

# “An analysis of service quality and complaint handling in the Jordanian healthcare sector: Implications for TQM and customer retention”

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# AN ANALYSIS OF SERVICE QUALITY AND COMPLAINT HANDLING IN THE JORDANIAN HEALTHCARE SECTOR: IMPLICATIONS FOR TQM AND CUSTOMER RETENTION

## Abstract

This study aims to investigate the interconnections among total quality management, service quality, customer retention, and moderating influence of customer complaint handling within the healthcare industry of Jordan. The paper used a quantitative approach, by using PLS-SEM as an approach selected for data analysis. 417 valid replies were gathered. The results found a positive association between total quality management and service quality ( $p$ -value  $< 0.05$ ), underscoring the significance of total quality management principles in improving the provision of healthcare services. The study demonstrates a significant correlation between service quality and customer retention, thereby validating the importance of delivering exceptional healthcare experiences in boosting customer retention. Moreover, it is imperative to acknowledge that the degree of service quality plays a crucial function in facilitating the connection between total quality management and customer retention ( $p$ -value  $< 0.05$ ). Furthermore, it has been demonstrated that customer complaints handling serves as a mechanism for reducing the negative effects of service quality on customer retention. The results offer useful insights for healthcare managers in Jordan, underscoring the significance of integrating total quality management practice, improving service quality, and developing efficient procedures for handling complaints. These approaches are imperative in fortifying customer interactions and augmenting customer retention rates.

## Keywords

service excellence, customer satisfaction, complaint resolution, customer loyalty, retention strategies, Jordanian healthcare sector

## JEL Classification

M11, M31, L15

## INTRODUCTION

Organizations strive ceaselessly to obtain a sustainable competitive advantage in the current incredibly competitive business environment. The continual improvement of customer retention plays a crucial role in attaining and sustaining a competitive advantage (Leong et al., 2022). Numerous empirical studies have continuously corroborated the significant influence of total quality management (TQM) methodologies on enhancing service quality (Zaid et al., 2020), leading to heightened customer retention. Organizations can effectively address their clientele's dynamic demands and expectations by using TQM practice, including the pursuit of ongoing enhancement, the prioritization of customer contentment, and the empowerment of staff. The adoption of this comprehensive strategy facilitates a thorough evaluation of service delivery processes, allowing companies to detect and rectify any potential shortcomings or flaws (Balinado et al., 2021). Consequently, firms must allocate significant importance to providing outstanding service quality and efficiently managing customer complaints (Morgeson III et al., 2020).

An intricate framework of relationships exists between TQM practice, service quality, and the processing of customer complaints. TQM techniques provide the foundation that businesses need to build a culture of continuous improvement characterized by the ongoing monitoring and improvement of service quality (Zaid et al., 2020). According to Pérez-Morón et al. (2022), strong service quality is positively associated with a higher probability of consumer satisfaction, resulting in enhanced customer loyalty and improved repeat business. However, despite the high quality of the service provided, there is always the possibility of occasional slip-ups, which might result in dissatisfied customers. In order to keep long-term relationships intact and prevent customer loss in these circumstances, effective complaint management based on TQM concepts becomes necessary.

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## 1. LITERATURE REVIEW AND HYPOTHESES

The implementation of TQM significantly impacts the level of service quality provided by an organization, as it instills a culture of continuous improvement and customer-centricity throughout the whole business (Janhi, 2022). At the core of TQM lies the fundamental premise of prioritizing the customer's requirements and satisfaction (García-Alcaraz et al., 2021; Luthra et al., 2020). This entails developing a comprehensive understanding of customer expectations and demonstrating a dedicated resolve to fulfill or surpass them (Salamakhina et al., 2021). The customer-centric approach is strengthened by the continuous improvement philosophy of TQM, in which services are regularly assessed and improved, resulting in increased efficiency and decreased mistakes (Gupta & Mittal, 2021). TQM refers to the dynamic engagement of employees across various hierarchical levels within a company to improve and optimize quality (Cavallone & Palumbo, 2022). The implementation of this inclusive strategy cultivates a sense of ownership and motivation among workers, hence playing a pivotal role in stimulating service innovation and responsiveness. Furthermore, it is necessary to note that TQM emphasizes the effective management of processes. The primary goal is to establish standardized and optimized service delivery processes, ensuring high consistency and predictability (Gonda & Poór, 2023).

The implementation of a deliberate and systematic approach ensures the incorporation of excellence throughout all dimensions of an organization, including both customer-facing service provision and internal administrative processes. Data-driven decision-making is a fundamental

aspect of TQM, enabling organizations to make well-informed enhancements by relying on statistical analysis and real data (Ming, 2023). In addition, the precise management of inputs from suppliers is a crucial aspect of TQM since it substantially influences service quality (Jum'a & Mansour, 2023). This approach guarantees that high standards are consistently maintained throughout the supply chain. TQM promotes the practice of comparing performance against established industry norms and implementing superior methods, enabling organizations to acquire knowledge and adjust their plans based on the successes of industry frontrunners. By using various comprehensive strategies, TQM brings about a significant shift in business culture and operations (Philip & McKeown, 2004). This transformation ultimately results in improved service quality, increased customer satisfaction, and a strengthened competitive advantage within the marketplace.

Several studies have examined the effects of TQM practices on the quality of services. Aburayya et al. (2020) demonstrate that TQM implementation in organizations improves service delivery and customer happiness, particularly leadership commitment and customer focus. Furthermore, Powell (1995) underscored the significance of TQM as a means to gain a competitive edge, emphasizing its favorable impact on the quality of services. TQM practices, such as the active participation of employees, ongoing improvement efforts, and a strong emphasis on meeting customer needs, play a significant role in augmenting the quality of services provided. Furthermore, Harimurti and Suryani (2019) emphasize that TQM indirectly boosts customer loyalty by improving service quality and customer engagement.

Permana et al. (2021) underscore the favorable influence of TQM on both the service quality and the performance of organizations. This proves the significance of leadership and employee engagement and a customer-focused approach in effectively implementing TQM within organizational contexts. Moreover, Pattanayak et al. (2017) determined that adopting TQM practices positively impacts the quality of services rendered. This, in turn, leads to increased levels of customer satisfaction and loyalty. Furthermore, Sigit Parawansa (2018) found a positive association between service quality and customer satisfaction; customer satisfaction subsequently influences customer retention. Daniel (2016) indicates that improving service quality can be a viable approach to maintaining customer loyalty and cultivating enduring relationships, ultimately bolstering their performance within the fiercely competitive market.

The recognition of the extensive benefits associated with the adoption of TQM principles, such as quality enhancement, employee empowerment, customer orientation, process refinement, and supplier collaborations, in relation to service quality, is widely acknowledged in academic literature (Abukhader & Onbaşıoğlu, 2021; Gupta et al., 2005; Kulenović et al., 2021). Recent research has shown that adopting TQM has proven effective in enabling organizations to recognize and rectify shortcomings in the quality of their services (Gathoni & Van der Walt, 2019; Qudratullah et al., 2023). Moreover, the adoption of TQM facilitates the provision of services characterized by outstanding quality, customization to address individual client requirements, enhanced operational effectiveness, and the assurance of input quality (Helmold, 2023). In general, TQM plays a pivotal role in augmenting the quality of services provided by an organization.

Meanwhile, the provision of high service quality has resulted in heightened levels of customer satisfaction, perceived service quality, and customer trust (Supriyanto et al., 2021). These factors collectively contribute to the establishment of customer loyalty and the maintenance of customer retention. Customer retention is influenced by various factors, including the efficacy of service recovery and complaint handling, as well as the generation of positive word-of-mouth and the establishment

of a favorable reputation (Alzghoul et al., 2016; Maamari & Wasfi, 2020). Ultimately, the provision of exceptional service enhances the probability of customer retention over an extended period for organizations. The sense of value and the entire experience of customers with a brand or service provider are directly influenced by service quality, which includes dependability, responsiveness, assurance, empathy, and tangibles (Maamari & Wasfi, 2020). Regularly providing high-quality service to clients fosters a sense of confidence in the brand, resulting in heightened levels of pleasure. Customer happiness is a significant indicator of customer loyalty, as contented consumers have a higher propensity to engage in repeat purchases and establish enduring affiliations with the brand (Yoshida et al., 2021). Furthermore, it is often seen that the provision of exceptional service quality surpasses the anticipated level of satisfaction among consumers, generating pleasurable encounters that can make customers enthusiastic about the brand (Liu et al., 2020). These proponents exhibit brand loyalty and engage in active word-of-mouth promotion, attracting new customers and establishing a positive cycle of customer retention and acquisition.

In the contemporary business landscape characterized by intense competition and a plethora of consumer options, high-quality service emerges as a distinguishing factor capable of establishing a brand's unique position. The provision of high service quality has been shown to decrease customer complaints and problems, hence leading to a reduction in the rate of customer turnover and the expenses incurred in attracting new customers. Moreover, when a service failure arises, the provision of exceptional service quality in addressing the matter may effectively bolster client loyalty, as patrons value a business that assumes accountability and promptly resolves any concerns. The correlation between service quality and customer retention is emphasized by the observation that the cost of acquiring new customers is often considerably higher than that of retaining current ones. Consequently, prioritizing the enhancement of service quality becomes a crucial strategic necessity for ensuring long-term business expansion and profitability. The importance of maintaining a high level of service quality is readily apparent as it plays a crucial role in fostering the retention of

customers. This connection is rooted in the fundamental concepts of consumer satisfaction and loyalty. Li et al. (2019) suggest that when employees embrace the principles of overall quality management, there is an increased emphasis on meeting customer needs and preferences, resulting in enhanced service quality.

Moreover, Sampaio et al. (2019) found that service quality partially mediated the relationship between market orientation and business performance. Market orientation, akin to TQM, places significant emphasis on the adoption of customer-centric strategies and practices.

TQM is a widely acknowledged strategic approach that prioritizes the ongoing enhancement of organizational processes, customer contentment, and overall business efficacy (García-Alcaraz et al., 2021; Hussain & Khan, 2020). The concept encompasses a variety of practices such as process improvement, employee engagement, customer-centricity, and quality assessment. Prior studies have emphasized the beneficial effects of TQM on a range of outcomes, such as customer satisfaction and organizational performance (Ezenyilimba et al., 2019; Shafiq et al., 2019). Nevertheless, research has been scarce focusing on the precise mechanism by which TQM affects customer retention (Ali & Johl, 2022; Le, 2023). The significance of service quality cannot be overstated in its impact on customer satisfaction and loyalty. The concept of service quality refers to the assessments customers make regarding the overall degree of excellence or superiority demonstrated by an organization in providing its services (Khalid et al., 2019).

A substantial body of scholarly literature has demonstrated the importance of service quality as a mediator in the association between various antecedents and customer outcomes. Sadeh and Garkaz (2015) furnished compelling evidence that substantiates the pivotal function of service quality as a substantial mediator within the intricate nexus connecting quality management motivators and the attainment of satisfaction. The incorporation and execution of TQM practices within an enterprise can yield amplified levels of service excellence, thereby leading to heightened degrees of customer contentment and loyalty. As per Yap and

Kew (2007), a discernible and unequivocal association can be observed between the caliber of service rendered and the contentment experienced by customers. This, in turn, positively influences customers' intentions to revisit and engage in future transactions. The empirical findings by Kuo et al. (2018) provide substantial validation for the notion that service quality significantly impacts both customer satisfaction and loyalty. Moreover, it has been empirically demonstrated that the correlation between gratification and fidelity is contingent upon the subjective assessment of the service's worth. The study presents a comprehensive collection of empirical evidence that substantiates the proposition that the level of service excellence assumes a mediating function in the intricate interplay between antecedent factors and the ultimate outcomes experienced by customers.

The concept of customer complaint management pertains to the organizational capacity to proficiently and expeditiously attend to and rectify customer grievances or occurrences of service inadequacy (Awa et al., 2021; Homburg & Fürst, 2005). The procedure involves the identification and acknowledgment of customer grievances, the provision of appropriate remedies, and the assurance of customer satisfaction. The significance of effectively overseeing grievances cannot be overemphasized, as it is pivotal in converting dissatisfied clientele into devoted advocates (Basari & Shamsudin, 2020). The implementation of this strategy has the potential to effectively restore customer trust, minimize the adverse consequences of service failures, and improve the overall customer experience. Morgeson III et al. (2020) indicated that effective complaint handling has a positive influence on the development of customer loyalty. This suggests that the management of customer complaints functions as a moderating variable, amplifying the positive impact of service quality on customers' propensity to maintain loyalty toward the organization. Iqbal et al. (2017) revealed that how complaints are addressed positively impacts the connection between the quality of service provided and the loyalty of customers. Implementing efficient complaint management practices contributes to improving customer satisfaction and loyalty through the acknowledgment and resolution of customer issues in a satisfactory manner. Moreover, Abbasi et al. (2023) delved into

the moderating influence of complaint handling in relation to brand antipathy within the framework of cancel culture. Although the study did not specifically focus on customer retention, it provided valuable insights into the wider implications of complaint handling on customer perceptions and attitudes.

Service quality is the fundamental TQM practice that affects customer retention (Aburayya et al., 2020). Service quality is an organization's ability to satisfy customers. Research shows that high-quality service providers have higher client satisfaction, loyalty, and retention rates (Alzoubi et al., 2020; Pérez-Morón et al., 2022). Thus, organizations seeking customer retention and a competitive edge must grasp how TQM standards improve service quality. TQM emphasizes customer satisfaction and complaint management (Ugboro & Obeng, 2000). Customer complaints are unavoidable in any business and can be used to improve service and satisfaction with customers. Effective complaint handling shows the organization's dedication to addressing customer complaints and resolving issues quickly, retaining customers. TQM may improve customer retention by quickly acknowledging, investigating, and resolving issues (Pattanayak et al., 2017; Su et al., 2010). Implementing efficient complaint-handling procedures has been shown to positively impact customer satisfaction, as it helps to alleviate negative experiences and cultivate loyalty, even when service failures occur. Organizations must give precedence to the establishment of comprehensive complaint-handling procedures to proficiently address customer grievances and guarantee optimal service recovery, thus enhancing customer retention.

Several previous studies emphasize the significance of customer complaint handling as a moderating factor in the correlation between service quality and customer retention.

This study aims to investigate the influence of quality management on customer satisfaction and retention within the healthcare sector in Jordan. By understanding how TQM practices can enhance the quality of service and customer complaint management, organizations can formulate strategies to augment customer retention rates

and establish a durable competitive edge. The hypotheses are as follows:

*H1: TQM influences service quality.*

*H2: Service quality influences customer retention.*

*H3: Service quality mediates the relationship between TQM and customer retention.*

*H4: Customer complaint handling moderates the effect of service quality on customer retention.*

## 2. METHODOLOGY

The study utilized a quantitative research approach to achieve its stated objectives. Measurement scales were derived from previously conducted studies to assess the validity of the proposed model. In order to maintain linguistic equivalence, a meticulous translation procedure was implemented using established protocols (Brislin, 1970). This involved translating the text from English to Arabic and back-translating it to ensure lexical congruence. Based on the report released by the Ministry of Health (2023) in 2023, the number of private hospitals in Jordan amounted to 71. However, the city of Amman was the sole geographic area covered by this study. The study sample consisted exclusively of employees from the eight private hospitals within the area of focus. The paper utilized a convenience sampling method to enlist participants, considering practical factors and ease of access. In order to adhere to the ethical standards of research, participants were provided with guarantees of confidentiality and anonymity. Participants were duly notified that their responses would be utilized solely for research, and their involvement in the study was voluntary, allowing them to withdraw their participation at any given point. 540 questionnaires were distributed to the HR management of private hospitals, requesting their assistance in distributing them to the intended sample. 432 questionnaires were collected, and after conducting a screening process, 417 valid responses remained for the final analysis. Some responses were excluded due to insufficient data.

TQM was examined using a set of 18 items based on Ahire et al. (1996) and Das et al. (2008). The key

areas of interest encompassed dimensions such as the unwavering dedication of leadership toward quality, the pursuit of continuous improvement, a strong emphasis on customer-centricity, effective process management, efficient supplier quality management, meticulous handling of quality data and reporting, and active involvement of employees in quality-related endeavors. The evaluation of service quality was carried out utilizing a series of 15 inquiries, which were derived from the investigations conducted by Dagger et al. (2007) and Yang et al. (2004). The components above were meticulously designed to encompass a diverse array of service quality facets, including but not limited to responsiveness, reliability, certainty, empathy, and tangibles. Moreover, customer retention was assessed using a collection of 13 items derived from Hennig-Thurau and Klee (1997) and Verhoef (2003). The comprehensive instrument encompassed a multitude of variables, including client satisfaction, perceived value, trustworthiness, brand loyalty, and the likelihood of future acquisitions. Customer complaint handling was measured by 8 items, as delineated by Kumari et al. (2021) and Homburg and Fürst (2005). The primary areas of concern encompassed the expeditiousness of response, equitable treatment, contentment with the resolution, and the display of empathy throughout the process of addressing grievances. In this context, it would be prudent to consider the utilization of a Likert scale as a means to evaluate and gauge employees' perceptions within the hospitals.

The healthcare sector in Jordan invests more in essential services and organizational outcomes that are trying to get them, like service quality and customer retention, to obtain a business edge over the market competition. The research sample frame was employees in private hospitals in Jordan, which contribute to the national economy. The study applied a purposive sampling method to select the target sample by G\*Power software that was selected to calculate the minimum sample size and run the analysis with a significance level of 0.05; the sample size needed to conduct this analysis was 417. Moreover, the study increased the sample size as suggested to reduce the possible errors about the sample size and avoid the non-responses cases. The description of respondents' profiles is given in Table 1.

**Table 1.** Sample demographics

Demographic	Options	Frequency
Gender	Male	280
	Female	137
Age	25-35 years	81
	36-45 years	130
	46-55 years	99
	Above 55 years	107
Education	Diploma and less	194
	Bachelor	145
	Higher studies	78

### 3. RESULTS

The study used the second-generation structural equation modeling approach, a proxy measure established to quantify the unobservable constructs. The SEM method considers the first-generation analysis model, such as regression, which can assess estimation and indicator errors. The SEM approach can also epitomize data analysis techniques, which assess the proposed framework and test the hypotheses using causal models (Koran & Hancock, 2010). The evidence indicated that the SEM method has some important streams, including covariance-based SEM that is conducted to confirm the theory foundation and the approach of PLS-SEM is conducted in order to explore the relations based on the theoretical basis and for prediction purposes (Hair et al., 2016). The paper applied the technique of PLS-SEM to stress the prediction and explain the variances in the dependent variable; in addition, this method can work with a small sample size without data normality assumption (Sarstedt et al., 2021). It is also concerned with the causal prediction used to evaluate the predictive quality of the endogenous constructs, so this analysis is concerned with PLS-SEM for these reasons.

Furthermore, this study used a method related to common bias that is widely used to detect the issues regarding bias and explain the variance through acceptable outcomes (i.e., 50%). The study used the variance inflation factor (VIF) to examine and consider collinearity issues through the SmartPLS software. VIF values that come less than 3.0 are considered acceptable (Podsakoff et al., 2003). A suggestion about the collinearity using VIF by Bagozzi et al. (1991) is stated once the correlation between the construct is greater than 0.9, which means evidence of common bias; the study results revealed no correlation among the study variables.

### 3.1. Measurement model analysis

The study derived the key constructs from the relevant research to measure these constructs with validated items. TQM practices (independent variable) were measured by using eighteen items. Fifteen items measured service quality (mediator). The customer complaint handling

(moderator) was measured using eight items, and customer retention (dependent variable) used thirteen items. The results of the measurement model, including the reliability of the measure using factor loadings, Cronbach's alpha, composite reliability (CR), average variance extracted (AVE), and VIF, are shown in Table 2.

**Table 2.** Measurement model results

Construct	Item	Loading	Alpha	CR	AVE	VIF
TQM practices	Q1	0.76	0.96	0.96	0.60	2.44
	Q2	0.77				
	Q3	0.75				
	Q4	0.73				
	Q5	0.74				
	Q6	0.76				
	Q7	0.76				
	Q8	0.76				
	Q9	0.75				
	Q10	0.75				
	Q11	0.81				
	Q12	0.79				
	Q13	0.84				
	Q14	0.77				
	Q15	0.80				
	Q16	0.71				
	Q17	0.79				
	Q18	Deleted <0.60				
Service quality	Q19	0.77	0.94	0.95	0.58	2.50
	Q20	0.76				
	Q21	0.80				
	Q22	0.83				
	Q23	0.80				
	Q24	0.81				
	Q25	0.77				
	Q26	0.77				
	Q27	0.85				
	Q28	0.68				
	Q29	0.81				
	Q30	0.64				
	Q31	Deleted <0.60				
	Q32	0.64				
	Q33	0.68				
Customer retention	Q34	0.68	0.95	0.96	0.67	2.01
	Q35	0.78				
	Q36	0.74				
	Q37	0.83				
	Q38	0.82				
	Q39	0.76				
	Q40	0.85				
	Q41	0.85				
	Q42	0.86				
	Q43	0.84				
	Q44	0.90				
	Q45	0.85				
	Q46	Deleted <0.60				
Customer complaint handling	Q47	Deleted <0.60	0.84	0.89	0.61	2.77
	Q48	Deleted <0.60				
	Q49	0.81				
	Q50	0.74				
	Q51	0.80				
	Q52	0.84				
	Q53	0.70				
	Q54	Deleted <0.60				

**Table 3.** Discriminant validity

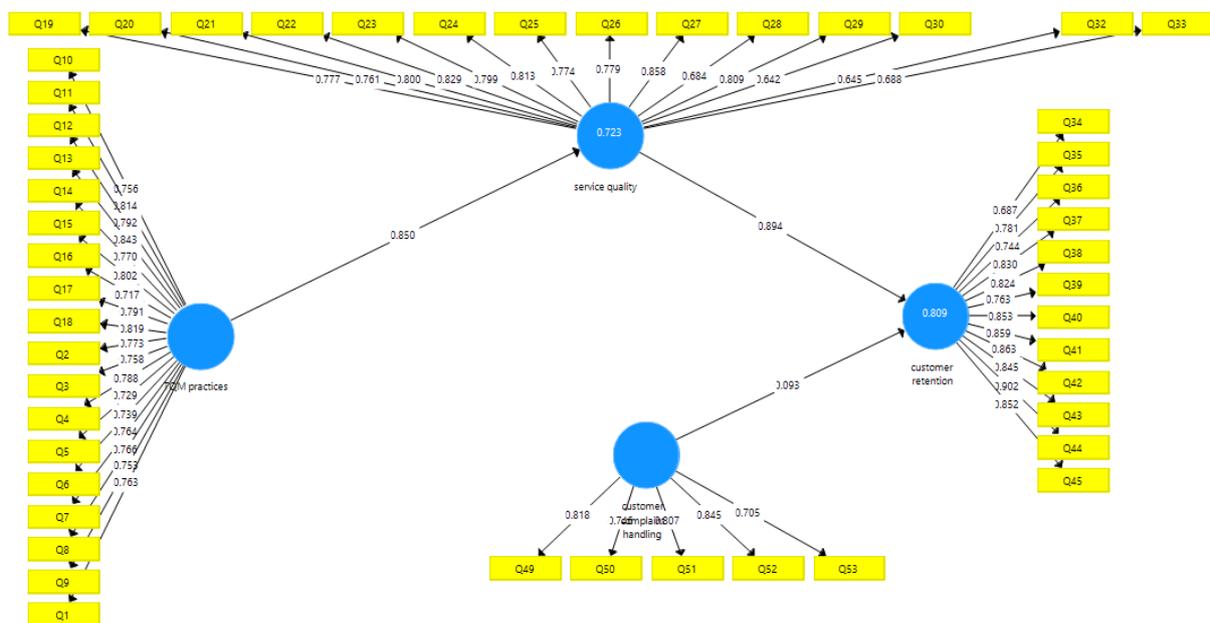
	TQM practices	Customer complaint handling	Customer retention	Service quality
TQM practices	0.775			
Customer complaint handling	0.039	0.786		
Customer retention	0.648	0.397	0.895	
Service quality	0.450	0.504	0.819	0.764

As indicated by Hair et al. (2016), the SEM analysis processes require key streams of analysis with a two-step approach through the SEM method by SmartPLS. Firstly, the study should assess the measurement model by using the common indicators and tests, including the loadings of the items, their reliability, and variance, as given in Table 2. Mostly, the study adopted the threshold of >0.60 value of factor loadings of the items to be accepted and skipped the lower loadings of this value. Based on the initial findings, the study removed six items that did not achieve the satisfactory levels of this analysis. The reliability issue through the alpha criteria showed reliable scales of the study measurements mainly used to assess the reliability (Kilic, 2016). Another vital reliability measure is CR, which checked the constructs' internal consistency with greater values of more than 0.70; the variance criteria through AVE addressed convergent validity ( $\geq 0.5$ ). On the other hand, the criteria of Fornell and Larcker were considered to check this validity and assess if the AVE's square root of a construct exceeds the shared correlation with different constructs. The results of this test are given in Table 3 and Figure 1.

Bootstrapping through the PLS-SEM process evaluated the prediction of the structural model (Streukens & Leroi-Werelds, 2016). Testing the structural model requires examining the path coefficient, significance level, and coefficient of determination ( $R^2$ ). According to Cohen (1992), the coefficient of determination ranged above 0.60 is substantial, above 0.33 is moderate, and above 0.19 is weak.

### 3.2. Structural model analysis

In the SmartPLS-SEM, the measures of goodness are not agreed upon. Hair et al. (2019) discussed this aspect and used PLS-SEM at SmartPLS to test a theory. The methods that endorse the aspect of the goodness of the measure through PLS-SEM, according to Henseler (2017), include the measure of standardized root mean square residual SRMR that generally evaluates the goodness of fit. The findings of SRMR showed a value of 0.066, which is acceptable ( $< 0.08$ ) (Hair et al., 2019). Table 4 and Figure 2 show testing the research hypotheses through the PLS bootstrap-



**Figure 1.** Measurement model

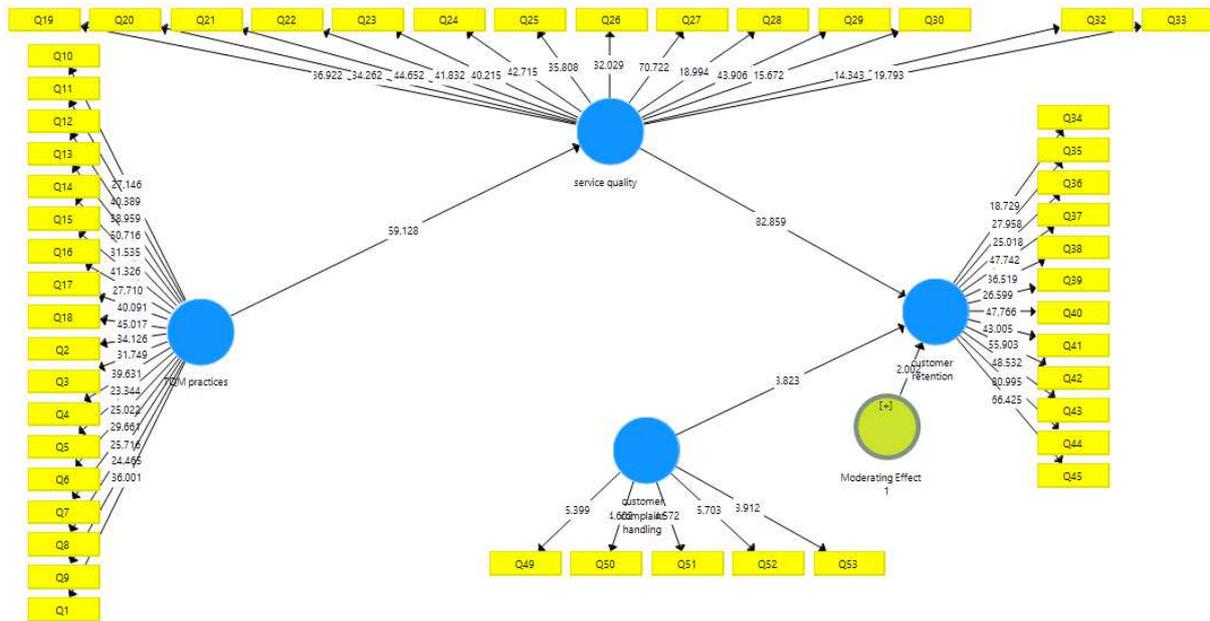


Figure 2. Structural equation modeling

Table 4. Hypotheses testing

Hypothesis	Coefficient	Mean	SD	t-value	Result
H1	0.850	0.853	0.015	56.712	Accepted
H2	0.894	0.893	0.011	83.631	Accepted
H3	0.760	0.761	0.019	40.457	Accepted
H4	0.044	0.040	0.022	2.002	Accepted

ping findings; the results confirmed and accepted all hypotheses based on the criteria of t-value > 1.96 and p-value < 0.05. H1 is accepted as TQM practices influence service quality ( $\beta = 0.850, p = 0.001$ ). Furthermore, an influence was evidenced of service quality on customer retention ( $\beta = 0.894, p = 0.001$ ), supporting H2.

Moreover, the results found that service quality significantly mediates the relationship between TQM practices and customer retention ( $\beta = 0.760, p = 0.001$ ), thus supporting H3. In addition, H4 was also accepted because customer complaint handling significantly moderates the effect of service quality on customer retention ( $\beta = 0.044, p = 0.046$ ).  $R^2$  showed the changes in customer retention because of TQM practices with 81%; meanwhile, the changes in TQM practices based on the results of total effect resulted in a 75% change in customer retention. The results of hypotheses testing revealed a significant influence of TQM practices on firms' service quality. Moreover, with the inclusion of the mediator (service quality), the influence of TQM practices on customer retention

was significant, and the indirect effect through service quality was also significant.

## 4. DISCUSSION

This study contributes to the existing literature by thoroughly analyzing the interconnected variables and providing valuable insights into the enhancement of operational strategies in healthcare organizations in Jordan. The focus was on achieving exceptional service delivery and fostering long-term client relationships. The first hypothesis investigated the impact of TQM on the quality of service.

The first hypothesis was determined to be substantiated, suggesting that adopting TQM approaches favorably impacts the degree of service quality inside healthcare institutions. The outcome above aligns with the existing corpus of scholarly literature about the subject matter. Pattanayak et al. (2017) offer empirical support for the claim that the implementation of TQM has a notable influence

on the quality of services. Furthermore, Aburayya et al. (2020) demonstrated a noteworthy and beneficial association between the implementation of TQM strategies and the standard of service quality. Furthermore, within a comparable setting of the service business, Harimurti and Suryani (2019) found that TQM has a favorable impact on service quality. The dominant theory posits that implementing TQM is important to improve service quality within organizational settings.

The second hypothesis examined the potential link between service quality and client retention. The findings revealed a statistically significant and positive correlation between the quality of service and client retention, lending credence to the acceptance of the hypothesis. This finding aligns with the findings reported by Permana et al. (2021), who conducted a comprehensive review of the existing scholarly works pertaining to the adoption and execution of TQM. In addition, Balinado et al. (2021) supported the notion that service quality plays a pivotal role in shaping customer satisfaction. The validation of this hypothesis underscores the significance of delivering superior services as a strategy for sustaining client loyalty across diverse industries.

The third hypothesis investigates the mediating role of service quality in the relationship between TQM and customer retention. The findings of this hypothesis were supported, which suggests that service quality mediates the relationship between

TQM and customer retention. These results support Sadeh and Garkaz (2015), who found the relationship between quality management enablers and satisfaction levels and demonstrated that service quality mediated this relationship. In addition, Sampaio et al. (2019) provide empirical evidence to support that service quality is a mediator in the relationship between market orientation and business performance. Also, Li et al. (2019) discovered that service quality is a mediator in influencing the relationship between employee customer orientation and customer satisfaction.

The fourth hypothesis was to investigate the potential moderating effect of customer complaint handling on the relationship between service quality and customer retention. The research findings offer empirical support for the hypothesis positing that effectively addressing customer complaints plays a significant role in mitigating the impact of service quality on customer retention. The study results exhibit similarity to the findings of Iqbal et al. (2017), who reported congruent outcomes. Furthermore, Morgeson III et al. (2020) supported the notion that the management of complaints moderates the relationship between consumers who express their grievances and their subsequent loyalty to the organization. The present study revealed that customers who expressed their issues exhibited higher loyalty toward the organization after implementing enhanced complaint management strategies.

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## CONCLUSION

This study examined the link among total quality management, service quality, customer retention, and the moderating impact of customer complaint handling within the healthcare sector in Jordan. The study results provided evidence supporting the positive influence of total quality management on service quality. It indicated that healthcare organizations that adopt total quality management principles are more likely to deliver healthcare services of higher quality. Moreover, it has been established that the level of service provided plays a pivotal role in influencing customer retention, highlighting the importance of consistently providing outstanding healthcare experiences to foster customer loyalty. Furthermore, the study results emphasized the mediating role of service quality, highlighting its importance as a crucial link between total quality management and customer retention. This underscores the significance of prioritizing endeavors focused on enhancing service quality to augment customer retention within the healthcare sector. The study results also revealed the moderating effect of customer complaint handling on the relationship between service quality and customer retention.

The study results underscore the importance of integrating total quality management practices, particularly in relation to enhancing service quality and implementing efficient protocols for handling

customer complaints. These measures are intended to bolster customer relationships and encourage customer loyalty by strongly emphasizing customer-centric care and cultivating a culture of ongoing improvement.

Nevertheless, it is imperative to recognize certain limitations. The study was carried out within the framework of the healthcare sector in Jordan, and the results may not be fully applicable to other industries or healthcare environments in diverse countries. Moreover, using cross-sectional data presents difficulties in identifying causal links and documenting the temporal progression of these components. The use of self-reported data, which is susceptible to social desirability bias, presents possible constraints in terms of measurement. In order to rectify these limitations, forthcoming research should delve into comparative analyses encompassing a wide range of industries and healthcare systems. Employing longitudinal designs to evaluate the sustainability of the phenomena under investigation would be advantageous.

Furthermore, incorporating qualitative methodologies would provide more profound insights into the subject matter. Incorporating mediation and moderation analyses is advisable to brighten the underlying mechanisms under investigation. Additionally, the implementation of intervention studies inside healthcare settings has the potential to bridge the divide between theoretical concepts and practical applications. These studies may provide tangible suggestions for healthcare organizations seeking to improve service quality, effectively manage complaints, and retain customers.

## AUTHOR CONTRIBUTIONS

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