Management & Economics Research Journal
ISSN 2710-8856
ISSN 2676-184X
University of Djelfa - Algeria
https://www.asjp.cerist.dz/en/PresentationRevue/615

Vol. 07 No. 01 (2025). P. 51-68

Impact of service quality on customer-based brand equity: A sample study of patients at the private healthcare facility Fatima AL-Azhar in the City of Algiers

Messaouda MEZINE* (1)
mezine.messaouda@cuniv-tissemsilt.dz
Tissemsilt University (Algeria)

Hanane DAHMANI (2)
ayaboulila2014@gmail.com
Bouira University, (Algeria)

Moussa BOUNOUIRA (3)
mrbounouiramoussa@hotmail.com
Tissemsilt University (Algeria)

Received : 30/01/2024 Accepted : 15/04/2025

Abstract

This study investigates the impact of service quality on customer-based brand equity, with a focus on dimensions such as reliability, tangibility, responsiveness, security, and empathy. Data was gathered through a field survey involving 57 in-patients at the private clinic 'Fatima Al-Azhar' in Algeria. Statistical analysis, including simple linear regression and multiple linear regression, was conducted using SPSS v26 to test hypotheses.

The study reveals a strong positive correlation between service quality and customer-based brand equity, leading to the rejection of the null hypothesis in favour of the alternative hypothesis. Notably, the security dimension emerged as the primary driver of customer-based brand equity.

Keywords: Service quality, customer-based brand equity, Fatima Al-Azhar Clinic

* *Corresponding author:*

1. INTRODUCTION

Service institutions in the current business environment face various challenges, with intensified competition being one of the most significant. The role of the customer has grown, becoming the primary focal point for planning, marketing activities, and goal setting. Customer requirements and preferences have undergone a qualitative leap, particularly in terms of high-quality standards, and they are no longer satisfied with anything that does not align with these requirements. This has become a significant incentive for these institutions to make radical changes and implement rapid procedures to adapt to these challenges. They are actively searching for mechanisms to achieve competitive superiority and stand out from their competitors within their industry sector. Consequently, building brand equity has become a strategic priority for any marketing activity in service institutions. They are keen on creating a distinctive brand that sets them apart from competitors and resonates with consumers who have their own criteria for distinguishing among various institutions and choosing the most suitable one for them.

In the field of healthcare marketing, the quality of healthcare services and related offerings is considered one of the most critical issues facing healthcare institutions of various types, especially in the private sector. Recently, they have adopted marketing concepts in their pursuit of strategic objectives, given the sector's importance, direct impact on individuals' lives, and the societal significance of health. This necessitates providing high-quality healthcare services and elevating performance levels to align with the expectations of consumers (patients), meeting their needs and desires. Consequently, healthcare institutions, like other organisations, strive to build their identity by acquiring a strong and distinctive brand, enabling them to connect with patients who have their own criteria for distinguishing among different institutions and choosing the most suitable one for them. Here, the concept of brand equity for the

patient becomes evident as one of the factors influencing their choice of an institution. They refer to it when deciding which organisation to engage with, believing that it is capable of meeting their needs. This decision-making process involves comparing the quality of services offered, the strength of the brand, and its value in the eyes of the patient.

This research paper aims to achieve multiple objectives. Firstly, we seek to define the concepts of service quality and customer-based brand equity. Secondly, our goal is to investigate the relationship and impact that connect the factors contributing to service quality and the determinants of customer-based brand equity at Fatima Al-Azhar Clinic. This study will approach this topic from various perspectives through conducting patients' opinion surveys at the clinic, with a focus on the following main question:

Does service quality impact customer-based brand value among Fatima Al-Azhar Clinic's patients?

2. HYPOTHESIS:

Main hypothesis:

H0: There is no statistically significant effect of service quality on customer-based brand equity.

H: There is a statistically significant effect of service quality on customer-based brand equity.

H1: There is a statistically significant effect of Reliability on customer-based brand equity.

H2: There is a statistically significant effect of Tangibility on customer-based brand equity.

H3: There is a statistically significant effect of Responsiveness on Customer based brand equity.

H4: There is a statistically significant effect of Security on customer-based brand equity.

H5: There is a statistically significant effect of Sympathy on customer-based brand equity.

3. STUDY OBJECTIVES:

Through this study, we aim to achieve a set of objectives outlined as follows:

- Understanding the study's concepts related to service quality and customer-based brand equity;

- Determining the strength and type of relationship between service quality and customer-based brand equity;

- Assessing the extent to which "Fatima Al-Azhar Clinic" applies quality standards in delivering its services;

- Investigating the opinions of beneficiaries of "Fatima Al-Azhar Clinic" regarding the level of service quality provided to them and their evaluation of it;

- Determining how the quality of services provided by healthcare institutions affects building Customer based brand equity.

4. STUDY IMPORTANCE:

The importance of this study lies in the significance assigned by scholars and practitioners to the concept of service quality as a new marketing approach. The study explores how to build brand equity centred around the customer to retain them for an extended period. This necessitates the integration of quality dimensions into the organisation’s activities, recognised as one of the most effective and expedient

ways to establish profitable customer relationships. Additionally, it facilitates business performance and ensures value realisation for both parties involved in the transaction.

5. CONCEPTS OF THE STUDY:

5.1. Service Quality Concept:

5.1.1. Service

The definition of services varies between researchers, reflecting different perspectives, services are deeds, processes, and performances (WILSON, ZEITHAML, BITNER, & D.GREMLER, 2016, p. 44), Kotler and others define services as activities or benefits provided from one party to another, primarily intangible, and not resulting in ownership transfer, with the possibility of being linked to a tangible product (KOTLER, Kevin KELLER, MANCEAU, & HEMONNET, 2019, p. 386). From the "a creation of customer value" perspective, services are economic activity aimed at producing value and satisfying customer needs in a specific time and place to achieve the desired change by the customer (LAPERT, 2005, p. 14), Services are transactions in which one party provides goods or services to another. These performances, which are frequently time-based, result in the anticipated outcomes for the objects, receivers. Service consumers demand value from access to labour, skills, knowledge, items, facilities, networks, and systems in return for payment of money, time, and effort (WIRTZ & LOVELOCK, 2021, p. 6)

It is worth noting that the service has several characteristics, including:

***Intangibility:** Services, in contrast to tangible commodities, are typically not able to be seen, tested, touched, heard, or smelled prior to consumption. Before, during, and perhaps even after the service delivery, the potential consumer frequently cannot perceive the service. For example, many clients of auto repair regard auto repair as a

completely intangible service; they frequently are unable to see what is being done and many are unable to assess what has been done (MUDIE & PIRRIE, 2006, p. 3).

***Perishability:** Services are perishable, meaning they cannot be stored or saved for future use (KOTLER, Kevin KELLER, MANCEAU, & HEMONNET, 2019, p. 392)

***Inseparability:** refers to the simultaneous production and consumption of services, often involving direct interaction between the service provider and the customer (LEVELOCK & GUMMESSON, 2004, p. 27)

***Heterogeneity:** Services are heterogeneous or variable in nature, as the quality and consistency of service delivery can vary from one interaction to another, based to Fitzsimmons (2011), The combination of the intangible nature of services and the active involvement of customers in the service delivery process leads to variations in the quality of service experienced by different customers. Nevertheless, the interaction between customers and service providers in the service industry offers the potential for a more fulfilling customer working experience (Fitzsimmons & Fitzsimmons, 2011, p. 21)

***Customer Participation:** Many services require customer participation in the delivery process, making customers part of the service production, according Fitzsimmons (2011), The involvement of the customer as a participant in the service process necessitates a rigorous focus on facility design, a dimension that distinguishes it from traditional manufacturing operations. Within the domain of services, the customer's experience unfolds in the front office of the service facility, and the quality of service is significantly enhanced when the facility's design is approached from the customer's viewpoint (Fitzsimmons & Fitzsimmons, 2011, p. 18)

5.1.2. Service Quality:

Michael Parasuraman suggests that the quality of service arises from the interaction between a customer's expectations and their real-time experience during the service encounter, and he defined service quality as a global judgment, or attitude relating to the superiority of service (PARASURMAN, ZEITHAML, & BERRY, 1988, p. 16)

Service quality constitutes a specific assessment centred around the customer's viewpoint regarding reliability, assurance, responsiveness, tangibles, and empathy. Conversely, satisfaction presents a broader scope, encompassing perceptions of service quality, product quality, pricing, in addition to situational and personal factors (ZEITHAML, BITNER, & GREMLER, 2018, p. 79), Kotler an all (2019) add that The quality of services is achieved through a careful analysis of customer expectations and an examination of critical points that may lead to dissatisfaction (KOTLER, Kevin KELLER, MANCEAU, & HEMONNET, 2019, p. 410)

These definitions underscore the multifaceted nature of service quality assessment, which plays a pivotal role in understanding and improving customer satisfaction.

5.1.3. Service quality dimensions:

* **Tangibility:** This dimension deals with how staff, equipment, communication materials, and service facilities physically look. It covers things like personnel professionalism, attractiveness, cleanliness, and the actual space where the service is provided (PARASURMAN, ZEITHAML, & BERRY, 1988, p. 23)

***Reliability:** The capacity of the service provider to provide dependable and consistent services is related to reliability. It includes things like providing services as promised, precisely and on schedule, maintaining a high standard of service quality, and not having any mistakes or malfunctions in the system (PARASURMAN, ZEITHAML, & BERRY, 1988, p. 23)

* **Responsiveness:** The capacity and willingness of service providers to help clients quickly is the main emphasis of responsiveness. It takes into account elements like promptness, readiness to assist, and attentiveness while responding to questions or concerns from customers (PARASURMAN, ZEITHAML, & BERRY, 1988, p. 23)

* **Assurance:** Assurance is the term used to describe the faith and confidence clients feel in the skill and reliability of service providers. It includes things like employee competency, their capacity to inspire confidence in others, and their ability to give clients accurate and clear information (PARASURMAN, ZEITHAML, & BERRY, 1988, p. 23)

***Empathy:** The factor known as empathy is used to evaluate how well service providers comprehend and show concern for the wants and worries of their clients. It encompasses things like staff members' empathy, their capacity to listen to clients, and their efforts to comprehend and meet the needs of individual customers (PARASURMAN, ZEITHAML, & BERRY, 1988, p. 23)

5.2. Customer- Based Brand Equity:

Aaker (1991) defines Customer-Based Brand Equity (CBBE) as the sum of assets and liabilities associated with a brand, including its name and symbols, which can be added to or subtracted from the values provided by the product or service to the organisation's customers. According to Aaker, these assets are comprised of four key components: brand awareness, brand associations, perceived quality, and brand loyalty (AAKER, 1991, p. 43). Keller (1993) defines Customer-Based Brand Equity (CBBE) as the distinctive impact of brand knowledge on consumer responses towards marketing endeavours. It underscores the additional value that a brand brings to a product or service. In essence, CBBE involves a consumer's responses to a specific element of the marketing mix pertaining to a brand when compared to their responses to an identical marketing mix element associated with a fictitious or unnamed version

of the product or service. Customer-Based Brand Equity is established when consumers are familiar with the brand and possess favourable, robust, and unique brand associations stored in their memory (KELLER K. L., 1993, p. 2) and Keller (2013) adds that further emphasises CBBE's power to influence consumer choice, foster loyalty, and shape purchasing decisions (KELLER K. L., 2013, p. 69). Hollensen also adds that brand equity represents the difference in value that both consumers and sellers are willing to pay for a product or service in relation to their satisfaction with the perceived benefits and image of the brand. Consequently, brand equity reflects the strength and depth of the relationship between the brand and its users, as strong brands are likely to be purchased regardless of their cost or market conditions (HOLLENSEN, 2004, p. 468)

Through these definitions, these researchers emphasise the importance of building Customer-Based Brand Equity and its strength in influencing consumer choices, shaping purchase decisions, and enhancing loyalty

5.2.1. Customer based- brand equity determinants:

According to Aaker's model, brand equity has four fundamental dimensions, which are:

***Brand Awareness:** According to AAKER Brand awareness is the customer's ability to recognise the brand, recall it in their mind, and distinguish it from competing brands in various circumstances (KELLER K. L., 1993, p. 2)

***Brand Associations:** Aaker defined brand associations as anything connected to the brand in one's memory, shaping the brand's mental perception (AAKER, 1991, p. 115). In this regard, Aaker also explained that mental associations form the brand's mental image.

***Perceived Quality:** According to Aaker (1991) perceived quality is the customers' perception of the overall quality or excellence of a product or service concerning its intended use, when compared to available alternatives (AAKER, 1991, p. 85)

***Brand Loyalty:** The degree of customer loyalty and their sustained preference for a particular brand over alternatives can be affected by various factors, such as their current deposit situation and the influence of marketing initiatives, all of which have the potential to induce switching behaviour (OLIVER, 1999, p. 34)

6. FIELD STUDY:

6.1. Population Study:

The field study was conducted at Fatima Al-Azhar Clinic in Algiers spanning the period from May 3, 2023 to June 28, 2023, the population study consists of in-patients at the hospital and patients who visit the clinic regularly for radiation therapy treatment totalling 337 individuals according to the records maintained by the Reception Department. A total of 57 patients took part in the study which is 16.91% of the total number of patients distributed among the different clinic departments.

6.2. Data collection tools:

The questionnaire was developed based on previous studies that addressed the variables study, the study variables scale aims to measure the variables dimensions as indicated in table 1:

Table 1 : variables scale

	Study variables				
	Service quality scale			Customer based brand equity scale	
Dimensions	Reliability Tangibility Responsiveness Assurance Empathy	5 items 5 items 3 items 3 items 4 items	The Independent Variable	Cbbe was measured with overall scale by 8 items	The dependent variable
	Total of items	20 items		8 items	
Source of items	Fayez Bassam Fayez Shriedeh 2020			Yousfi Radhia 2021/2021	

6.3. Study Framework:

Fig 1: Study Framework

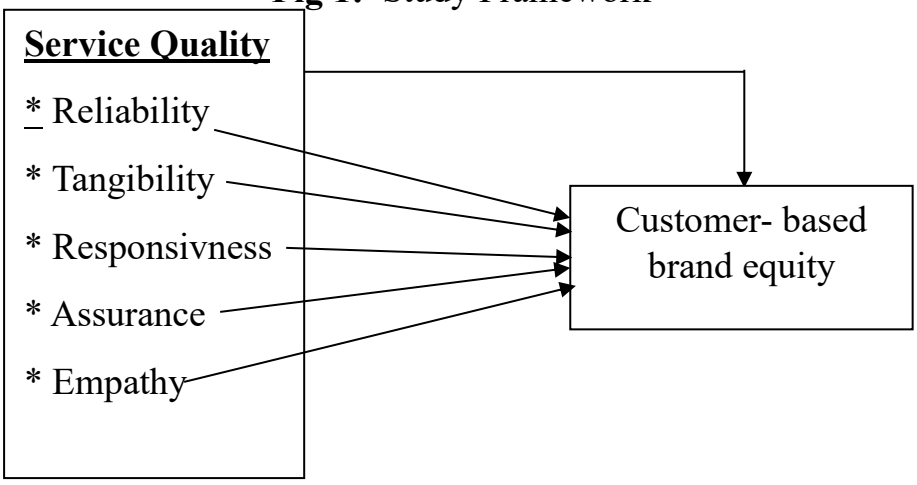


Table 2: Validity and Reliability test

Variables	N° of Items	Reliability (Cronbach' Alpha)	Validity (R Person)
Reliability (RE)	05	0.751	0.709**
Tangibility (TA)	05	0.663	0.605**
Responsiveness (RS)	03	0.646	0.549**
Assurance (AS)	03	0.590	0.747**

Empathy (EM)	04	0.593	0.646**
Service quality	20	0.888	0.592**
Brand equity	08	0.778	0.685**
Overall scale	28	0.909	/

Results from SPSS V26 ouputs

Note : *p < 0.05, **p < 0.01

Based on the results pertaining to the validity and reliability of the scales along with their respective dimensions, the findings indicate that the tool possesses the fundamental psychometric characteristics necessary for the utilisation of its data and the confirmation of the hypotheses that have been put forward.

Table 3 : Sample Characteristics Analysis

Characteristics		Frequency	Percentage
Gender	Male Female	21 36	36.8% 63.2%
Age	18 – 28 29 - 39 40 – 50 51 – 61 + 61	3 7 15 12 20	5.29% 12.3% 26.3% 21.1% 35.1%
Academic level	Elementary school Middle school High school University	10 13 12 22	17.5% 22.8% 21.1% 38.6%
Income	Less than 20000 20000 – 32000 32001 – 44000 44001 – 56000 + 56000	8 10 8 8 23	14% 17.5% 14% 14% 40.4%
Total		57	100%

Results from SPSS V26 outputs

7. RESULT AND DISCUSSION :

7.1. Data analysis

To analyse our findings, we used SPSS V 26 for analysing the multiple linear regression used to test the research hypotheses, as well as Pearson correlation analysis and the Cronbach's alpha coefficient to analyse the Reliability and Validity of the study scale.

Table 4 : Simple linear regression model

	B	SE	Beta	T	Sig	R
Constant	3.362	4.769	-	0.705	0.484	-
Service quality	0.346	0.053	0.663	6.574	0.000	0.663

Results from SPSS V26 outputs

The null hypothesis (H0) is that there is no relationship between service quality and Customer based brand equity. The alternative hypothesis (H) is that there is a relationship between them as follows:

H0: There is no statistically significant effect of service quality on customer-based brand equity.

H: There is a statistically significant effect of service quality on customer-based brand equity.

From the results of the table 5:

* The Beta value for Service quality is 0.663, indicating a positive effect of service quality on brand equity

* The p-value for Service quality is 0.000, meaning that the null hypothesis can be rejected with a high level of confidence

Based on the results, it can be concluded that there is a significant and positive impact of service quality on brand equity, therefore, we reject the null hypothesis (H0) and accept the alternative hypothesis (H).

Table 5: The significance (F) Of regression model

	DF	SS	MS	R^2	AR^2	F	Sig
Regression	5	481.155	96.231	0.529	0.483	11.452	**0.000
Residual	51	428.564	8.403				
Total	56	909.719					

Results from SPSS V26 outputs

Through the results indicated in table 5 F significance is 0.000 this means that the regression model is acceptable.

Table 6: The significance (T) Of regression model

	Coefficients	SE	T	Sig	Tolerance	VIF
Constant	3.438	4.873	0.705	0.484	-	-
Reliability	-0.112	0.256	0.435	0.665	0.458	2.181
Tangibility	0.453	0.274	1.650	0.105	0.483	2.070
Responsiveness	0.135	0.338	0.400	0.691	0.606	1.651
Assurance	1.457	0.327	4.461	*0.000	0.596	1.679
Empathy	0.185	0.269	0.686	0.496	0.596	1.677

Results from SPSS V26 outputs

Based on the results showed in table 6, there is only one statistically significant dimension which is Assurance with coefficient = 1.457 and Sig = 0.000 which is below α= 0.05, it is the sole independent variable with a substantial impact on the dependent variable Customer based brand equity and hence, there is a significance positive effect

between Assurance and Customer based brand equity, from this, sub- hypothesis H4 is confirmed as stated below:

H4: There is a statistically significant effect of Security on customer-based brand equity.

While the remaining independent variables: Reliability, Tangibility, Responsiveness and Empathy are not statistically significant because the sig=(0.665, 0.105, 0.691, 0.496)> 0.05 they do not have any impact on the overall model since the independent variables exhibit a stronger correlation among themselves than with customer based brand equity, and so, we reject the sub- hypotheses : H1, H2, H3 and H5 which are stated as shown below:

H1: There is a statistically significant effect of Reliability on customer-based brand equity.

H2: There is a statistically significant effect of Tangibility on customer-based brand equity.

H3: There is a statistically significant effect of Responsiveness on customer-based brand equity.

H5: There is a statistically significant effect of Empathy on customer-based brand equity.

However, they appear in the correlation matrix with a high percentage correlation.

7.2. Study recommendation:

We suggest to the officials at Fatima Al-Azhar Clinic to consistently strive for the continuous development of the healthcare services they provide and to continually improve their quality:

- The Clinic administrators should reconsider certain aspects based on the feedback received from participants during the data collection period, namely these involve

addressing the shortcomings in patients' complaints management and bridging the gap between the patients and the clinic staff by improving these latters' attentiveness to patients' concerns;

-A significant challenge lies in the building of connections between the clinic management and the patients' undergoing treatment, it is hence advised that doctors initiate and build relationships with patients and enhance communication with them with particular care to enquire about their conditions;

-In response to the majority of surveyed patients' requests, it is highly recommended that the facility acquires more advanced medical equipment.

7. CONCLUSION AND STUDY LIMITATIONS:

Our research goal was to study the impact of service quality on customer-based brand equity by attempting to understand the relationships between service quality as an independent variable with its dimensions which are: Reliability, Tangibility, responsiveness, Assurance and Empathy, and customer-based brand equity as the independent variable. To achieve this, we conducted a field study employing a quantitative approach relying on surveys as a means of data collection from patients of Fatima Al-Azhar Clinic in the city of Algiers which was built upon previous studies related to our research topic.

The most important findings of this study can be summarised as follows:

-There is a significant positive effect between service quality and customer-based brand equity;

- There is a strong correlation between service quality dimensions and customer-based brand equity;

- There is a statistically significant positive effect between Assurance and customer-based brand equity;

- There is no statistically significant effect between Reliability and customer-based brand equity;

- There is no statistically significant effect between Tangibility and customer-based brand equity;

- There is no statistically significant effect between Responsiveness and customer-based brand equity;

- There is no statistically significant effect between Empathy and customer-based brand equity.

, this study can serve as a gateway to future research endeavours, which can uncover additional aspects of service quality and its relationship with key determinants of customer- based brand equity, this can be achieved through the introduction of new variables namely:

- The mediating effect of customer satisfaction between service quality and customer-based brand equity;

- Impact of interactive conversation on brand equity development;

- Electronic service meeting as a moderator variable between service quality and brand equity.

8. BIBLIOGRAPHY LIST:

1. Books:

1. David Aaker (1991), Managing brand equity - Captualizing on the value of brand name, The Free Press, England**.**

2. Fitzsimmons, J. A; Fitzsimmons, M. J (2011), Service Management: Operations, Strategy, Information Technology, McGraw-Hill Education, USA.

3. HOLLENSEN, Sevend (2004), Global Marketing- A decision- oriented approach, Pearson education, Singapore.

4. Kivin Lane Keller (2013), Strategic Brand Management: Bulding, Measuring, and Managing Brand Equity, Pearson, England.

5. KOTLER, Philip; Kevin KELLER; MANCEAU, Delphine; HEMONNET, Aurelie (2019), Marketing Management, Pearson, France.

6. LAPERT, Denis (2005), Le marketing des services, Dunod, France.

7. MUDIE, Peter; PIRRIE, Angela (2006), Service Marketing Management, Elsevier, Great Britain.

8. WILSON, Alan; ZEITHAML, Valarie; BITNER, Mary Jo; D. GREMLER, Dwayene (2016), Cervices Marketing- Integrating customer focus across the firm, McGraw - Hill Education, England.

9. WIRTZ, Jochen; LOVELOCK, Christipher (2021), Essentials of Services marketing, Pearson Education Limited, England.

10. ZEITHAML, Valarie A; BITNER, Mariy Jo; GREMLER, Dwayne D (2018), Service marketing- integrating customer focus across the firm, McGraw - Hill Education, England.

2. Journal article:

11. Kivin Lane Keller (1993), Conceptualizing, measuring and managing customer- based brand equity, journal of marketing, USA, Vol 57, N° 01.

12. LEVELOCK, Christopher; GUMMESSON, Evert (2004), Whither services marketing? In Search of a New Paradigm and Fresh Perspectives, Journal of Service Research, USA, V 07, N° 01.

13. OLIVER, Richard L; (1999), Whence Consumer Loyalty? Journal of Marketing, USA, V63, N° Special.

14. PARASURMAN, A; ZEITHAML, Valarie A; BERRY, Leonard L (1988), SERVQUAL: A Multiple-Item Scale for Measuring Consumer Perceptions of Service Quality, journal of retailing, USA, V 64, N° 01.