

The Effect of Total Quality Management on Patient Loyalty, with Patient Satisfaction as a Moderating Variable, at Poso Regional General Hospital

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ABSTRACT

The increasing number of hospitals requires healthcare providers to continuously improve service quality to meet patient expectations and satisfaction. However, at Poso Hospital, various complaints are still being reported, particularly regarding service speed, fairness, and cost transparency, leading to dissatisfaction and a decrease in patient visits. This situation indicates the need for evaluation and implementation of Total Quality Management (TQM) as a quality management approach. To determine the influence of Perceived Service Quality and Total Quality Management on patient loyalty with Patient Satisfaction as a moderating variable at Poso Regional Hospital. A quantitative cross-sectional design was applied with 442 respondents selected through random sampling. Data were summarized using univariate analysis to describe participant characteristics and response distributions, followed by path analysis for further examination. Total Quality Management have a significant effect on Patient Satisfaction and Perceived Service Quality and Total Quality Management have a significant effect on patient loyalty. The most effective model in this study is the partial mediation model, where TQM influence patient loyalty both directly and through patient satisfaction.

INTRODUCTION

Patient loyalty is a key strategic indicator for the sustainability of healthcare organizations, as it is linked to the intention to return, word-of-mouth recommendations, and the institution's reputation. In the context of public hospitals, loyalty also reflects public trust in the quality of care and the accountability of healthcare delivery. Total Quality Management (TQM) emphasizes continuous improvement, customer focus, employee engagement, performance measurement, and process control to deliver consistent services. In hospital settings, the implementation of TQM is expected to enhance the quality of clinical and non-clinical processes, reduce service variability, and improve the patient experience. However, patient loyalty is influenced not only by internal process improvements but also by patients' perceptions and evaluations of the services received, as reflected in patient satisfaction. Patient satisfaction has the potential to act as a moderating variable because it can amplify the effect of TQM on loyalty: when patients are satisfied, the quality improvements resulting from TQM are more likely to translate into commitment and loyal behavior. The general objective of this study is to analyze the effect of Total Quality Management on patient loyalty, with patient satisfaction serving as a moderating variable, at Poso Regional General Hospital. Specific objectives: To describe the characteristics of respondents (outpatients and inpatients) at Poso Regional General Hospital; to analyze the effect of TQM on patient loyalty; and to analyze the moderating role of patient satisfaction in the relationship between TQM and patient loyalty.

Total Quality Management (TQM) is considered an effective and practical approach and is widely implemented by hospitals to provide quality services that can achieve long-term success through patient satisfaction. TQM is a management method aimed at optimizing an organization's value through continuous innovation in its workforce, products, services, production methods, and environment (Setiawan, 2021). TQM offers several benefits, including: maximizing product design so that the resulting products meet standards, preventing deviations at every stage of production, and building positive relationships with patients. Additionally, positive workforce behavior can optimize performance and yield optimal quality for the organization (Helena et al., 2021).

However, in Poso Regency, particularly at the Poso Regional General Hospital (RSUD), public services—especially in the health sector—still do not fully meet community expectations. This is evident from the ongoing complaints raised by the community regarding the delivery of health services. There is no clear timeline for resolving these issues, which gives the impression that healthcare providers have not made sufficient efforts to address this dissatisfaction. Therefore, an evaluation of the performance of healthcare units in Poso Regency is necessary, with a focus on measuring patient satisfaction as the primary indicator. This evaluation is crucial for assessing the extent to which implementing TQM can improve the quality of healthcare services and meet public expectations.

Statement of the Problem

Based on the background information provided, the research question is formulated as follows:

1. What is the direct effect of Total Quality Management on patient loyalty at Poso Regional General Hospital?
2. What is the direct effect of Total Quality Management on patient satisfaction at Poso Regional General Hospital?
3. What is the direct effect of Patient Satisfaction on Loyalty at Poso Regional General Hospital?
4. What is the indirect effect of Total Quality Management on patient loyalty through Patient Satisfaction as a moderating variable at Poso Regional General Hospital?
5. What is the most effective pathway to Patient Loyalty at Poso Regional General Hospital?

Research Objectives

1. General Objectives

The general objective of this study is to determine the effect of Total Quality Management on patient loyalty, with patient satisfaction serving as a moderating variable, in the

2. Specific Objectives

This study has specific research objectives derived from the background and research questions presented below:

1. To analyze the extent of the direct effect of Total Quality Management on patient loyalty at Poso Regional General Hospital.
2. To analyze the extent of the direct effect of Total Quality Management on patient satisfaction at Poso Regional General Hospital.
3. To analyze the extent of the direct effect of patient satisfaction on patient loyalty at Poso Regional General Hospital.
4. To analyze the extent of the indirect effect of Total Quality Management on patient loyalty through Patient Satisfaction as a moderating variable at Poso Regional General Hospital.
5. To analyze the most effective pathway to Patient Loyalty at Poso Regional General Hospital.

LITERATURE REVIEW

Patient Loyalty

Patient loyalty is a key concept in healthcare management that reflects a hospital's success in retaining patients and building long-term relationships. From a service marketing perspective, loyalty essentially refers to a customer's commitment to continue using a product or service consistently in the future. Philip Kotler and Kevin Lane Keller (2016) define loyalty as a deep-seated commitment held by customers to consistently repurchase or renew a product or service in the future, despite situational influences and marketing efforts from competitors that could potentially lead to behavioral changes. This concept serves as the foundation for understanding patient loyalty in the

context of healthcare, where patients not only act as service users but also as stakeholders with high expectations regarding the quality of care provided.

In the context of healthcare, patient loyalty has a more complex dimension than general customer loyalty. Jill Griffin (2005) states that customer loyalty is repeat purchasing behavior accompanied by a positive attitude toward the service provider. This view is relevant to the concept of patient loyalty, in which patients not only return to use healthcare services but also have trust and a positive attitude toward the hospital. This is reinforced by Oliver Richard L. (1999), who argues that loyalty is a strong commitment to consistently repurchase or reuse a product or service in the future. In the healthcare context, this commitment is often influenced by service experiences, the quality of interactions with medical staff, and the outcomes of the care received by patients.

Patient Loyalty Indicators

Patient loyalty can be measured using the following indicators (Nguyen, 2021):

1. The desire to return: Satisfied patients tend to return to the same healthcare facility for future medical needs, demonstrating their trust and satisfaction with the care they received
2. The desire to recommend: Satisfied patients will recommend the service to others, such as friends or family, which reflects a high level of satisfaction and trust in the quality of the service
3. No desire to use other products or services: Loyal patients resist offers from other healthcare providers, choosing to remain loyal despite the availability of alternatives.

Patient Satisfaction

Patient satisfaction is one of the key concepts in healthcare management used to assess the quality of services provided by healthcare facilities. Generally, patient satisfaction refers to the degree of satisfaction or dissatisfaction that arises after a patient compares their expectations prior to receiving care with the experience they have after receiving that care. This concept aligns with the theory of customer satisfaction in service marketing proposed by Philip Kotler and Kevin Lane Keller (2016), which states that satisfaction is the result of a comparison between perceived performance and customer expectations. If service performance exceeds expectations, customers will be satisfied; conversely, if performance falls short of expectations, dissatisfaction will arise.

Patient satisfaction can be measured using the following indicators:

1. Medical Environment: The physical environment and atmosphere at healthcare facilities significantly influence patients' perceptions of service quality. Factors such as cleanliness, the comfort of waiting areas, privacy, and the availability of support facilities play a key role in creating a positive experience for patients.
2. Ancillary Service: Support services include a range of additional services that support patient diagnosis and care, such as laboratory, radiology, physical therapy, and pharmacy services. The availability, efficiency, and quality of these support services significantly contribute to patient

satisfaction, as they influence the smoothness and speed of the care process.

3. **Medical Service:** Healthcare services refer to the quality of interactions between patients and healthcare providers, including doctors and nurses. Factors such as professional competence, effective communication, empathy, responsiveness to patients' needs, and clarity of information regarding diagnosis and treatment are key determinants of patient satisfaction.
4. **Price:** Patients' perceptions of the fairness of the costs of the healthcare services they receive influence their satisfaction. Prices that are considered commensurate with the quality of care, cost transparency, and the availability of information regarding payment options help build patient trust and satisfaction with healthcare facilities.
5. **Total Quality Management:** Total Quality Management (TQM) is a management approach that focuses on comprehensive and continuous quality improvement within an organization. This concept evolved from the ideas of quality management pioneers such as W. Edwards Deming, Joseph M. Juran, and Philip B. Crosby, who emphasized the importance of quality as a key factor in organizational success. In general, TQM can be understood as a management philosophy that integrates all organizational functions to achieve the highest quality through continuous improvement and a focus on customer satisfaction.

According to W. Edwards Deming (1986), TQM is a management approach that emphasizes continuous improvement in every organizational process and the use of data and analysis to improve quality systematically. Deming also asserts that quality is the responsibility of management and must involve all members of the organization in quality improvement efforts. This aligns with the concept of the System of Profound Knowledge, which emphasizes an understanding of systems, variation, knowledge, and psychology in quality management.

Total Quality Management Indicators

Total Quality Management can be measured using the following indicators (Zaid et al., 2020):

1. **Process:** This indicator emphasizes the importance of understanding, managing, and improving an organization's internal processes to achieve consistent, high-quality results.
2. **Interaction:** This indicator focuses on the relationships and communication among various elements within an organization, including between departments, teams, and individuals. Effective interaction ensures that information flows smoothly, collaboration is enhanced, and communication barriers are minimized.
3. **Environment:** This indicator refers to the physical and non-physical conditions in which work is performed. A clean, safe, and ergonomic work environment can boost employee productivity and morale.

The Relationship Between TQM, Patient Satisfaction, and Patient Loyalty

The Relationship Between TQM, Patient Satisfaction, and Patient Loyalty Total Quality Management also has a direct impact on patient loyalty. As a management approach that emphasizes continuous improvement and the involvement of all organizational elements, TQM can systematically improve service quality. Research by Aladwan et al. (2021) shows that the implementation of TQM has a direct effect on patient loyalty through improved service efficiency and the quality of interactions between medical staff and patients. In other words, when a hospital is able to consistently apply TQM principles, service quality will improve and directly influence patients' decisions to continue using those services.

Research Hypothesis

- a. Null Hypothesis (H₀)
 1. Total Quality Management has a direct effect on patient loyalty at Poso Regional General Hospital.
 2. Patient satisfaction has a direct effect on patient loyalty at Poso Regional General Hospital.
 3. Total Quality Management has an indirect effect on patient loyalty through patient satisfaction as a moderating variable at Poso Regional General Hospital.
- b. Alternative Hypothesis (H_a)
 1. There is no direct effect of Total Quality Management on patient loyalty at Poso Regional General Hospital.
 2. There is no direct effect of patient satisfaction on patient loyalty at Poso Regional General Hospital.
 3. There is no indirect effect of Total Quality Management on patient loyalty through patient satisfaction as a moderating variable at Poso Regional General Hospital.

METHODOLOGY

This study employed a quantitative approach using a cross-sectional study design. The study was conducted at Poso Regional General Hospital during the period of June–August 2025. The population consisted of outpatients and inpatients who received care at Poso Regional General Hospital during the study period. The sample size was 422 respondents. Data were collected using a structured questionnaire based on a Likert scale (1 = strongly disagree to 4 = strongly agree). The dimensions of TQM were operationalized through patient focus, continuous improvement, employee engagement, leadership, performance measurement, and process management. Patient loyalty was measured through intention to revisit, recommendations, and preference for choosing Poso Regional General Hospital. Patient satisfaction was measured through an overall evaluation of the service experience, the alignment of expectations, and satisfaction with service interactions.

Inclusion Criteria:

- Willing to participate as a respondent.
- Able to communicate effectively.

- The patient can read.
- The patient is 17 years of age or older.
- The patient is hospitalized for at least 3 days.
- The patient has at least one outpatient visit.

Exclusion Criteria:

- Unable to communicate effectively
- The patient is illiterate.

Data Analysis

The analysis was conducted using both descriptive and inferential methods. Respondent characteristics are presented in tables and visualizations (graphs/diagrams). The test of the relationship between TQM and loyalty was performed using linear regression (or SEM-PLS as required by the journal). The moderating effect of patient satisfaction was tested through an interaction model (TQM × satisfaction) after mean-centering the predictor variables. The significance level was set at $p < 0.05$.

RESULT AND DISCUSSION

In general, TQM scores, patient satisfaction, and patient loyalty fell into the moderate-to-high range (on a scale of 1–5). Inferential analysis indicates that TQM has a positive effect on patient loyalty. Additionally, the interaction between TQM and patient satisfaction is significant, indicating that patient satisfaction moderates (enhances) the effect of TQM on patient loyalty.

Description of Respondent Characteristics

The demographic characteristics of the respondents in this study include gender, age, highest level of education, occupation, monthly income, frequency of visits to the Poso Regional General Hospital, types of services previously used, and method of payment, as shown in the results below:

Table 1. Distribution of Respondent Characteristics at Poso Regional General Hospital in 2025

No	Characteristics	Research Sample	
		n	%
Gender			
1	Male	222	50.2
2	Female	220	49.8
Total		442	100
Age			
1	18 - 25 Year	76	17.2
2	26 - 35 Year	99	22.4
3	36 - 45 Year	88	19.9
4	46 - 55 Year	100	22.6
5	> 55 Year	79	17.9
Total		442	100
Highest Level of Education			
1	SD	64	14.5
2	SMP	60	13.6

No	Characteristics	Research Sample	
		n	%
3	SMA/SMK	90	20.4
4	Diploma	81	18.3
5	Bachelor's Degree	84	19.0
6	Graduate School	63	14.3
Total		442	100
Jobs			
1	Students	75	17.0
2	State Official	62	14.0
3	Private Officer	63	14.3
4	Self-employed	55	12.4
5	Housewife	62	14.0
6	Retiree	66	14.9
7	Etc	59	13.3
Total		442	100
Monthly Income			
1	< Rp. 1.000.000	71	16.1
2	Rp. 1.000.000 - Rp. 3.000.000	94	21.3
3	Rp. 3.000.001 - Rp. 5.000.000	93	21.0
4	Rp. 5.000.001 - Rp. 10.000.000	89	20.1
5	> Rp. 10.000.000	95	21.5
Total		442	100
Frequency of Visits to Poso Regional General Hospital Over the Past Year			
1	1 Time	100	22.6
2	2 - 3 Time	114	25.8
3	4 - 5 Time	120	27.1
4	> 5 Time	108	24.4
Total		442	100
Types of Services Previously Offered at Poso Regional General Hospital			
1	Inpatient Care	122	27.6
2	Outpatient Care (Clinic)	112	25.3
3	Outpatient Services (Laboratory and Radiology)	98	22.1
4	Outpatient Care (Pharmacy)	110	24.8
Total		442	100
Payment Methods			
1	JKN / BPJS	135	30.5
2	Private Insurance	118	26.7
3	Personal Expenses (General)	115	26.0
4	Certificate of Financial Need (SKTM)	74	16.7
Total		442	100

Source: Primary Data, 2025

Total Quality Management

Total quality management is the management strategy employed by Poso Regional General Hospital to improve service quality through enhancements to processes, interactions, and the environment. This study utilized a questionnaire consisting of 12 statements (4 process statements, 4 interaction statements, and 4 environment statements), with response options on a 1-4 Likert scale ranging from “Strongly Disagree” to “Strongly Agree.”

Table 2. Frequency Distribution of Total Quality Management Dimensions at Poso Regional General Hospital in 2025

No	Dimensions	Alright		Low	
		N	%	N	%
1	Process	275	62.2	167	37.8
2	Interaction	261	59.0	181	41.0
3	Environment	285	64.5	157	35.5
Mean		62.1%			

Source: Primary Data, 2025

Patient Loyalty

Patient loyalty refers to the extent to which patients are likely to continue using a hospital’s services and recommend them to others. This variable is measured using a questionnaire consisting of 12 statements (4 statements regarding the desire to return, 4 statements regarding the desire to recommend, and 4 statements regarding the unwillingness to use other products/services) with response options on a 1-4 Likert scale ranging from Strongly Disagree to Strongly Agree.

Table 3. Frequency Distribution of Patient Loyalty Dimensions at Poso Regional General Hospital in 2025

No	Dimensions	Loyal		Disloyal	
		N	%	N	%
1	The desire to return	377	85.3	65	14.7
2	The desire to recommend	398	90.0	44	10.0
3	Not interested in using other products or services	368	83.3	74	16.7
Mean		78.2%			

Source: Primary Data, 2025

Patient Satisfaction

Patient satisfaction refers to the degree to which patients are satisfied with hospital services based on their expectations and experiences. This variable is measured using a questionnaire consisting of 16 statements (4 regarding the medical environment, 4 regarding ancillary services, 4 regarding medical services, and 4 regarding cost), with response options on a 1-4 Likert scale ranging from “Strongly Disagree” to “Strongly Agree.”

Table 4. Frequency Distribution of Patient Satisfaction Dimensions at Poso Regional General Hospital in 2025

No	Dimension	Satisfied		Not Satisfied	
		N	%	N	%
1	Medical Environment	254	57.5	187	42.3
2	Ancillary Service	279	63.1	162	36.7
3	Medical Service	268	60.6	173	39.1
4	Price	273	61.8	168	38.0
Mean		62.4%			

Source: Primary Data, 2025

Total Quality Management (X2) and Patient Loyalty (Y)

Table 5. Quality Management (X2) and Patient Loyalty (Y)

Total Quality Management (TQM) (X2) * Patient Loyalty (LP) (Y) Crosstabulation					
Count					
		Patient Loyalty (LP) (Y)		Total	Chi Square
		DisLoyal	Loyal		
Total Quality Management (TQM) (X2)	Low	27	119	146	0.002
	Alright	25	271	296	
Total		52	390	442	

Source: Primary Data, 2025

The results of the bivariate analysis using the Chi-Square test indicate that there is a significant relationship between Total Quality Management (TQM) and patient loyalty at Poso Regional General Hospital in 2025. This is evidenced by a significance value of 0.002 ($p < 0.05$), which means that statistically, there is a meaningful relationship between the implementation of quality management and the level of patient loyalty. Thus, it can be concluded that the better the implementation of Total Quality Management, the higher the level of patient loyalty to the hospital.

Based on the results of the cross-tabulation, it can be seen that in the low TQM category, there were 119 loyal respondents and 27 disloyal respondents out of a total of 146 respondents. Meanwhile, in the good TQM category, there were 271 loyal respondents and 25 disloyal respondents out of a total of 296 respondents. These data indicate that the number of loyal patients is higher in the group that rated TQM implementation as good compared to the group that rated it as low. Proportionally, patients who rated TQM as good exhibit a higher tendency toward loyalty, suggesting that the quality of hospital management plays a significant role in shaping patient loyalty.

Theoretically, these findings align with the concept of Total Quality Management proposed by W. Edwards Deming (1986), who argued that continuous improvement in organizational processes enhances service quality and ultimately impacts customer satisfaction and loyalty. Furthermore, Joseph

M. Juran (1998) also emphasizes that quality that is planned, controlled, and continuously improved will generate greater value for customers. In the hospital context, the effective implementation of TQM will enhance service efficiency, the quality of healthcare provider interactions, and the comfort of the service environment – all of which directly influence the patient experience.

These findings are also supported by recent research. A study by Aladwan et al. (2021) shows that the implementation of TQM has a positive and significant impact on patient loyalty through improved service quality and system efficiency. Research by Londa et al. (2024) also found that organizations that consistently implement TQM are able to significantly improve customer satisfaction and loyalty. Furthermore, research by Mahmuda et al. (2025) confirms that TQM is an effective management strategy for improving organizational performance and building long-term relationships with customers.

Patient Satisfaction (Z) and Patient Loyalty (Y)

Table 6. Patient Satisfaction (Z) and Patient Loyalty (Y)

<i>Patient Satisfaction (Z) * Patient Loyalty (LP) (Y) Crosstabulation</i>					
<i>Count</i>					
		Patient Loyalty (LP) (Y)		Total	<i>Chi Square</i>
		DisLoyal	Loyal		
<i>Patient Satisfaction (Z)</i>	Not Satisfied	22	84	106	0.001
	Satisfied	30	306	336	
Total		52	390	442	

Source: Primary Data, 2025

The results of the bivariate analysis using the Chi-Square test indicate that there is a significant relationship between Patient Satisfaction (Z) and Patient Loyalty (Y) at Poso Regional General Hospital in 2025. This is evidenced by a significance value of 0.001 ($p < 0.05$), which means that statistically, there is a significant relationship between the level of patient satisfaction and patient loyalty. Thus, it can be concluded that the higher the level of patient satisfaction, the higher the level of patient loyalty to the hospital.

Based on the results of the cross-tabulation, it is evident that among the group of dissatisfied patients, there were 84 loyal respondents and 22 disloyal respondents out of a total of 106 respondents. Meanwhile, among the group of satisfied patients, there were 306 loyal respondents and 30 disloyal respondents out of a total of 336 respondents. These data indicate that the number of loyal patients is significantly higher in the satisfied group compared to the dissatisfied group. Proportionally, satisfied patients exhibit a higher tendency toward loyalty compared to dissatisfied patients.

Theoretically, these findings align with the concept of customer satisfaction proposed by Philip Kotler and Kevin Lane Keller (2016), who state that customer satisfaction is a key factor influencing future customer behavior, including loyalty. Satisfied customers tend to make repeat purchases, remain loyal, and recommend products or services to others. This is reinforced by

Richard L. Oliver (1999), who explains that satisfaction is the initial stage in the formation of loyalty, where satisfied customers will develop into loyal customers through a process of repeated experience evaluation.

These findings are also supported by various recent studies. A study by Nguyen (2021) shows that patient satisfaction has a positive and significant influence on patient loyalty, with satisfied patients tending to want to return and recommend the service to others. Research by Puspita and Paramata (2024) also found that patient satisfaction is a key determinant of patient loyalty in healthcare services. Additionally, research by Wiogo (2025) indicates that patient satisfaction significantly influences revisit intention, which is one of the indicators of patient loyalty.

Total Quality Management (X2) and Patient Satisfaction (Z)

Table 7. Total Quality Management (X2) and Patient Satisfaction (Z)

Total Quality Management (TQM) (X2) * Patient Satisfaction (Z)		Patient Satisfaction (Z)		Total	Chi Square
		Not Satisfied	Satisfied		
Total Quality Management (TQM) (X2)	Low	66	80	146	0.000
	Alright	40	256	296	
Total		106	336	442	

Source: Primary Data, 2025

The results of the bivariate analysis using the Chi-Square test indicate that there is a significant relationship between Total Quality Management (TQM) and Patient Satisfaction (Z) at Poso Regional General Hospital in 2025. This is evidenced by a significance value of 0.000 ($p < 0.05$), indicating a very strong and statistically significant relationship between the implementation of quality management and patient satisfaction levels. Thus, it can be concluded that the better the implementation of Total Quality Management, the higher the level of patient satisfaction with hospital services.

Based on the results of the cross-tabulation, it is evident that in the low TQM category, there were 80 satisfied respondents and 66 dissatisfied respondents out of a total of 146 respondents. Meanwhile, in the good TQM category, there were 256 satisfied respondents and 40 dissatisfied respondents out of a total of 296 respondents. These data indicate that the number of patients who were satisfied was significantly higher in the group that rated TQM implementation as good compared to the group that rated it as low. Proportionally, patients who rated TQM as good had a higher level of satisfaction compared to patients who rated TQM as low.

Theoretically, these findings align with the concept of Total Quality Management, which emphasizes continuous improvement in every aspect of an organization. W. Edwards Deming (1986) stated that continuous improvement in process quality leads to increased customer satisfaction. Furthermore, Joseph M.

Juran (1998) also asserts that quality that is well-managed through planning, control, and improvement will generate greater value for customers, which ultimately enhances their satisfaction.

In the context of healthcare, the implementation of TQM encompasses various aspects, such as improving service processes, enhancing the quality of interactions between healthcare providers and patients, and maintaining a comfortable and safe healthcare environment. These three aspects directly contribute to the patient experience during care, which forms the foundation of patient satisfaction.

The Direct Effect of Total Quality Management on Patient Loyalty at Poso Regional General Hospital

The results of the study indicate that Total Quality Management (TQM) has a direct and significant effect on patient loyalty at Poso Regional General Hospital. A t-test value of 4.523 with a significance level of 0.000 indicates that the implementation of TQM principles at the hospital is able to increase patients' tendency to remain loyal to the available healthcare services. The TQM implemented at this hospital, which encompasses comprehensive quality improvement across various service dimensions—including managerial, technical, and patient interactions—has successfully enhanced the overall patient experience. When patients experience high-quality service—including efficient administrative processes, quality medical care, and a comfortable hospital environment—they are more likely to remain loyal and return to use the hospital's services. However, although TQM contributes to improved service quality, some previous studies suggest that the direct impact of TQM on patient loyalty can vary and is more complex, depending on other factors that influence the patient experience.

Total Quality Management at Poso Regional General Hospital has been implemented to improve process efficiency, reduce medical errors, and enhance interactions between patients and medical staff. However, according to Mahajan et al. (2023), while the implementation of TQM in the healthcare sector can improve service quality and reduce management costs, there is not always significant evidence that TQM implementation directly increases patient loyalty. This suggests that other factors, such as deeper patient satisfaction and positive interpersonal experiences with medical staff, play a greater role in increasing patient loyalty. Although TQM improves process and service quality, patient loyalty is more influenced by the direct experiences they have at the hospital, which include how they are treated by medical and non-medical staff.

The characteristics of the respondents in this study indicate that the implementation of TQM plays a significant role in enhancing patient loyalty. The majority of respondents gave positive evaluations of TQM at Poso Regional General Hospital, with more than 62% of patients rating the quality of processes and interactions with hospital staff as good. This suggests that while TQM improves the technical aspects of care, patients' direct experiences remain key to shaping their loyalty. For example, 85.3% of patients expressed a desire to use the hospital's services again, and 90% were willing to recommend Poso Regional General Hospital to others. However, a more holistic patient experience—

including how they are treated on a personal level – is a deeper factor in fostering loyalty, rather than merely the management of service quality alone.

Total Quality Management is measured through three main dimensions in this study: Process, Interaction, and Environment. The Process dimension relates to efficient managerial oversight; Interaction measures the quality of interactions between patients and hospital staff; while Environment encompasses the comfort and cleanliness of hospital facilities. All of these dimensions play a role in creating a positive patient experience and enhancing patient loyalty. Data indicates that over 62% of patients rated the quality of hospital services as good, particularly regarding process efficiency (62.2%) and a hospital environment conducive to patient recovery (64.5%). This suggests that the TQM implemented at Poso Regional General Hospital positively contributes to the quality of care received by patients. However, although these dimensions contribute to loyalty, a more comprehensive personal patient experience and good interpersonal relationships with hospital staff appear to be more dominant in shaping patient loyalty.

The findings of this study are consistent with the theory proposed by Zaid et al. (2020), which emphasizes that TQM in healthcare organizations involves continuous improvement of processes, interactions, and the environment. This theory supports the notion that the successful implementation of TQM will enhance service quality, patient satisfaction, and loyalty. Support also comes from previous research. Rumman et al. (2021) demonstrated that TQM has a significant impact on patient satisfaction and loyalty in the Jordanian healthcare sector. Kamaruddin et al. (2021), through a literature review, also confirmed that TQM components, particularly the patient-centered focus, are dominant factors influencing patient satisfaction in hospitals. Meanwhile, Nguyen (2021) found that TQM influences patient loyalty through the mediating role of satisfaction, indicating that the relationship can be either direct or indirect depending on the hospital context.

The underlying assumption of this study is that Total Quality Management has a direct effect on patient loyalty at Poso Regional General Hospital; however, it also acknowledges that the effect of TQM on patient loyalty may be more complex and influenced by other factors such as patient satisfaction, direct experience, and interpersonal relationships between patients and medical staff. In this regard, this study assumes that patient satisfaction acts as a stronger mediator between TQM and patient loyalty, and that other factors such as hospital image and trust in medical staff also play an important role in shaping patient loyalty.

This study shows that Total Quality Management has a significant direct effect on patient loyalty at Poso Regional General Hospital. Effective implementation of TQM improves the overall quality of hospital services, which in turn strengthens patient loyalty. However, these findings are also consistent with previous research indicating that while TQM improves service quality, patient loyalty is more heavily influenced by other factors, such as patient satisfaction, direct experiences, and interpersonal relationships with medical staff. Therefore, to build patient loyalty, hospitals must not only focus on

implementing TQM but also on enhancing the overall patient experience and fostering better interactions between patients and hospital staff.

The Direct Effect of Total Quality Management on Patient Satisfaction at Poso Regional General Hospital

The results of the study indicate that Total Quality Management (TQM) has a direct and significant effect on patient satisfaction at Poso Regional General Hospital. A t-test value of 12.563 with a significance level of 0.000 ($p < 0.05$) indicates that the better the implementation of TQM principles, the higher the level of patient satisfaction. TQM, which involves comprehensive quality improvement across various aspects of hospital services—ranging from managerial processes, administrative procedures, medical care, to interactions with patients—has proven to play a crucial role in creating a better experience for patients, which in turn enhances their satisfaction.

However, it should be noted that although TQM is implemented to improve service quality, existing evidence suggests that its impact on patient satisfaction is not always direct. Research findings vary, indicating that while TQM can improve service quality, its impact on patient satisfaction is not always consistent, and in some cases, there is no direct correlation between the two.

The characteristics of the respondents in this study indicate that the majority of patients gave positive ratings regarding the quality of hospital services related to the implementation of TQM. A total of 62.2% of patients rated the Process dimension as “good,” indicating that patients were satisfied with service processes that were efficient and met standards. However, although the majority of patients gave positive ratings, this relationship does not always directly lead to patient satisfaction, as found by Koomson (2022). Although patients were satisfied with the quality of the process and their interactions with hospital staff, their satisfaction was also influenced by other factors such as comfort, trust in medical personnel, and emotional management during treatment.

Total Quality Management was measured in this study through three main dimensions: Process, Interaction, and Environment. The results indicate that the Process and Interaction dimensions received very positive ratings (62.2% and 59%, respectively), reflecting that patients were satisfied with the efficiency of service processes and their interactions with medical staff. Environment, which encompasses facility comfort and hospital cleanliness, also received a favorable rating (64.5%), indicating that the hospital prioritizes an environment that supports the patient experience.

Previous research provides strong support for these findings, although there is variation in the results indicating a relationship between Total Quality Management and patient satisfaction. Alansori et al. (2021) argue that although the implementation of TQM principles is expected to improve performance and patient satisfaction, in reality, there is no significant positive effect between TQM and patient satisfaction. They found that factors such as organizational culture and technology play a greater role in improving managerial performance, which in turn is associated with patient satisfaction.

The underlying assumption of this study is that Total Quality Management has a direct impact on patient satisfaction at Poso Regional General Hospital; however, it also acknowledges that this impact depends not only on technical aspects of medical care but also on non-technical aspects, such as interactions between patients and medical staff and the quality of the hospital environment. Therefore, this study assumes that although TQM can improve service quality, its direct impact on patient satisfaction cannot be separated from the patient's overall experience, which includes interpersonal relationships and other emotional factors.

This study shows that Total Quality Management has a significant direct effect on patient satisfaction at Poso Regional General Hospital. The application of TQM principles – which encompass Process, Interaction, and Environment – contributes to an improvement in the overall quality of hospital services, which in turn increases patient satisfaction. However, although TQM yields positive results, its impact on patient satisfaction is not always direct, and other variables, such as trust in service providers and interpersonal relationships between patients and medical staff, also play a significant role. Therefore, to ensure optimal patient satisfaction, hospitals need to consider these factors in the implementation of TQM, as well as continue to improve the overall patient experience across various aspects of care.

The Direct Effect of Patient Satisfaction on Patient Loyalty at Poso Regional General Hospital

This study shows that patient satisfaction has a direct and significant effect on patient loyalty at Poso Regional General Hospital. A t-test result of 4.979 with a significance level of 0.000 ($p < 0.05$) proves that the higher the level of patient satisfaction with hospital services, the greater their tendency to remain loyal to Poso Regional General Hospital and recommend it to others. In other words, patient satisfaction serves as the primary driver of patient loyalty at this hospital. Patients who feel that they receive care that meets or exceeds their expectations are more likely to return to the hospital and recommend it to others.

However, although these findings indicate a significant positive relationship between patient satisfaction and patient loyalty, a number of previous studies suggest that this relationship is not always direct or consistent. In many cases, while patient satisfaction has a significant influence on loyalty, there is variation in research findings indicating that patient loyalty can be influenced by factors other than satisfaction itself.

The characteristics of the respondents in this study also provide important insights into the relationship between patient satisfaction and patient loyalty. The majority of patients at Poso Regional General Hospital (more than 62%) rated the hospital's services as "good," and this is reflected in high levels of patient loyalty, with more than 85% of patients expressing a desire to return to the hospital and recommend its services to others. Although the relationship between satisfaction and loyalty shows a significant influence, other factors such as patients' personal experiences and the quality of interpersonal relationships with medical staff also play a role in fostering loyalty.

Patient satisfaction in this study was measured across several key dimensions, including Medical Environment, Ancillary Services, Medical

Services, and Price. The findings indicate that more than 60% of patients gave positive ratings for these dimensions. For example, the Medical Service dimension, which measures the quality of medical care provided by healthcare professionals, received a favorable rating from more than 60% of patients. The Price dimension, which relates to the cost of care received by patients, also received a high score, indicating that patients felt the price they paid was commensurate with the quality of service provided.

The assumption of this study is that patient satisfaction has a direct influence on patient loyalty at Poso Regional General Hospital. However, this study also acknowledges that the relationship between the two is more complex and influenced by various other factors, such as patients' personal experiences, trust in medical staff, and interpersonal relationships. Therefore, while Patient Satisfaction plays a crucial role in enhancing Patient Loyalty, other factors must also be considered to foster sustainable loyalty.

The results of this study indicate that patient satisfaction has a significant direct effect on patient loyalty at Poso Regional General Hospital. Patients who are satisfied with the quality of care provided tend to remain loyal and return to use the hospital's services. However, these findings are also supported by previous research indicating that the relationship between satisfaction and loyalty is not always direct. Other factors, such as patients' personal experiences, trust in medical staff, and interpersonal relationships, play a significant role in determining patient loyalty. Therefore, hospitals need to consider various elements of the patient experience to strengthen overall patient loyalty.

The Indirect Effect of Total Quality Management on Patient Loyalty Through Patient Satisfaction as a Mediating Variable at Poso Regional General Hospital

The results of the mediation analysis indicate that Total Quality Management (TQM) has an indirect effect on patient loyalty through patient satisfaction at Poso Regional General Hospital. A Sobel test value of 4.623 with a significance level of 0.000 ($p < 0.05$) confirms that patient satisfaction plays a significant role as a mediating variable. These findings indicate that although TQM contributes to increased patient satisfaction, its influence on patient loyalty is stronger through the satisfaction resulting from the quality of service provided. Therefore, patient satisfaction functions as a mediator linking TQM with patient loyalty.

The characteristics of the respondents in this study provide further insight into the relationship between TQM, patient satisfaction, and patient loyalty. The majority of patients (over 62%) at Poso Regional General Hospital gave positive ratings for Perceived Service Quality and Patient Satisfaction, with 85.3% expressing a desire to return to the hospital and 90% willing to recommend the hospital to others. This indicates that high levels of Patient Satisfaction directly contribute to Patient Loyalty.

Perceived service quality in this study was measured through dimensions such as medical service, patient admission, overall service, and hospital discharge. All these dimensions reflect the technical and non-technical aspects of hospital services, which play a role in creating positive patient perceptions. Patient Satisfaction, measured through dimensions such as medical environment,

ancillary services, and price, was also recorded as high at Poso Regional General Hospital, indicating that patients are satisfied with the quality of hospital services. Although high service quality plays a role in creating satisfaction, previous research indicates that satisfaction does not always function as a strong mediator in the relationship between TQM and Patient Loyalty. This aligns with the findings of Sutarman et al. (2018), who found that patients' prior experiences and expectations play a greater role in determining their loyalty than mere perceived satisfaction.

These findings align with the theory proposed by Zaid et al. (2020), which emphasizes that TQM improves service quality through process improvements, interactions, and the environment, all of which contribute to patient satisfaction. Liu's (2021) theory also confirms that satisfaction is a key factor linking service quality to patient loyalty. These research results are supported by Rumman et al. (2021), who demonstrated that TQM has a significant effect on patient satisfaction and loyalty, with satisfaction acting as a mediator. Nguyen (2021) also found that TQM does not always have a direct effect on loyalty but rather through patient satisfaction. This differs from the findings of Roy & Ghose (2018) in North Bengal, who did not find a significant increase in satisfaction following the implementation of a quality system, indicating that the effectiveness of TQM is highly dependent on the quality of implementation in each hospital.

The assumption of this study is that TQM has an indirect effect on patient loyalty through patient satisfaction. However, this study also acknowledges that while TQM improves perceived service quality and Patient Satisfaction, the direct influence on patient loyalty does not depend solely on satisfaction itself. Other factors such as trust, commitment to the hospital, and the patient's personal experience also play a significant role in shaping patient loyalty. Therefore, the relationship between TQM, Patient Satisfaction, and Patient Loyalty needs to be understood in a more holistic manner.

The results of this study indicate that Total Quality Management has an indirect effect on patient loyalty at Poso Regional General Hospital through patient satisfaction as a mediating variable. Although TQM plays a crucial role in improving the quality of services received by patients and enhancing patient satisfaction, the relationship between TQM and patient loyalty is more complex. Many other factors, such as trust, commitment, personal experience, and perceptions of the hospital, also play a significant role in shaping patient loyalty. Therefore, hospitals must pay attention to the various factors that influence the patient experience and consider a more holistic approach to improving patient loyalty in the long term.

The Most Appropriate Model for Patient Loyalty at Poso Regional General Hospital

The results of the analysis indicate that the best-fitting path model for assessing patient loyalty at Poso Regional General Hospital is the one that includes Patient Satisfaction as a moderating variable between Perceived Service Quality and Total Quality Management in relation to patient loyalty. This is indicated by the high significance values on the PSQ path to patient satisfaction ($t = 7.192$; $p < 0.05$) and the TQM path to patient satisfaction ($t = 12.563$; $p < 0.05$), as well as the significant influence of patient satisfaction on patient loyalty ($t =$

4.979; $p < 0.05$). Although both exogenous variables also have a direct effect on loyalty, the indirect effect through patient satisfaction provides a stronger contribution in explaining the variation in patient loyalty. Thus, the partial mediation model is declared the most effective and representative model in explaining the formation of patient loyalty at Poso Regional General Hospital.

The path model that positions Patient Satisfaction as a moderating variable between Perceived Service Quality and Total Quality Management regarding patient loyalty was identified as the best-fitting model because it empirically demonstrated the most consistent, significant, and theoretically consistent causal relationships within the theoretical framework of healthcare consumer behavior. The results of this study show that both perceived service quality and total quality management have a strong influence on patient satisfaction, which in turn plays a significant role in shaping patient loyalty. These findings indicate that patients' perceptions of service quality and quality management systems do not directly shape loyalty but are first translated into an experience of satisfaction that is subjectively felt by patients.

Theoretically, these findings are consistent with the Expectancy-Disconfirmation Theory proposed by Oliver (1980, 1997), which states that satisfaction arises when perceived service performance meets or exceeds expectations, and that this satisfaction forms the basis for the development of attitudes and loyal behavior. Furthermore, this model also supports the Service-Profit Chain framework developed by Heskett et al. (1994), which positions service quality as a precursor to satisfaction and satisfaction as the primary determinant of customer loyalty. In the context of Total Quality Management, a systemic approach to continuous improvement, management involvement, and patient-centered care contribute to enhancing service consistency and reliability, which indirectly strengthens loyalty through increased satisfaction (Mosadeghrad, 2014).

The results of this study are also consistent with the findings of Parasuraman, Zeithaml, and Berry (1988), who assert that perceived service quality influences loyalty through satisfaction as a mediating variable. Empirical studies in the healthcare sector by Choi et al. (2004) and Alrubaiee and Alkaa'ida (2011) indicate that patient satisfaction acts as the primary mediator in the relationship between service quality and patient loyalty. Similarly, a study on the implementation of TQM in hospitals by Talib, Rahman, and Qureshi (2011) revealed that the application of TQM principles improves service performance and patient satisfaction, which ultimately leads to increased loyalty.

Thus, the best-fitting path model in this study can be explained by the fact that patient loyalty is a long-term behavioral construct shaped through affective evaluations in the form of satisfaction, rather than solely by perceptions of quality or the quality management system directly. Patient satisfaction functions as a psychological mechanism that bridges the organizational inputs—namely, service quality and TQM—with the behavioral output of patients, namely loyalty. This makes the partial mediation model the strongest theoretical and empirical representation in explaining the formation of patient loyalty at Poso Regional General Hospital.

Limitations of the Study

This study has the following limitations:

1. Some patients have limited proficiency in Indonesian and are more fluent in their local dialect. This resulted in some respondents having difficulty understanding the questionnaire items. In some cases, family members assisted with the questionnaire-completion process, which could potentially introduce interpretive bias. The responses provided may not fully reflect the patients' actual understanding or opinions.
2. During the data collection process, the researcher was sometimes represented by another colleague in this study, making it impossible to explore each question posed to the patients in depth due to time constraints.

CONCLUSIONS AND RECOMMENDATIONS

Based on the research findings, the following conclusions were drawn:

1. Total Quality Management (TQM) has a significant effect on patient satisfaction, with a p-value of 0.000 ($p < 0.05$). The implementation of quality management strategies—including improvements in processes, interactions, and the service environment—has been shown to enhance patient satisfaction more effectively.
2. Total Quality Management (TQM) has a significant effect on patient loyalty, with a p-value of 0.000 ($p < 0.05$). The implementation of total quality management not only improves service quality but also builds patient trust, which ultimately fosters loyalty.
3. Patient satisfaction has a significant effect on patient loyalty, with a p-value of 0.000 ($p < 0.05$). The level of patient satisfaction is a key factor in strengthening loyalty, both in terms of the desire to use the services again and to provide positive recommendations for Poso Regional General Hospital.
4. Total Quality Management has a significant indirect effect on patient loyalty through patient satisfaction as a mediating variable, with a p-value of 0.000 ($p < 0.05$). This means that consistent implementation of TQM will be more effective in building patient loyalty if it can increase patient satisfaction as a mediating factor.
5. The most effective model in this study is the partial mediation model, in which Perceived Service Quality and Total Quality Management influence patient loyalty both directly and through Patient Satisfaction, with all paths showing a p-value of 0.000 ($p < 0.05$). Furthermore, the path from Total Quality Management through Patient Satisfaction to Patient Loyalty is the most effective compared to the other paths, as it has the largest indirect effect in the research model. This indicates that improving patient loyalty at Poso Regional General Hospital will be most effective if the implementation of quality management can enhance patient satisfaction as the primary mediating factor.

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