)

2. Patient Satisfaction as a Mediator of Loyalty

Patient satisfaction is not only an indicator of service success, but also acts as a mediator between service quality and loyalty. Several international studies highlight that patients who are satisfied with the service will be more likely to make repeat visits, give recommendations to others and show tolerance for minor deficiencies in subsequent services (Wulan, Adji and Nasir, 2025) (Rane, Achari and Choudhary, 2023).

Studies by (Khotib, Suprpto and Indasah, 2024) show that patient satisfaction contributes to long-term patient retention, especially in clinics and outpatient services. Meanwhile, (Ferreira *et al.*, 2023) confirmed that medical service quality has a direct and indirect impact on patient loyalty through satisfaction as a mediator (Rosali, Margaretha and Christian, 2025)

3. Patient Loyalty and Institutional Reputation

Patient loyalty in the world of health services not only has an impact on the financial sustainability of hospitals, but also on the reputation of health institutions in the eyes of the public (Ubery and Ernawaty, 2024). Studies by (Upe *et al.*, 2024) and (Hariyanti *et al.*, 2024) state that loyal patients become advocates for hospitals, spreading positive experiences through word of mouth, which in the digital age can have a wide impact.

(Nguyen, Tran and Nguyen, 2021) examined private hospitals in Vietnam and found that patient loyalty is strongly influenced by perceived service quality, which includes speed of service and modern facilities, but also warm interpersonal relationships between patients and staff (Veranita *et al.*, 2025).

4. Contextual and Cultural Roles

Several studies emphasize that the relationship between quality, satisfaction, and loyalty is not always uniform across countries. Service culture, patient expectations, and level of technology engagement vary across countries.

For example:

(Javed and Ilyas, 2018) in Pakistan shows that the influence of the 'empathy' dimension is much greater than in Western countries, due to the high expectations of patients for personal attention from doctors (Prawasari *et al.*, 2024).

In developed countries, access to health technologies (telemedicine, e-health) is now starting to be part of the quality dimensions that patients consider, as revealed by (Alshurideh *et al.*, 2021) and (da Fonseca *et al.*, 2021).

This study aims to analyzing the effect of each dimension of service quality consisting of physical evidence (tangibles), reliability, responsiveness, assurance, and empathy on patient satisfaction at Herlina Kasih Hospital, analyzing the effect of patient satisfaction on patient loyalty and analyzing the effect of overall service quality on patient loyalty either directly or indirectly through patient satisfaction as a mediating variable.

Uses the SERVQUAL model which has been adapted to the context of hospital services in semi-urban Indonesia. The hypotheses proposed in this study are as follows:

H1: Physical evidence (X1) has a positive and significant effect on patient satisfaction (Z).

H2: Reliability (X2) has a positive and significant effect on patient satisfaction (Z).

H3: Responsiveness (X3) has a positive and significant effect on patient satisfaction (Z).

H4: Guarantee (X4) has a positive and significant effect on patient satisfaction (Z).

H5 : Empathy (X5) has a positive and significant effect on patient satisfaction (Z).

H6 : Service Quality (X) has a positive and significant effect on Patient satisfaction (Z).

H7 : Service Quality (X) has a positive and significant effect on Patient Loyalty (Y).

H8 : Patient Satisfaction (Z) has a positive and significant effect on Patient Loyalty (Y).

METHOD

This study used a quantitative approach to analyze the influence of service quality on patient satisfaction and its impact on loyalty at Herlina Kasih Hospital. The quantitative method was chosen because this study focuses on objectively measuring the relationship between variables through numerical data and statistical analysis.

1. Data Type

The data used consisted of primary and secondary data. Primary data was obtained through the distribution of structured questionnaires to patients, while secondary data was obtained from internal hospital documents, literature, and relevant previous research findings.

2. Sample and Interviewees

This study used purposive sampling technique, which is (Etikan, Musa and Alkassim, 2016) a non-probability sampling method based on certain considerations or criteria relevant to the research objectives (Makwana *et al.*, 2023), obtained as many as 116 samples. The inclusion criteria for respondents in this study are: respondents are patients who have obtained health services at Herlina Kasih Hospital more than 4 times and patients aged 16 years and over. The frequency of visits more than four times was chosen to ensure that respondents have sufficient experience in receiving hospital services, so that they can provide a valid and reliable assessment of the quality of services provided while the age limit of ≥16 years was chosen because at that age individuals generally have sufficient cognitive and emotional maturity to understand and assess health services independently, without dependence on companions.

Thus, this criterion is set so that the data obtained is more representative, relevant, and quality in evaluating patient perceptions of service quality, satisfaction, and loyalty (Nguyen, Tran and Nguyen, 2021).

3. Research Instrument

The main instrument was a 5-point Likert-scale questionnaire, structured according to the SERVQUAL model (tangibles, reliability, responsiveness, assurance, and empathy). This instrument has been tested for validity and reliability to ensure consistency of results.

4. Data Collection Techniques

Primary data was obtained by directly distributing questionnaires to 116 patients who met the inclusion criteria. Secondary data was obtained from internal hospital reports,

official publications, and academic journals related to service quality, patient satisfaction, and loyalty.

5. Data Analysis

Before conducting the main analysis, classical assumption tests (normality, multicollinearity, and heteroscedasticity) were conducted to ensure the feasibility of the regression model. Next, the data was analyzed using path analysis to examine the direct and indirect effects of service quality on patient satisfaction and loyalty. The results were then interpreted by linking them to theory and previous research findings to draw comprehensive conclusions.

RESULTS AND DISCUSSION

Descriptive Analysis

Descriptive analysis was conducted on five dimensions of service quality based on the SERVQUAL model, namely Physical Evidence (X1), Reliability (X2), Responsiveness (X3), Assurance (X4), and Empathy (X5), Patient Satisfaction (Z) and Patient Loyalty (Y). This discussion is prepared based on the results of SPSS 2024 data processing and the theoretical framework of the SERVQUAL model (Parasuraman et al., 1988).

The following are the results of the frequency distribution of respondents for each dimension

Physical Evidence (X1)

The physical evidence dimension shows an average score of 4.12. Respondents gave the highest response to the strategic hospital location indicator (average 4.20). Other items, namely attractive building interiors and neat employee appearance, have an average score of 4.14 and 4.02 respectively.

No.	Indicator	Average
1	Attractive interior building	4.14
2	Strategic location	4.2
3	Employee appearance is neat	4.02
	Average Evidence Dimension	4.12

Reliability (X2)

The reliability dimension has an average score of 4.10. The indicator of not being busy in serving patients occupies the highest position (4.23), followed by ease of making payments (4.07), and service according to procedures (3.99).

No.	Indicator	Average
1	Not busy in serving	4.23
2	Ease of making payments	4.07
3	Service according to procedure	3.99
	Average Reliability Dimension	4.10

Responsiveness (X3)

Respondents gave an average score of 4.03 in the responsiveness dimension. The indicator of employees quickly providing services recorded the highest score of 4.18.

No.	Indicator	Average
1	Quick to provide services	4.18
2	Responsive to patient complaints	4.04
3	Quick to solve problems	3.88

	Average Power Dimension	4.03
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Assurance (X4)

The assurance dimension shows the highest average value of 4.35. Respondents most approved of the indicator of very friendly employees (4.44), followed by safe product knowledge (4.38) and extensive staff knowledge (4.24).

No.	Indicator	Average
1	Friendly service	4.44
2	Product is safe for consumption	4.38
3	Extensive staff knowledge	4.24
	Average of Assurance Dimension	4.35

Empathy (X5)

The empathy dimension obtained an overall average of 4.17. The highest indicator is that employees do not differentiate between patients (4.37), followed by personal attention (4.16) and understanding patient needs (3.99).

No.	Indicator	Average
1	Personalized attention	4.16
2	Understand patient needs	3.99
3	Does not differentiate between patients	4.37
	Average Empathy Dimension	4.17

Patient Satisfaction (Z)

The patient satisfaction dimension obtained an overall average of 4.40. The highest indicator is that satisfy with service (4.40).

No.	Indicator	Average
1	Satisfaction with service	4.40
2	Satisfaction with facilities	4.41
	Average Satisfaction Dimension	4.40

Patient Loyalty (Y)

The patient loyalty dimension obtained an overall average of 4.29, with the highest indicator is that repeat visits (4.36).

No.	Indicator	Average
1	Repeat visits	4.36
2	Recommendation to others	4.22
	Average Loyalty Dimension	4.29

The research results can be described in the form of graphs and images as shown in Figure 1 and Table 1.

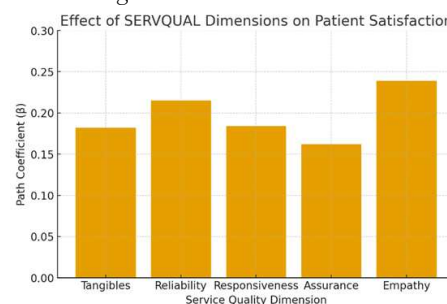


Figure 1. Path Coefficient The Influence of SERVQUAL Dimensions on Patient Satisfaction

Tabel 1. The Influence of SERVQUAL Dimensions on Patient Satisfaction

Dimension	Average Score	Path Coefficient (β)	Significance (p-value)
Tangibles	4.12	0.182	0.036
Reliability	4.10	0.215	0.010
Responsiveness	4.03	0.184	0.026
Assurance	4.35	0.162	0.029
Empathy	4.17	0.239	0.006

The table and diagram show that empathy ($\beta = 0.239$, $p = 0.006$) is the most dominant dimension influencing patient satisfaction, followed by reliability. While assurance, despite having the highest average score (4.35), has a relatively smaller direct impact on satisfaction.

Discussion

Descriptive analysis was conducted on seven main variables, namely five dimensions of service quality based on the SERVQUAL model, as well as two secondary variables: Patient Satisfaction (Z) and Patient Loyalty (Y). The discussion is conducted by linking the quantitative findings with theory and practical implications in the hospital environment.

Physical Evidence (X1)

The tangibles dimension received an average score of 4.12. This indicates that patients rated physical aspects such as strategic location, attractive hospital interiors, and the neat appearance of staff quite favorably. This finding aligns with the SERVQUAL theory (Parasuraman, Zeithaml and Berry, 1985), which states that physical aspects are the initial impression that influences patient perceptions. These results confirm the research by (Javed and Ilyas, 2018) in Pakistan, which found that physical facilities influenced patients' initial perceptions of service quality. However, unlike the study by (Nguyen, Tran and Nguyen, 2021) in Vietnam, which emphasized facility modernization as a dominant factor, in the semi-urban context of Herlina Kasih Hospital, physical facilities played an important role but were not the primary determinant of satisfaction.

Reliability (X2)

The reliability dimension received an average score of 4.10 with a path coefficient of 0.215 ($p = 0.010$). The highest indicator was the availability of staff who were "not busy serving patients" (4.23). This indicates that accuracy, consistency, and clear service procedures significantly influence satisfaction. These results support the research of (Noorossana *et al.*, 2021) in Iran, which stated that adherence to procedures improves perceived quality. These findings also align with (Alibrandi *et al.*, 2023), who emphasized the role of speed in metropolitan hospital services. However, at Herlina Kasih Hospital, reliability was more prominent than the digitalization of services, indicating a difference in context between semi-urban and metropolitan areas.

Responsiveness (X3)

The responsiveness dimension received an average score of 4.03 with a path coefficient of 0.184 ($p = 0.026$). Patients considered staff

speed in responding to complaints and resolving problems to be an important factor. This finding is consistent with the research of (Ferreira *et al.*, 2023), which confirmed that a quick response to patient needs increases satisfaction. However, research by (Septyarani, 2023) showed that responsiveness does not always guarantee loyalty without patient trust and emotional involvement. Thus, the results of this study confirm that responsiveness is important but not sufficient to build loyalty without the support of other factors.

Assurance (X4)

The assurance dimension had the highest average score (4.35), but its path coefficient was relatively smaller (0.162; $p = 0.029$). This means that although patients value friendliness, staff knowledge, and guaranteed service security, these factors are not as strong as empathy in shaping satisfaction. These results are consistent with (Liu *et al.*, 2021), who found that a sense of security builds trust but does not necessarily drive loyalty if better service alternatives are available. In other words, while staff professionalism does build reputation, patient emotional satisfaction remains a key determinant of loyalty.

Empathy (X5)

The empathy dimension received an average score of 4.17 and was the dominant factor with the highest path coefficient (0.239; $p = 0.006$). The indicator "does not discriminate against patients" received the highest score (4.37), indicating that fairness and personalized attention are highly valued by patients. These findings support research by (Nembhard *et al.*, 2023) and (Guidi and Traversa, 2021), which emphasizes that empathy is key to building patient satisfaction. Even in hospitals with limited resources, (Ahmed, Arif and Tarique, 2017) also found that empathy was more important than other dimensions. Thus, this study reinforces the literature that personal interactions remain key despite the continued advancement of service technology.

Patient Satisfaction (Z)

Patient satisfaction showed an average score of 4.40, with a significant influence from all SERVQUAL dimensions. This finding supports (Okronipa, Aboagye-darko and Nyame, 2023) who stated that satisfaction is the primary mechanism linking service quality to loyalty. (Khotib, Suprpto and Indasah, 2024) study also confirmed that satisfaction contributes to long-term patient retention. Therefore, the results of this study reinforce the view that satisfaction is an essential mediating variable.

Patient Loyalty (Y) and Satisfaction Mediation

The average patient loyalty score was 4.29, with the "return visit" indicator achieving the highest score (4.36). Path analysis showed that service quality had a direct effect on loyalty ($\beta = 0.548$), but the effect was stronger when mediated by satisfaction ($\beta = 0.310$). These results align with the findings of (Rosali, Margaretha and Christian, 2025) and (Wulan, Adjil and Nasir, 2025), which showed that loyalty is not formed solely by service quality, but is strongly influenced by the level of patient satisfaction. These findings also confirm the findings of (Ferreira *et al.*, 2023), who found that satisfaction plays a significant role as a mediating variable in building loyalty.

Contribution of the Semi-Urban Context

This study offers a distinct contribution compared to previous research, which was largely conducted in metropolitan hospitals (Septyarani, 2023) (Najmuddin and Tan, 2021).

CONCLUSION

1. This study confirms that all five SERVQUAL dimensions tangibles, reliability, responsiveness, assurance, and empathy—significantly influence patient satisfaction at Herlina Kasih Hospital. Among them, empathy emerged as the most dominant factor. Furthermore, patient satisfaction was found to mediate the relationship between service quality and patient loyalty, indicating that loyalty is strongly determined by the degree of satisfaction experienced by patients.
2. Theoretically, this research strengthens the understanding that patient satisfaction is a central mechanism linking service quality to loyalty, especially in semi-urban healthcare contexts that have received limited scholarly attention. Practically, the findings highlight the importance of a holistic, patient-centered service strategy. Hospital management should prioritize personal interaction, fairness in service delivery, and the integration of digital technologies such as online registration and telemedicine to enhance patient experience and build sustainable loyalty.
3. Further studies should expand the scope by involving multiple hospitals in both urban and rural areas to enable broader generalization. Future research may also include external variables such as price fairness, trust, or hospital reputation to capture a more comprehensive picture of patient loyalty. Additionally, longitudinal studies

This study has several limitations. First, it was conducted in one semi-urban hospital, so the results cannot be generalized to hospitals in other areas or metropolitan areas. Second, the variables studied were limited to the SERVQUAL dimension, satisfaction, and loyalty without considering external factors such as price, hospital image, or trust. Third, the study was cross-sectional and therefore unable to capture the long-term dynamics of patient loyalty. Future research is recommended to: (1) expand the study to various hospitals in urban and rural areas to obtain contextual comparisons, (2) include additional variables such as trust, hospital reputation, and price fairness to enrich the model, and (3) use a longitudinal design to examine changes in patient loyalty over the long term. Thus, future research will be able to provide both theoretical contributions and more comprehensive practical recommendations for healthcare management.

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