

Enhancing Patient Loyalty through High-Quality and Actual Value Delivery: The Moderating Influence of Switching Costs in Libyan Private Hospitals

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Abstract

This quantitative study examined the moderating effect of switching costs on the relationship between patient satisfaction and loyalty in private hospitals in Libya. The research objectives shaped the development of research questions addressing key elements of the study. Healthcare Service Quality (HSQ) was assessed using an adapted version of HealthQual, with primary data collected from outpatients at private hospitals in Tripoli, Benghazi, and Misurata. The final sample consisted of 389 respondents. Confirmatory factor analysis (CFA) was performed to validate the measurement model, and hypotheses were tested using multiple regression analysis, hierarchical multiple regression, and Structural Equation Modeling (SEM) through SPSS and SEM software. The results were mixed: two of the three direct relationships were not supported, while one of the two indirect (mediating) relationships was confirmed. The study found a significant moderating effect of switching costs on the link between patient satisfaction and loyalty. This research contributes to the expanding literature on service quality, patient satisfaction, loyalty, and switching costs. It provides valuable insights for healthcare managers, physicians, and administrative staff in Libya's private healthcare sector, supporting better decision-making and strategic planning.

Keywords: Hospital Service Quality Dimensions, Switching Cost, Actual Value Delivery, Patient Satisfaction, Patient Loyalty, Private Hospitals, Libya.

Introduction

Following Libya's conflict, the country's healthcare system has experienced significant changes, particularly with the growing importance of private hospitals amid challenges faced by the public sector (Perroux, 2019). These private institutions have prioritized delivering high-quality services, highlighting their vital role in shaping healthcare experiences and

outcomes for the population. This study investigates the concept of High-Quality Delivery (HQD) within Libya's private healthcare sector and its impact on patient loyalty.

Meeting customer needs and expectations is a critical challenge for service organizations, especially in rapidly changing and highly competitive environments (Shemwell et al., 1998). In healthcare, delivering high-quality services is not just a goal but a fundamental aspect of achieving patient satisfaction and loyalty. Although the relationship between service quality and satisfaction has been extensively studied (Cronin & Taylor, 1992; Parasuraman et al., 1985; Zeithaml et al., 1990), the interplay between service quality, actual value delivered, and patient loyalty remains insufficiently explored, particularly in the context of private hospitals in developing countries like Libya.

Given Libya's socio-economic complexities, providing access to high-quality healthcare services is crucial (Mahmud et al., 2022). Patients increasingly turn to private hospitals for superior care. This study explores the relationship between HQD and patient loyalty, focusing on key factors such as patient satisfaction, actual value delivered, and the moderating role of switching costs. These elements offer a comprehensive framework to understand how service quality influences patient behavior in healthcare.

The study aims to address the following objectives:

1. To examine the relationship between Healthcare Service Quality (HSQ) and patient satisfaction within the private healthcare sector in Libya.
2. To examine the relationship between Healthcare Service Quality (HSQ), encompassing Cost, Environment and Facilities, Service Procedures, Physicians, Nurses, and Administrative Personnel, and patient loyalty within the private healthcare sector in Libya.
3. To examine the relationship between patient satisfaction and patient loyalty within the private healthcare sector in Libya.
4. To examine whether patient satisfaction mediates the relationship between Healthcare Service Quality (HSQ) and patient loyalty within the private healthcare sector in Libya.
5. To examine whether actual value delivery mediates the relationship between Healthcare Service Quality (HSQ) and patient satisfaction within the private healthcare sector in Libya.
6. To examine whether switching costs have a moderating effect on the relationship between patient satisfaction and patient loyalty within the private healthcare sector in Libya.

This study contributes to the ongoing discourse on healthcare management in regions experiencing systemic transitions, with a particular focus on Libya. It addresses a significant research gap by examining the relationship between service quality, actual value delivered, patient satisfaction, and loyalty in private hospitals—an area with limited existing studies. Utilizing an adapted HealthQual instrument and data collected from outpatients in Libya's private hospitals, this research builds upon established theories of service quality and perceived value (Zeithaml, 1988; Eggert & Ulaga, 2002).

The findings aim to offer practical insights for healthcare managers, policymakers, and stakeholders within Libya's healthcare sector. By deepening the understanding of High-Quality Delivery (HQD) and its influence on patient loyalty, this study provides a framework for enhancing healthcare delivery in similar transitional contexts.

Research Questions

1. What is the relationship between HSQ (Cost, environment and Facilities, Service procedures of service, Physicians, Nurses and the Administrative personnel) and patient loyalty in the private healthcare sector in Libya?
2. What is the relationship between HSQ and patient satisfaction of private healthcare sector in Libya?
3. What is the relationship between patient satisfaction and patient loyalty of private healthcare sector in Libya?
4. Does patient satisfaction have a mediating effect on the relationship between HSQ and patient loyalty of private healthcare sector in Libya?
5. Does actual value delivery have a mediating effect on the relationship between HSQ and patient satisfaction of private healthcare sector in Libya?
6. Does switching cost have a moderating effect on the relationship between patient satisfaction and patient loyalty of private healthcare sector in Libya?

Research Hypotheses

H1: There is a significant relationship between hospital service quality and patient loyalty.

H2: There is a significant relationship between hospital service quality and patient satisfaction.

H3: There is a significant relationship between patient satisfaction and patient loyalty.

H4: There is a significant indirect relationship between hospital service quality and patient loyalty with the mediation of patient satisfaction.

H5: There is a significant indirect relationship between hospital service quality and patient satisfaction with the mediation of actual value delivery.

H6: Switching costs moderate the relationship between patient satisfaction and patient loyalty.

Research Motivation

The motivation for this study arises from the need to address critical gaps in the existing literature on healthcare service quality and its impact on patient satisfaction and loyalty. Previous research has largely focused on patient perceptions rather than the actual value delivered, leaving an incomplete understanding of how tangible healthcare outcomes influence patient behaviors. By emphasizing the measurement of actual value delivery, this study seeks to provide a more robust framework for evaluating the relationship between service quality, patient satisfaction, and loyalty.

A key driver for this research is the recognition of patient satisfaction as a pivotal factor in the success of private hospitals in Libya. Satisfied patients are more likely to maintain loyalty, recommend services, and foster positive relationships with healthcare providers. Through an in-depth examination of factors such as service quality, perceived value, and patient experiences, this study aims to offer actionable insights to strengthen patient loyalty and enhance healthcare delivery in a post-conflict context.

Moreover, the study delves into the role of switching costs as a moderating factor in shaping patient behaviors. By addressing this often-overlooked aspect, the research contributes to a richer understanding of the interplay between patient satisfaction, loyalty, and the deterrents associated with changing providers. These insights are not only

academically valuable but also hold significant practical implications, offering healthcare organizations evidence-based strategies to improve service quality, retain patients, and optimize long-term outcomes.

Literature Review

As patient awareness grows, the demand for high-quality healthcare services becomes increasingly prominent, making quality a pivotal factor in hospital selection (Lynch & Schuler, 1990). The link between actual value delivery and patient satisfaction is well-established in existing literature. Amporfro et al. (2021) highlight that prioritizing patient satisfaction during medical encounters and utilizing patient feedback for quality enhancement can significantly improve service delivery and satisfaction outcomes.

In healthcare, patients assess various elements such as the environment and facilities, service procedures, and interactions with healthcare professionals, including physicians, nurses, and administrative staff. These factors play a crucial role in determining patient satisfaction and loyalty. Apriliani et al. (2024) emphasize that factors like facility cleanliness, wait times, staff responsiveness, and trust are integral to patients' evaluations of healthcare service quality.

Actual value delivery is a key driver of patient satisfaction and loyalty in healthcare, encompassing the alignment of services with patients' expectations for efficiency, reliability, and personalized care. Zeithaml (1988) notes that perceived value strongly influences patients' loyalty intentions, particularly in competitive private healthcare markets.

This study aligns with these insights by examining the relationship between Healthcare Service Quality (HSQ), patient satisfaction, and loyalty in Libya's private healthcare sector. By analyzing dimensions such as cost, environment and facilities, service procedures, and staff interactions, this research investigates how actual value delivery influences satisfaction and loyalty, while accounting for the moderating role of switching costs. This approach provides valuable contributions to improving healthcare delivery and strategic planning in Libya's private healthcare sector.

Hospital Service Quality Dimensions (HealthQual)

The hospital service quality framework encompasses several dimensions that collectively define the quality of care and patient experience. Drawing on the HEALTHQUAL model, which adapts insights from established models like Donabedian's (1988) framework and SERVQUAL, six primary dimensions are emphasized:

Cost

Cost is a crucial factor in healthcare quality perception. Patients evaluate the fairness of service costs relative to the value they receive, which significantly influences their satisfaction. Research shows that reasonable and transparent costs enhance patient satisfaction and foster trust in healthcare institutions. For providers, balancing service delivery costs while maintaining quality outcomes is essential (Edwin, 2021).

Facilities and Environment

The physical environment and facilities are vital to patients' perceptions of service quality. Aspects such as cleanliness, aesthetics, noise control, and accessibility contribute to a therapeutic and comforting atmosphere. Features like private rooms, well-designed waiting areas, and efficient facility layouts enhance patient experiences and support positive health outcomes (Rocco et al., 2020).

Service Procedures

Service procedures include all operational processes that patients experience, such as appointment scheduling, registration, waiting times, and payment processes. Efficient, transparent, and accessible procedures reduce patient stress and improve their overall experience. Streamlined processes reflect a hospital's commitment to organizational efficiency and patient-centered care (Kim et al., 2017).

Physicians

Physicians play a central role in shaping patient experiences. Professionalism, empathy, attentiveness, and effective communication are key factors that impact patient satisfaction. Moreover, physicians' expertise and their ability to clearly explain treatments and diagnoses build trust and confidence among patients (Kim et al., 2017).

Nursing

Nursing staff are critical to delivering comprehensive healthcare services. Their professionalism, courtesy, attentiveness, and communication skills are essential for ensuring patient comfort and satisfaction. High-quality nursing care often defines the patient's overall hospital experience (Carretta et al., 2017).

Administrative Personnel

Administrative personnel enhance service quality through their professionalism, kindness, and responsiveness. They manage essential touchpoints, such as appointment bookings, billing, and patient inquiries, which directly influence patients' perceptions of the hospital. Efficient administrative support improves the patient journey and reflects the institution's organizational effectiveness (Sutrisno et al., 2016).

These dimensions, adapted to the Libyan context, form the foundation for assessing hospital service quality in this study. By integrating the perspectives of patients, physicians, nurses, and administrative staff, the HEALTHQUAL model provides a comprehensive evaluation framework aligned with the cultural and economic dynamics of developing countries (Sutrisno et al., 2016).

Patient Satisfaction

Patient satisfaction is a critical goal for healthcare providers, directly impacting service quality, financial outcomes, and organizational development. Research indicates that satisfaction is influenced by factors such as patient expectations, healthcare service attributes, and the behavior of practitioners during care (Altin & Stock, 2016; Lakin & Kane, 2022; Rahman et al., 2024). Unlike tangible goods, patient satisfaction is derived from service experiences, making it essential for healthcare managers to oversee service delivery and consider patient feedback (Waweru et al., 2020).

Patient satisfaction serves as a measure of healthcare experiences, helps identify system deficiencies, and assesses service quality. It plays a role in enhancing patients' quality of life and in pinpointing areas needing improvement (Godovykh & Pizam, 2023). Models of patient satisfaction emphasize the significance of access, communication, outcomes, and quality, with social identity theory suggesting that factors like demographics and health status affect satisfaction levels (Ferreira et al., 2023). Studies show that patients who are informed and involved in their treatment decisions report higher satisfaction, whereas insufficient information can lead to dissatisfaction (Wennberg-Capellades et al., 2021).

Patient Loyalty

Patient loyalty is crucial for the success of healthcare providers and the overall well-being of patients. Loyal patients are more inclined to return for future services, recommend the provider to others, and advocate on behalf of the healthcare institution (Dayan et al., 2022). Loyalty helps reduce patient attrition, minimizes the need for expensive marketing efforts, and boosts profitability (Dlačić & Kežman, 2014; Aladwan et al., 2021). Additionally, it enhances the provider's reputation through positive word-of-mouth.

Loyal patients contribute to improved health outcomes by promoting continuity of care, adherence to treatment plans, and the use of preventive services (Rundle-Thiele & Russell-Bennett, 2010). Effectively managing patient loyalty is essential for enhancing healthcare services and outcomes. Key factors such as satisfaction, service quality, perceived value, and trust play a significant role in fostering loyalty (El Garem et al., 2024). High-quality service delivery reinforces loyalty, while poor service can result in patient defection (Harriet et al., 2024). Understanding the dynamics of patient loyalty, including their willingness to pay higher prices and maintain loyalty under cost increases, is vital for improving retention and reducing price sensitivity (Lamiraud & Stadelmann, 2020; Anell et al., 2021).

Switching Costs in Healthcare

Switching costs in healthcare refer to the expense's patients face when transitioning to a different provider, which include both financial and non-financial elements (Mofokeng, 2020). These can involve the effort required to learn about new providers, search for alternatives, and overcome inertia. Non-financial costs, such as the psychological stress related to the uncertainty of care quality and the effort involved in finding a suitable new provider, are also significant (Dick & Basu, 1994). With the rise in healthcare costs due to inflation and increased government spending, switching costs play an increasingly important role in patient retention. As these costs increase, patients are less likely to change providers, reinforcing their loyalty to their current healthcare institution.

Actual Value Delivery in Healthcare

Delivering actual value is essential for improving patient satisfaction, loyalty, and healthcare outcomes. In contrast to perceived value, which relies on subjective patient perceptions, actual value is centered on tangible, measurable outcomes such as health improvements, quality of life, cost-effectiveness, and evidence-based practices (Clark, 2023). Healthcare organizations that focus on actual value can enhance care quality by tracking patient outcomes, gathering feedback, and employing patient-centered strategies like shared decision-making and tailored treatment plans (Teisberg et al., 2020).

Value-based healthcare (VBHC) models prioritize quality over quantity, emphasizing patient outcomes rather than service volume. These models align healthcare providers' goals to improve results, reduce costs, and improve the overall healthcare experience (Canolle et al., 2022). By focusing on actual value, healthcare providers can drive significant improvements in patient health and contribute to the well-being of the community.

The Moderating Role of Switching Costs on Patient Satisfaction and Loyalty

Switching costs play a crucial moderating role in the connection between patient satisfaction and loyalty. These costs, which encompass the barriers or expenses associated with changing healthcare providers, help to explain why patients may remain loyal even in the face of dissatisfaction or subpar service quality (AlOmari, 2022). By considering switching costs as a moderator, researchers can gain a deeper understanding of the conditions under which these costs either strengthen or weaken the impact of satisfaction on loyalty (Willys, 2018).

This perspective is particularly valuable for healthcare providers, as it sheds light on why patients might continue their relationship with a provider despite dissatisfaction, due to the deterrent effect of high switching costs. Understanding this dynamic is essential for managing patient retention and enhancing customer relationship strategies, particularly in settings where switching costs are significant (AlOmari, 2022).

Methodology

This quantitative study aimed to examine the moderating effect of switching costs on the relationship between patient satisfaction and loyalty within private hospitals in Libya. The study employed a structured approach to collect and analyze data, addressing key research questions and objectives with a focus on understanding the roles of healthcare service quality (HSQ), patient satisfaction, loyalty, and switching costs.

An adapted instrument based on the HealthQual model was used to measure healthcare service quality, encompassing six key dimensions: Cost, Facilities and Environment, Service Procedures, Physicians, Nurses, and Administrative Personnel. The HealthQual model, an adaptation of the SERVQUAL framework tailored to healthcare services, assesses patient perceptions of service quality. Additionally, switching costs, including actual value delivery, were measured using ten items adapted from previous studies. Patient satisfaction was assessed using six items derived from established healthcare scales, and patient loyalty was evaluated using six items from relevant loyalty measurement frameworks.

The target population consisted of outpatients from private hospitals across Libya. A total of 389 completed questionnaires were collected and analyzed using SPSS and SEM software. A five-point Likert scale (ranging from 1 - strongly disagree to 5 - strongly agree) was used for all measurement items. Demographic factors such as gender, age group, marital status, Educational Background, Occupation, and Monthly Income were considered in the analysis.

To validate the measurement model, confirmatory factor analysis (CFA) was performed. Hypotheses were tested using multiple regression analysis, hierarchical multiple regression, and Structural Equation Modeling (SEM). The analysis aimed to explore the direct

and moderating effects of switching costs on patient satisfaction and loyalty, providing insights into how these factors shape the healthcare experience in Libya's private healthcare sector.

The findings revealed mixed results. Two of the direct relationships were not supported, while one of the indirect (mediating) relationships was confirmed. Importantly, the moderating role of switching costs on the relationship between patient satisfaction and loyalty was found to be significant. This study contributes to a deeper understanding of the factors that drive patient satisfaction and loyalty, offering valuable insights for healthcare providers and administrators to enhance service delivery and strategic planning.

Data Analysis and Findings

Respondents' General Profile

This section presents the general profile of the respondents, i.e. the patients of the private hospitals. The criteria include patient's gender, age group, marital status, Educational Background, Occupation, and Monthly Income.

Table 1
Summary Distribution of Demographic Variables

Variable	Category	Number	Percentage (%)
Gender	Male	217	55.8
	Female	172	44.2
Age	Less than 25	60	15.4
	from 25 to 35	54	13.9
	from 36 to 45	95	24.4
	from 46 to 55	82	21.1
	from 56 to 56	48	12.3
	Greater than 65	50	12.9
Marital Status	Single	46	11.8
	Married	276	71.0
	Other	67	17.2
Educational Background	Bachelor's Degree	156	40.1
	Master's Degree	104	26.7
	Doctorate Degree	77	19.8
	Other	52	13.4
Occupation	Employee	114	29.3
	Self-employed	38	9.8
	Military / policeman	19	4.9
	A homemaker	38	9.8
	a student	54	13.9
	Retired	90	23.1
	Other	36	9.3
Monthly Income	Less than 1000	41	10.5
	from 1000 to 2000	145	37.3
	more than 2000 to 3000	123	31.6
	More than 3000	80	20.6

Sample Size = 389

As shown in the Table 1, male response rate is more than female. There were about 55.8 percent of male respondents while remaining 44.2 percent were females. Percentage of age demographic shows that the percentage of the respondents between category age from 36 to 45 is 24.4 percent. As the percentage, demographic shows that 71 percent of the respondents were married, educational background of the respondents is also considered as a demographic variable, 40.1 percentage of the largest of the respondents belong to the category holder of bachelor's degree. In addition, the highest percentage, 29.3 percent, of the study participants are employees. Finally, monthly income of the respondents is also considered as a demographic variable, the highest percentage, 37.3 percent, of the study participants they get paid salary from 1000 to 2000.

Partial Least Square- Structural Equation Modeling

following the guidelines by Hair Jr et al. (2016), the application of PLS-SEM is a two-staged process that involves assessment of the measurement model (MM) and the structural model (SM).

Measurement Model

The assessment of Measurement Model (MM) is made to evaluate the internal consistency, reliability, and validity among the studied latent variables. In MM, there is an assessment of two criteria: the assessment of Convergent Validity and Discriminant Validity. These criteria are further evaluated through the help of multiple tests and measures, which are discussed below. Convergent validity reflects inter-connectedness among the measuring items belonging to the same construct (Mehmood & Najmi, 2017). In this study, the assessment of convergent validity is made through four criteria. Firstly, through the factor loading, which should exceed the value of 0.7; secondly, through Cronbach's Alpha which should also exceed the value of 0.7; thirdly, Composite Reliability which should also exceed the value of 0.7 and is superior to the Cronbach's Alpha and lastly, by "Average Variance Extracted" (AVE) which should exceed the value of 0.5. The threshold mentioned for all of the aforementioned criteria is discussed by Hair Jr et al. (2016). The assessment of MM is listed in Figure 1 below.

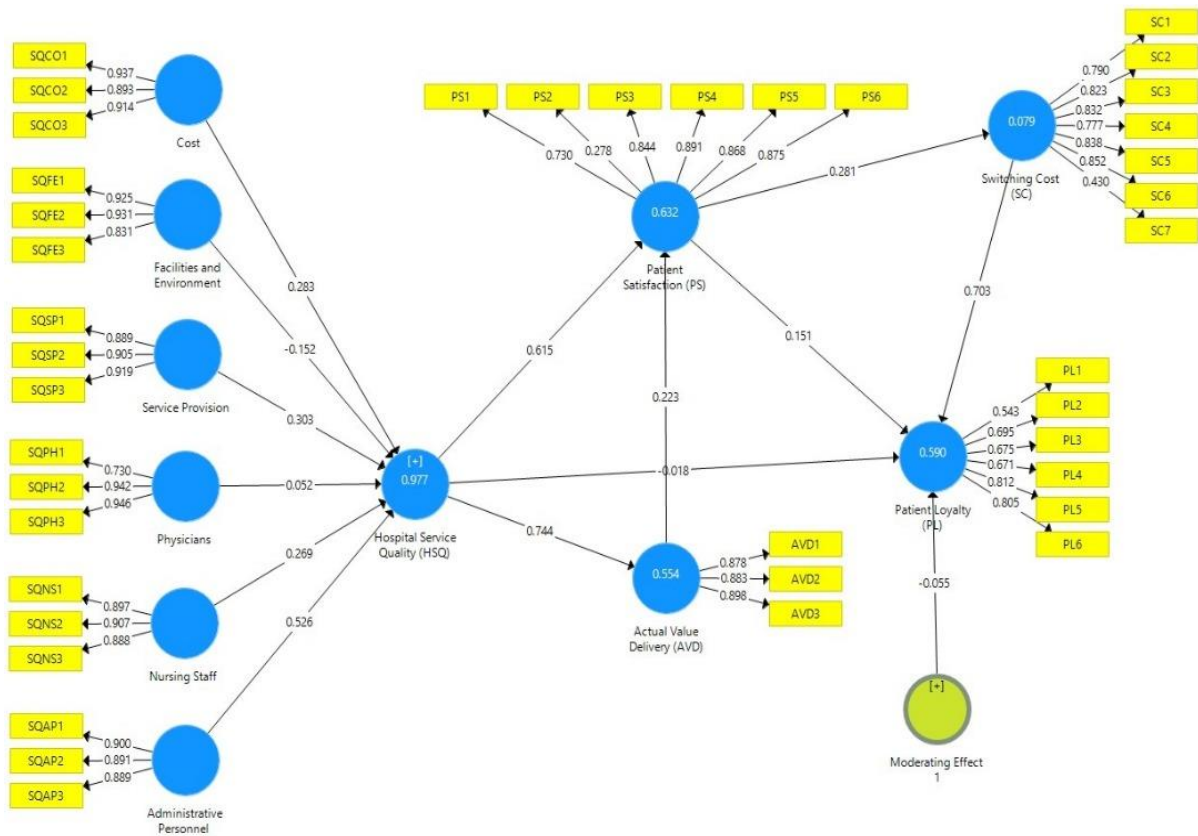


Fig. 1: Confirmatory Factor Analysis on the Initial Model. PLS3 Algorithm.

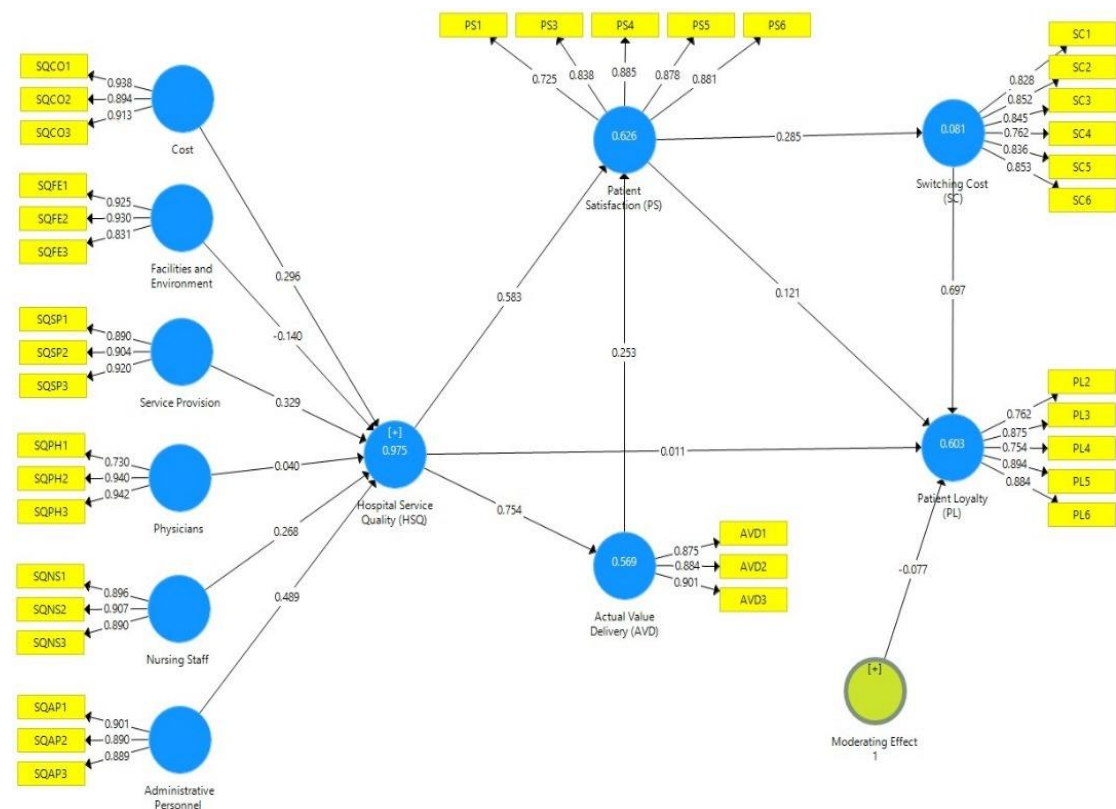


Fig. 2: Confirmatory Factor Analysis on the Initial Model with deleted some items. PLS3 Algorithm.

Table 2

Summary Results Constructs' Convergent Validity and Reliability Analysis

Construct		Measurement Items	Factor Loadings	Composite reliability (CR)	Cronbach's Alpha	Average of variance extracted (AVE)
Hospital Service Quality (HSQ) Independent Variable	Cost	SQCO1	0.938			
		SQCO2	0.894	0.939	0.903	0.837
		SQCO3	0.913			
	Facilities and Environment	SQFE1	0.925			
		SQFE2	0.930	0.924	0.876	0.804
		SQFE3	0.831			
	Service Provision	SQSP1	0.890			
		SQSP2	0.904	0.931	0.889	0.818
		SQSP3	0.920			
	Physicians	SQPH1	0.730			
		SQPH2	0.940	0.850	0.741	0.669
		SQPH3	0.942			
	Nursing Staff	SQNS1	0.896			
		SQNS2	0.907	0.925	0.879	0.805
		SQNS3	0.890			
Administrative Personnel	SQAP1	0.901				
	SQAP2	0.890	0.922	0.874	0.798	
	SQAP3	0.889				
Patient Satisfaction (PS) Mediating Variable		PS1	0.725			
		PS2	Deleted			
		PS3	0.838	0.925	0.854	0.712
		PS4	0.885			
		PS5	0.878			
		PS6	0.881			
Actual Value Delivery (AVD) Mediating Variable		AVD1	0.875			
		AVD2	0.884	0.917	0.867	0.786
		AVD3	0.901			
Switching Cost (SC) Moderating Variable		SC1	0.828			
		SC2	0.852			
		SC3	0.845			
		SC4	0.762	0.930	0.881	0.689
		SC5	0.836			
		SC6	0.853			
		SC7	Deleted			
Patient Loyalty (PL) Dependent Variable		PL1	Deleted			
		PL2	0.762			
		PL3	0.875	0.835	0.824	0.516
		PL4	0.754			
		PL5	0.894			
		PL6	0.884			

Source: SmartPLS3 output (2024).

Note: items, PS2, SC7, PL1, deleted due to lack of saturation were less than 0.7.

Figure 2 above displayed the measurement model while the figures contained therein were further analysed in Table 2. From the table, the factor loadings ranged from 0.725 to 0.942 which are greater than the threshold of 0.70 as recommended by [Hair Jr. et al., (2010); Hair Jr. et al., (2017)]; Cronbach Alpha and composite reliability values ranged from 0.741 to 0.903 while Average Variance Extracted (AVE) values ranged from 0.516 to 0.837 which are higher than the threshold of 0.50 [Hair Jr. et al., (2017); Ramayah et al., (2018)]. Based on the results, it is reported that the study has no problem with the constructs' convergent validity and reliability as each of the values computed is higher than the respective threshold.

Discriminant Reliability

For the measurement of discriminant reliability, the Fornell-Larcker criterion and cross-loading examination were applied primarily (Henseler et al., 2015). Conversely, the Fornell-Larcker Secondly, the assessment is made through the criterion proposed by Fornell and Larcker (1981). According to this, the values of the correlations among the constructs should be below the square root of the AVE. Table 3 below is the depiction of the Fornell-Larcker criterion. In this table, the diagonal values represent the square root of AVE, whereas the values other than that reflect the correlations among the construct. It is visible that the diagonal values exceed the off-diagonal values.

Table 3
Summary Results Discriminant validity Fornell-Larcker Criterion

Variables	Actual Value Delivery	Administrative Personnel	Cost	Facilities and Environment	Hospital Service Quality	Moderating Effect 1	Nursing Staff	Patient Loyalty	Patient Satisfaction	Physicians	Service Provision	Switching Cost
Actual Value Delivery (AVD)	0.887											
Administrative Personnel	0.467	0.893										
Cost	0.628	0.323	0.915									
Facilities and Environment	0.606	0.366	0.914	0.896								
Hospital Service Quality (HSQ)	0.754	0.761	0.746	0.719								
Moderating Effect 1	0.094	0.263	0.007	0.033	0.137	1.000						
Nursing Staff	0.590	0.456	0.491	0.443	0.768	0.080	0.897					
Patient Loyalty (PL)	0.426	0.136	0.368	0.331	0.410	-0.279	0.407	0.718				
Patient Satisfaction (PS)	0.693	0.763	0.456	0.452	0.774	0.169	0.510	0.312	0.844			
Physicians	0.503	0.303	0.634	0.621	0.681	-0.056	0.573	0.370	0.468	0.818		
Service Provision	0.619	0.284	0.798	0.807	0.759	0.012	0.519	0.410	0.466	0.725	0.905	
Switching Cost (SC)	0.545	0.082	0.471	0.412	0.457	-0.291	0.424	0.765	0.285	0.447	0.525	0.830

Source: SmartPLS3 output (2024).

Variance Inflation Factor (VIF)

Table 4

Summary Variance Inflation Factor Check Test (VIF)

Variables	VIF
Actual Value Delivery (AVD)	2.318
Administrative Personnel	1.362
Cost	3.777
Facilities and Environment	3.230
Hospital Service Quality (HSQ)	2.318
Moderating Effect 1	1.218
Nursing Staff	1.823
Patient Satisfaction (PS)	2.537
Physicians	2.391
Service Provision	3.961
Switching Cost (SC)	1.519

Source: SmartPLS3 output (2024).

Table 4 above shows the results of the collinearity check test. For the test, the values for the Variance Inflation Factor (VIF) ranged from 1.218 to 3.961 which is below 5 (Hair et al., 2014). Hence, there is no collinearity problem with the data set.

Structural Model and Test of Hypothesis

This step involves the assessment of the quality of estimation power, which includes assessing “predictive relevance” through “coefficient of determination” R-square and “cross-validated redundancy” Q-square of the criterion constructs assessed by Q-Square. Though Cohen (1988) proposed a threshold of R-square as values exceeding 0.26 and considered as substantial, however, it is highly dependent on the nature of the relationship between predictors and criterion, whereas the greater number of pre-dictors explaining criterion, the more will be the value of R-Square. On the other hand, Hair Jr et al. (2016) considered a value above 0 as acceptable for Q-Square. The assessment of “coefficient of determination” and “cross-validated redundancy” are listed in Table 5 and Table 6.

Table 5

Summary Results R-Square

Variables	R-Square
Actual Value Delivery (AVD)	0.569
Hospital Service Quality (HSQ)	0.975
Patient Loyalty (PL)	0.603
Patient Satisfaction (PS)	0.626
Switching Cost (SC)	0.081

Source: SmartPLS3 output (2024).

Table 6
Summary Results for Q²_predict

Variables	RMSE	MAE	Q ² _predict
Actual Value Delivery (AVD)	0.709	0.508	0.502
Hospital Service Quality (HSQ)	0.170	0.116	0.972
Patient Loyalty (PL)	0.916	0.685	0.167
Patient Satisfaction (PS)	0.662	0.471	0.567
Switching Cost (SC)	0.935	0.757	0.134

Source: SmartPLS3 output (2024).

Table 6 and Figure 3 exhibited the results for the predictive relevance of the manifest variables. The Q²_predict values ranged from 0.134 to 0.972. Each of the values is greater than zero (0), (Henseler & Ray, 2017). Hence, the indication that the exogenous variable hospital service quality (HSQ) has predictive relevance on the endogenous construct for each variable, patient satisfaction (PS), actual value delivery (AVD), switching cost (SC), and patient loyalty (PL)

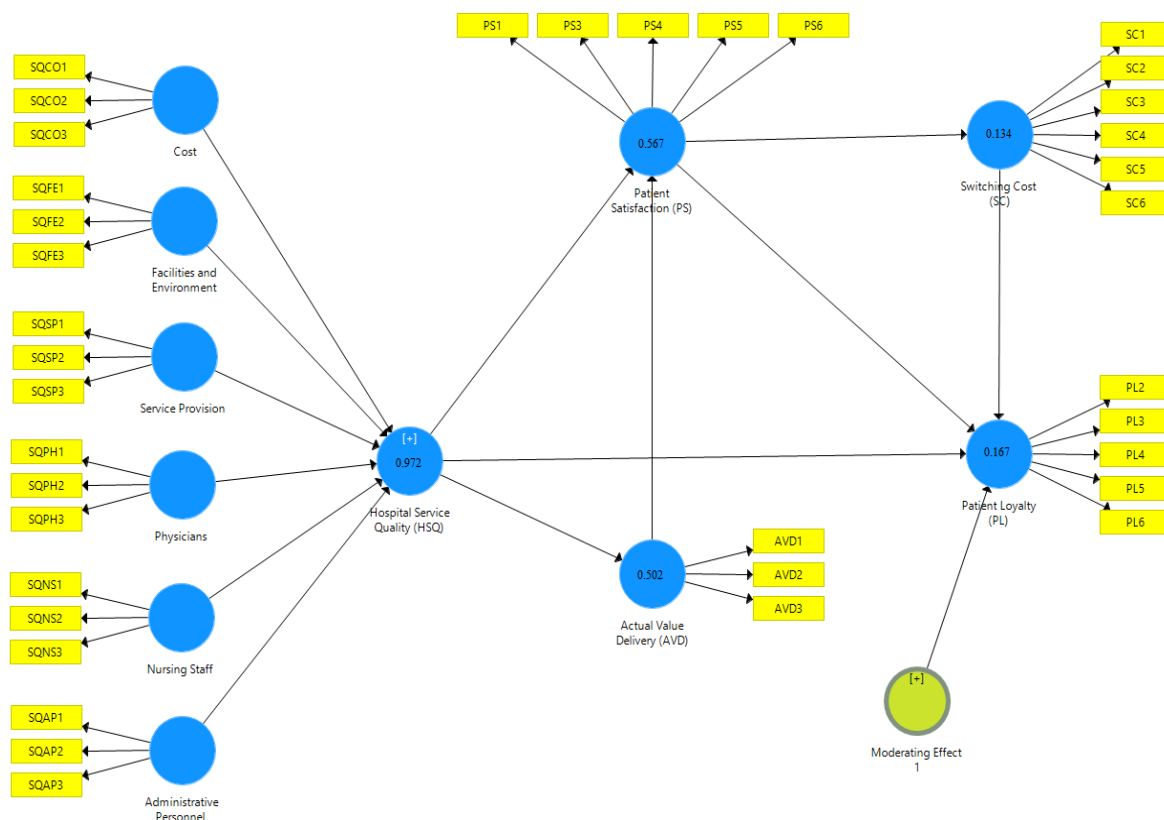


Fig. 3: The Final Model. Q²_predict.

Hypotheses Testing

For examining the proposed hypotheses, two things need to be considered. The first thing is the value of the beta coefficient, which reflects the change in the criterion variable being caused by the predictor variable. In contrast, the second thing that needs to be considered is the p-value that reflects the statistical significance of the studied relationships. Initially, the study’s objective is to explore the potential Hospital service quality in patient loyalty. Therefore, multiple dimensions of Hospital service quality, patient satisfaction, actual

value delivery, switching cost and patient loyalty were identified through the literature, which is assessed statistically.

Table 7

Summary of the Hypothesis, Bootstrapping Test

Hypothesis	Testing	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T_Statistics	P_Values	Remarks
H1	Hospital Service Quality (HSQ) -> Patient Loyalty (PL)	0.011	0.027	0.075	0.147	0.884	Not Supported
H2	Hospital Service Quality (HSQ) -> Patient Satisfaction (PS)	0.583	0.596	0.069	8.417	0.000	Supported
H3	Patient Satisfaction (PS) -> Patient Loyalty (PL)	0.121	0.114	0.075	1.621	0.105	Not Supported
H4	Hospital Service Quality (HSQ) -> Patient Satisfaction (PS) -> Patient Loyalty (PL)	0.071	0.069	0.048	1.475	0.140	Not Supported
H5	Hospital Service Quality (HSQ) -> Actual Value Delivery (AVD) -> Patient Satisfaction (PS)	0.191	0.182	0.048	3.969	0.000	Supported
H6	Patient Satisfaction (PS) -> Switching Cost (SC) -> Patient Loyalty (PL)	0.198	0.198	0.042	4.698	0.000	Supported

Note: Level of Significance (5% i.e. 0.050). Source: SmartPLS3 output (2024)

Table 8

Main Summary of the Hypotheses

No.	Hypotheses	Result
Direct Effect		
H1	Significant relationship between hospital service quality and patient loyalty.	Not Supported
H2	Significant relationship between hospital service quality and patient satisfaction.	Supported
H3	Significant relationship between patient satisfaction and patient loyalty.	Not Supported
Mediating Effect		
H4	Significant indirect relationship between hospital service quality and patient loyalty with the mediation of patient satisfaction.	Not Supported
H5	Significant indirect relationship between hospital service quality and patient satisfaction with the mediation of actual value delivery.	Supported
Moderating Effect		
H6	Switching costs moderate the relationship between patient satisfaction and patient loyalty.	Supported

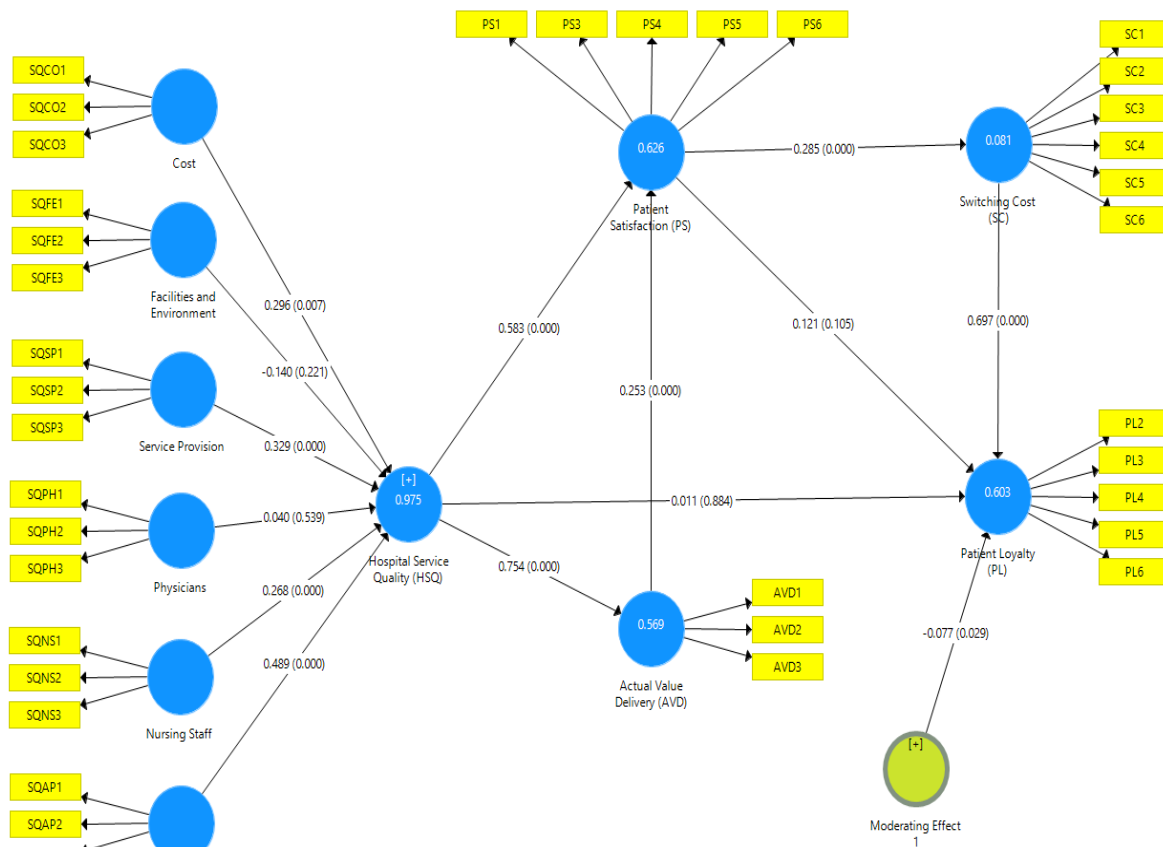


Fig. 4: The Final Model. Bootstrapping

Conclusions and Implications

This study explored the moderating effect of switching costs on the relationship between patient satisfaction and loyalty within private hospitals in Libya. The findings revealed that while two of the direct relationships between service quality dimensions and patient satisfaction were not supported, the moderating role of switching costs was found to

be significant. This indicates that switching costs play a crucial role in shaping patient loyalty, even in the presence of dissatisfaction.

In terms of service quality, dimensions such as cost, facilities, environment, service procedures, physicians, nurses, and administrative personnel were found to influence patient satisfaction. The results suggest that private hospitals in Libya can enhance patient satisfaction and loyalty by improving these service quality dimensions. Importantly, the role of switching costs and value patients perceive when choosing healthcare providers, was confirmed as a significant factor in retaining patients despite any negative experiences.

From a managerial perspective, the findings have important implications for healthcare providers in Libya. Healthcare managers and policymakers can leverage these insights to better understand patient behavior, improve service quality, and manage patient retention strategies effectively. Specifically, private hospitals should consider strategies to reduce switching costs and increase the perceived value of their services, making it more likely that patients will remain loyal even when faced with suboptimal experiences.

Theoretically, this research contributes to the body of knowledge on the relationship between service quality, patient satisfaction, and loyalty in healthcare settings. It highlights the moderating effect of switching costs, which has been underexplored in the Libyan context. Future research could further examine how different dimensions of switching costs influence patient behavior across various healthcare settings and geographical locations.

Overall, this study provides valuable insights for the private healthcare sector in Libya, suggesting that focusing on service quality improvement and managing switching costs can contribute to enhanced patient loyalty and satisfaction.

Limitations of the Research

While this study provides valuable insights into the moderating effect of switching costs on patient satisfaction and loyalty within private hospitals in Libya, several limitations should be considered when interpreting the findings.

Firstly, this study adopted a cross-sectional design, which provides a snapshot of patient perceptions and behaviors at a single point in time. A longitudinal design would offer a more comprehensive understanding of how the relationships between service quality, patient satisfaction, loyalty, and switching costs evolve over time. This approach could also provide deeper insights into the long-term impact of switching costs on patient behavior.

Secondly, the research focused on latent variables such as service quality dimensions (e.g., cost, facilities, environment, service procedures, physicians, nurses, and administrative personnel), switching costs, and patient satisfaction. The study did not explore the relationships between specific indicators or observed variables within these constructs. Future research could examine these relationships in greater detail, identifying the key drivers behind patient satisfaction and loyalty, and understanding how each dimension of service quality impacts patient perceptions.

Thirdly, the study sample was limited to outpatients in private hospitals in three cities in Libya, using a convenience sampling technique. This approach may limit the generalizability of the findings. A more diverse sample, including inpatients and outpatients across multiple cities in Libya, would provide a broader perspective on patient satisfaction and loyalty across different demographics and geographical areas.

Fourthly, the research was conducted solely within the private healthcare sector, which may not fully represent the dynamics of the healthcare system in Libya. Future research could compare the private sector with the public healthcare system, as well as explore patient loyalty and satisfaction in specialized hospitals and primary healthcare units. This would provide a more comprehensive understanding of healthcare service quality across different sectors.

Lastly, while this study contributes to the understanding of quality from the patients' perspective in Libya, it focused solely on patient viewpoints. Further studies could examine the concept of service quality from the perspectives of other stakeholders in healthcare, such as healthcare providers, administrative staff, and policymakers, to provide a more holistic view of healthcare service quality.

These limitations highlight areas for future research that could expand on this study's findings, offering a deeper understanding of patient loyalty, satisfaction, and service quality in the Libyan healthcare context.

References

- Abd-El-Fattah, S. M. (2010). Structural equation modeling with AMOS: basic concepts, applications and programming. *Journal of applied quantitative methods*, 5(2), 365-368.
- Ai, Y., Rahman, M. K., Newaz, M. S., Gazi, M. A. I., Rahaman, M. A., Mamun, A. A., & Chen, X. (2022). Determinants of patients' satisfaction and trust toward healthcare service environment in general practice clinics. *Frontiers in Psychology*, 13, 856750.
- Aladwan, M. A., Salleh, H. S., & ALhwadi, H. (2021). The Impact of Hospital Reputation on Patient Loyalty Mediated by Patient Satisfaction. *Turkish Online Journal Of Qualitative Inquiry*, 12(4).
- Allen, J. A., Reiter-Palmon, R., Prange, K. A., Shuffler, M. L., & Barber, E. (2019). Leading after-action reviews among emergency responder teams: how perceptions of leader behaviors relate to proximal and distal outcomes. *Occupational health science*, 3, 59-81.
- AlOmari, F. (2022). The mediating role of hospital image: The impact of care cost and service quality on patient satisfaction. *Journal of Innovation in Business and Economics*, 6(01), 1-16.
- Altin, S. V., & Stock, S. (2016). The impact of health literacy, patient-centered communication and shared decision-making on patients' satisfaction with care received in German primary care practices. *BMC Health Services Research*, 16, 1-10.
- Amporfro, D. A., Boah, M., Yingqi, S., Cheteu Wabo, T. M., Zhao, M., Ngo Nkondjock, V. R., & Wu, Q. (2021). Patients satisfaction with healthcare delivery in Ghana. *BMC health services research*, 21, 1-13.

- Anell, A., Dietrichson, J., Ellegård, L. M., & Kjellsson, G. (2021). Information, switching costs, and consumer choice: Evidence from two randomised field experiments in Swedish primary health care. *Journal of Public Economics*, 196, 104390.
- Apriliani, M., Febrianti, S. N., Nariyah, H., & Sutarjo, M. (2024). Quality Of Health Services For Bpjs Patients At Waled Hospital, Cirebon Regency. *Journal of Social Research*, 3(8).
- Brick, J. M., & Williams, D. (2013). Explaining rising nonresponse rates in cross-sectional surveys. *The ANNALS of the American academy of political and social science*, 645(1), 36-59.
- Canolle, F., AntoniĆ, D., Nova, A. C., Goncharuk, A., Melo, P., Raposo, V., & Vinot, D. (2022). Advancement of efficiency evaluation for healthcare. In *Intelligent systems for sustainable person-centered healthcare* (pp. 91-118). Cham: Springer International Publishing.
- Carretta, E., Bond, T. G., Cappiello, G., & Fantini, M. P. (2017). Looking through the patients' eyes: Measuring patient satisfaction in a public hospital. *Journal of Patient Experience*, 4(3), 121-128.
- Clark, H. (2023). Development of a Customer Relationship Program in a Private Healthcare Business. Case: Pihljalinna.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. (2nd ed.). Academic Press.
- Cronin, J. J. Jr., & Taylor, S. A. (1992). Measuring service quality: A reexamination and extension. *Journal of Marketing* 56(7), 55-68.
- Dayan, M., Al Kuwaiti, I. A., Husain, Z., Ng, P. Y., & Dayan, A. (2022). Factors influencing patient loyalty to outpatient medical services: an empirical analysis of the UAE's government healthcare system. *International Journal of Quality & Reliability Management*, 39(1), 176-203.
- Dick, A. S., & Basu, K. (1994). Customer loyalty: toward an integrated conceptual framework. *Journal of the academy of marketing science*, 22, 99-113.
- Dlačić, J., & Kežman, E. (2014). Exploring Relationship between Brand Equity and Customer Loyalty on Pharmaceutical Market. *Economic and Business Review*, 16(2). <https://doi.org/10.15458/2335-4216.1275>
- Donabedian, A. (1988). The quality of care: how can it be assessed?. *Jama*, 260(12), 1743-1748.
- Edwin Yirong Chan. (2021). Understanding Costs Of Healthcare: Patient Perspectives And Understanding Costs Of Healthcare: Patient Perspectives And Beyond Beyond .
- Eggert, A., & Ulaga W. (2002). Customer-perceived value: A substitute for satisfaction in business markets? *Journal of Business and Industrial Marketing*, 17(2/3), 107-118.
- El Garem, R. A. A., Fouad, A., & Mohamed, H. (2024). Factors associated with patient loyalty in private healthcare sector in Egypt. *Journal of Humanities and Applied Social Sciences*, 6(2), 181-206.
- Ferreira, D. C., Vieira, I., Pedro, M. I., Caldas, P., & Varela, M. (2023, February). Patient satisfaction with healthcare services and the techniques used for its assessment: a systematic literature review and a bibliometric analysis. In *Healthcare* (Vol. 11, No. 5, p. 639). MDPI.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50.
- Godovykh, M., & Pizam, A. (2023). Measuring patient experience in healthcare. *International Journal of Hospitality Management*, 112, 103405.

- Hair Jr, J. F., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2016). A primer on partial least squares structural equation modeling (PLS-SEM). Sage Publications.
- Hair Jr., J.F., Babin, B.J., Krey, N. (2017). Covariance-based structural equation modelling in the journal of advertisement: Review and recommendations. "Journal of Advertisement".
- Hair Jr., J.F., Black, W.C., Babin, B.J., Anderson, R.E. (2010). Multivariate data analysis. Seventh edition. New Jersey: Pearson Educational International.
- Hair, J. F., Jr., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2014). A primer on partial least squares structural equation modeling (PLS-SEM). SAGE Publications.
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2–24.
- Harriet, N., Arthur, N., Komunda, M. B., & Mugizi, T. (2024). Service Quality, Customer Loyalty and Customer Retention among Private Health Care Services in Mbarara City. *Open Journal of Social Sciences*, 12(01), 101-126.
- Hassan, S. A., & Khairuldin, W. M. K. F. W. (2020). Research Design Based on Fatwa Making Process: An Exploratory Study. *International Journal of Higher Education*, 9(6), 241-246.
- Henseler, J., Hubona, G., & Ray, P. A. (2017). Partial least squares path modeling: Updated guidelines. *Partial Least Squares Path Modeling*, 19:39.
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the academy of marketing science*, 43, 115-135.
- Kim, C. E., Shin, J. S., Lee, J., Lee, Y. J., Kim, M. R., Choi, A., ... & Ha, I. H. (2017). Quality of medical service, patient satisfaction and loyalty with a focus on interpersonal-based medical service encounters and treatment effectiveness: A cross-sectional multicenter study of complementary and alternative medicine (CAM) hospitals. *BMC complementary and alternative medicine*, 17, 1-12.
- Lakin, K., & Kane, S. (2022). Peoples' expectations of healthcare: A conceptual review and proposed analytical framework. *Social Science & Medicine*, 292, 114636.
- Lamiraud, K., & Stadelmann, P. (2020). Switching costs in competitive health insurance markets: The role of insurers' pricing strategies. *Health Economics (United Kingdom)*, 29(9). <https://doi.org/10.1002/hec.4111>
- Lineback, J. F., & Thompson, K. J. (2010). Conducting nonresponse bias analysis for business surveys. In *Proceedings of the American Statistical Association, Section on Government Statistics*.
- Lynch, J. & Schuler, D. (1990). Consumer evaluation of the quality services from an economics of information perspective. *Journal of Health Care Marketing*, 10(2), 6-22.
- Mahmud, S. M., Ali, F. I., Salhin, A., Mohamed, F., & Elkhammas, E. A. (2022). Regulating healthcare professions in Libya: A viewpoint. www.ijmbs.org
- Mehmood, S. M., & Najmi, A. (2017). Understanding the impact of service convenience on customer satisfaction in home delivery: Evidence from Pakistan. *International Journal of Electronic Customer Relationship Management*, 11(1), 23–43.
- Meier, S., Klarmann, S., Thielen, N., Pfefferer, C., Kuhn, M., & Franke, J. (2023). A process model for systematically setting up the data basis for data-driven projects in manufacturing. *Journal of Manufacturing Systems*, 71, 1-19.
- Mofokeng, T. E. (2020). Switching costs, customer satisfaction, and their impact on marketing ethics of medical schemes in South Africa: An enlightened marketing perspective. *Cogent Business & Management*, 7(1), 1811000.

- Parasuraman, A., Zeithaml, V. A. & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research. *Journal of Marketing*, 49(4), 41-50.
- Perroux, J. L. R. (2019). The deep roots of Libya's security fragmentation. *Middle Eastern Studies*, 55(2). <https://doi.org/10.1080/00263206.2018.1538970>
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: a critical review of the literature and recommended remedies. *Journal of applied psychology*, 88(5), 879.
- Ramayah, T., Cheah, J., Chuah, F., Ting, H., Memon, M.A. (2018). Partial least square equation modelling (PLS-SEM) using smartPLS 3.0. An updated and practical guide to statistical analysis. Second edition. Malaysia: Pearson.
- Ringle, C. M., Wende, S., & Becker, J. M. (2015). SmartPLS 3. SmartPLS GmbH.
- Rundle-Thiele, S., & Russell-Bennett, R. (2010). Patient influences on satisfaction and loyalty for GP services. *Health Marketing Quarterly*, 27(2), 195-214.
- Shemwell, D.J., Yavas, U., Bilgin, Z. (1998). Customer-service provider relationships: an empirical test of a model of service quality, satisfaction and relationship oriented outcome. *International Journal of Service Industry Management*, 9, 155-68.
- Sutrisno, I. A. B., & Panjaitan, H. (2016). The influence of service quality, and customer relationship management (CRM) of patient satisfaction, brand image, trust, and patient loyalty on Indonesian National Army Level II Hospitals. *International Journal of Business and Management Invention*, 5(5), 30-44.
- Teisberg, E., Wallace, S., & O'Hara, S. (2020). Defining and implementing value-based health care: A strategic framework. *Academic Medicine*, 95(5), 682-685.
- Waweru, E., Smekens, T., Orne-Gliemann, J., Ssengooba, F., Broerse, J., & Criel, B. (2020). Patient perspectives on interpersonal aspects of healthcare and patient-centeredness at primary health facilities: a mixed methods study in rural Eastern Uganda. *PLoS One*, 15(7), e0236524.
- Wennberg-Capellades, L., Feijoo-Cid, M., Llaurodo-Serra, M., & Portell, M. (2021). Feeling informed versus being informed: Mixed-methods analysis of family perceptions and behavior following a pediatric emergency department visit. *Journal of Pediatric Nursing*, 60, e87-e95.
- Willys, N. (2018). Customer satisfaction, switching costs and customer loyalty: An empirical study on the mobile telecommunication service. *American Journal of Industrial and Business Management*, 8(04), 1022.
- Zeithaml, V. A. (1988). Consumer Perceptions of Price, Quality, and Value: A Means- End Model and Synthesis of Evidence. *Journal of Marketing*, 52(7), 2-22.
- Zeithaml, V. A., Parasuraman, A., & Berry, L. L. (1990). *Delivering quality service: Balancing customer perceptions and expectations*. New York, NY: Free Press.