



Satisfaction and loyalty of users of public and private healthcare services during the covid-19 pandemic

Satisfacción y lealtad de los usuarios de servicios de salud públicos y privados durante la covid-19

Grace Aileen Ruiz Santoyo^{*}, Berenice Juárez López, Alejandra Marín Alcalá

Universidad Autónoma de Coahuila, México

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Abstract

Health services adapted to the new normal, from changes in their infrastructure and attention to beneficiaries, derived from Covid-19. Likewise, efforts were made so that users felt satisfied with the service provided. Therefore, the objective of this work is to analyze satisfaction and loyalty in health services, during the pandemic, in the study region. This research is causal, under a quantitative approach and transversal temporality. First, the literature was reviewed, a theoretical model was proposed, which was validated and, subsequently, the hypotheses were tested, based on the estimation of linear regressions. The results indicated that the model is acceptable and loyalty is explained by satisfaction. Finally, it is concluded that patient satisfaction has a mediating role in increasing patient loyalty.

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Keywords: satisfaction; loyalty; health services; covid-19

^{*} Corresponding author.

E-mail address: grace.ruiz@uadec.edu.mx (G. A. Ruiz Santoyo).

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Resumen

Los servicios de salud se adaptaron a la nueva normalidad, a partir de cambios en su infraestructura y atención a los beneficiarios, derivados de la Covid-19, así mismo, se realizaron esfuerzos para que los usuarios se sintieran satisfechos con el servicio brindado. Por ello, el objetivo de este trabajo es analizar la satisfacción y lealtad en los servicios de salud, durante la pandemia, en la región de estudio. Esta investigación es de tipo causal, bajo un enfoque cuantitativo y de temporalidad transversal. Primeramente, se realizó la revisión de la literatura, se propuso un modelo teórico, el cual fue validado y, posteriormente, se probaron las hipótesis, a partir de la estimación de regresiones lineales. Los resultados indicaron que el modelo es aceptable y la lealtad es explicada por la satisfacción. Finalmente, se concluye que la satisfacción del paciente tiene un papel mediador en el aumento de la lealtad de este.

Código JEL: M30, M31, M39

Palabras clave: satisfacción; lealtad; servicios de salud; covid-19

Introduction

Healthcare services have evolved due to scientific research, technological development, and innovation, with notable progress from the COVID-19 pandemic. The increased demand for healthcare services led countries to significantly improve their health policies to guarantee optimal user conditions (Ruiz, Juárez, & Aguilera, 2021).

The World Health Organization (WHO) carried out several health campaigns to raise awareness of the various health problems affecting society at local, regional, national, and international levels, especially those resulting from COVID-19 (WHO, 2021). These campaigns led countries to significantly improve healthcare policies to ensure adequate conditions for their populations.

According to the WHO, the countries with the highest investment in their healthcare systems in recent years are Sweden, Japan, Germany, and Norway (WHO, 2021). These findings are aligned with the quality dimensions of the WHO framework, which state that healthcare should be patient-centered while considering local cultures and user preferences.

The WHO's call to consider healthcare systems based on the cultures of each country led each nation to organize itself differently, which resulted in a widening gap between healthcare systems as each country allocates varying amounts of resources, both economic and human.

Atalan (2022) points out that it is impossible to achieve positive results in the short run by increasing investment alone since it is essential to consider efficient management and individual patient factors such as age, gender, medical history, education, and income. Other inefficiencies in the healthcare system, such as inadequate infrastructure and medical care personnel, must also be considered.

It should be noted that providing public healthcare services is a key component in a country's economic growth and development. Therefore, it is critical to evaluate healthcare services to provide

viable strategies to improve the care systems of public and private hospitals to increase the number of satisfied patients and, thus, generate loyalty to these institutions.

The Mexican Social Security Institute (IMSS; Spanish: Instituto Mexicano del Seguro Social) has researched service quality in Mexico. Proof of its efforts is that the institution has been characterized by maintaining the sense of improvement of the physical infrastructure and the personnel who make up the IMSS (Navarrete-Navarro et al., 2013).

Due to the scarcity of empirical research on this topic in the Laguna Region, Mexico, this paper aims to analyze the level of satisfaction with care and service conditions and their impact on the loyalty of healthcare service users by collecting responses from a sample of 389 patients in public and private hospitals in the region.

The above contributes to the understanding of satisfaction in healthcare services, both public and private, as well as to identifying the characteristics that can be improved to achieve the perception of satisfaction and generate loyalty on the part of users.

Review of the literature

The evaluation of health delivery from the patients' perspective has received increased attention. It has become a key characteristic of any healthcare system, as it serves as a valuable indicator to measure the success of service delivery, particularly in public and private hospitals (Manzoor, Wei, Hussain, Asif, & Shah, 2019). Therefore, service quality is considered a relevant factor in generating patient satisfaction and, thus, loyalty toward healthcare institutions.

Patient satisfaction

The analysis of satisfaction is complex due to the multiple approaches and perspectives from which the concept can be approached. Particularly, satisfaction in healthcare services faces the challenge of considering the patient as a citizen and consumer simultaneously, i.e., the health sector must differentiate between the expectations and preferences of the general population.

When reviewing the research background and international empirical evidence, it is common to find studies on patient satisfaction with the infrastructure conditions of hospitals, both public and private. In other words, most publications focus on general assessments of the care provided and on evaluating more tangential healthcare aspects (Mira & Aranaz, 2000). From this perspective, the research by Jaráiz Martínez and Oller (2019), Panezai, Ahmed, and Saqib (2019), and Manzoor, Wei, Hussain, Asif, and Shah (2019) focus on the relationship between the patient and the healthcare staff, especially doctors and

nurses. They address intangible factors such as the treatment received from staff and the patient's involvement in the decisions about their treatment.

Overall, the improvement in the quality of healthcare services derives from the patient's opinion on their degree of satisfaction, which is considered a good indicator of the quality of medical care received and, therefore, of the effectiveness and performance of the countries' healthcare systems (Martinez & Oller, 2019). In addition, Panezai, Ahmed, and Saqib (2019) pointed out that user satisfaction regarding the quality of care influences the utilization of services, and therefore, satisfied patients are more likely to continue using healthcare services and to recommend them to others.

Satisfaction is a multidimensional concept, the components of which vary according to the type of service in question. It may be more related to the attitude toward the healthcare system or any of its units and can be explained as the non-confirmation of expectations where the difference between expectations and perceptions is the key element (Mira & Aranaz, 2000). Thus, consumer satisfaction generates consumer loyalty (Meesala & Paul, 2018).

It is worth noting that the term satisfaction is not always understood by all since there is no consensus on its empirical meaning, measurement, or evaluation. Therefore, it is necessary to point out that patient satisfaction is a complex concept that can be summarized as the comparison between the expectations held in a service and the perception of the service received. Despite being a subjective concept, it is important to study it as it is associated with the quality of the healthcare system (Santos-Jaén et al., 2022).

Patient loyalty

In marketing, loyalty has been considered one of the most important factors for business success. Loyalty can be built and maintained by providing a better quality of service, which leads to greater satisfaction. As a result, patient loyalty has been perceived as the frequent use of the service, especially when the user has a positive attitude toward the healthcare service or hospital, whether public or private.

Customer loyalty to hospitals and their options is an important concern for the healthcare sector because, to ensure high patient loyalty, a healthcare provider may need to achieve excellent patient satisfaction and meet other conditions (Chang, Tseng, & Woodside, 2013). Consumer satisfaction can have a direct effect on customer loyalty as long as the patient has a positive inclination toward the service, which allows for building trust and, thus, achieving the interconnectedness of quality, satisfaction, and patient loyalty (Shabbir, Malik, & Malik, 2016).

Research conducted by Fatima, Malik, and Shabbir (2018) analyzed the variables of satisfaction and loyalty in the context of private hospitals in Pakistan and concluded that user satisfaction is one of the

factors for the development of loyalty. Patient satisfaction and loyalty are two strategic constructs that must be monitored and maintained as an element of great importance to maintain success in the long term. Similarly, hospitals must understand the link between quality healthcare service, satisfaction, and patient loyalty (Meesala & Paul, 2018).

Hypotheses and model

The relation between patient satisfaction and loyalty has been extensively studied. Nonetheless, several studies have shown that patient satisfaction alone is insufficient to achieve a high loyalty level toward healthcare institutions. Therefore, it is relevant to investigate the active role played by users, especially in making treatment decisions since they may become loyal hospital patients (Chang, Tseng, & Woodside, 2013). In contrast, other studies consider reliability and responsiveness to be mediated by patient satisfaction influencing patients' loyalty to the hospital (Meesala & Paul, 2018).

Several studies have been conducted to empirically corroborate the relation between service quality, user satisfaction, and user loyalty in the health sector (Haque, Sarwar, Yasmin, Anwar, & Nuruzzaman, 2012; Amin & Siti, 2013). Service quality has similarly been posited as an antecedent of user satisfaction and loyalty (De Oña, Machado, & De Oña, 2015). It should be noted that satisfaction is linked to continuity in the use of services, which can be interpreted as loyalty, and both factors will contribute to the quality of the health sector.

Satisfaction can be considered based on two variables: care and service conditions. Care refers to the staff's friendliness, the trust they convey, their training, interest, and time spent with the patient, and the usefulness of the care provided. On the other hand, conditions include facilities, materials, procedures to facilitate access, administrative effectiveness, and timely services. Loyalty, meanwhile, is conceived as fulfilling the service's expectations, preferences, and recommendations (Donabedian, 2005; Numpaque-Pacabaque & Rocha-Buelvas, 2016; Vera & Trujillo, 2018).

Based on the literature review and national and international empirical evidence, a research model is proposed representing the relations between the loyalty level and its explanation based on the level of satisfaction with care (understood as intangible) and the conditions in the healthcare services (understood as tangible). Therefore, the following research hypotheses are proposed:

H1: The loyalty level is explained by the satisfaction level regarding care in healthcare services.

H2: The loyalty level is explained by the satisfaction level regarding the conditions of the healthcare service.

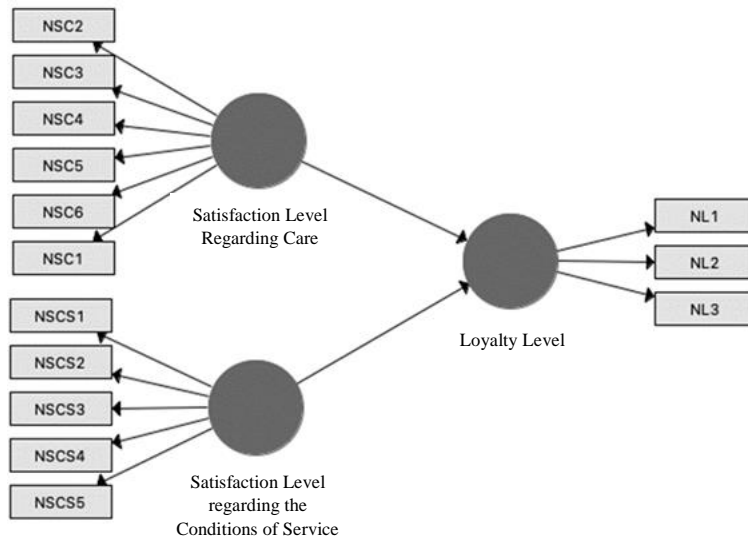


Figure 1. Model of satisfaction and loyalty in healthcare services
Source: created by the authors based on the authors cited above

Figure 1 shows the proposed model of satisfaction and loyalty in healthcare services, which was integrated as follows: Factor 1: satisfaction level regarding care; it has six variables: friendliness, trust, training, interest, time, and usefulness of the care provided. Factor 2: satisfaction regarding the conditions of the service; it has five variables: facilities, materials, procedures, effectiveness, and timely services. Factor 3: loyalty; it consists of three variables: fulfillment of expectations, preference, and recommendation of the service. Altogether, the model is composed of fourteen variables.

Methodology

This research was carried out in the Laguna Region, Mexico, which is comprised of the municipalities of Torreón and Matamoros in the state of Coahuila de Zaragoza and Gómez Palacio and Lerdo in the state of Durango. Regarding this spatial demarcation, it should be noted that the state of Coahuila was one of the two states to begin the vaccination campaign against COVID-19. This was due to the compliance with the refrigeration conditions required by the vaccine and the good logistics provided by the National Army.

Regarding healthcare services, the Laguna Region has 27 public and private hospitals, including the General Hospital of Torreón, the General Zone Hospital with Family Medicine 16, the General Zone Hospital with Family Medicine 18, the High Specialty Medical Unit No. 71 IMSS, the Rural Hospital No. 79 IMSS Bienestar, the University Children's Hospital, the University General Hospital, the Magisterio

Hospital Clinic, and private hospitals such as Sanatorio Español, Hospital Angeles, Hospital de la Mujer, and Andalucía.

The proposed methodology is quantitative, which is used when a defined and concrete problem is posed (Hernández, Fernández, & Baptista, 2010). This research is of a causal and transversal type due to the proposal of a theoretical research model. Information was collected by designing and applying an online questionnaire of three factors and fourteen variables. The questions were measured by a seven-point Likert-type scale, where 1 was considered totally dissatisfied and 7 totally satisfied.

The sample was obtained from a simple random probability sample, which facilitates the representativeness of the population, with 95% confidence and a 5% margin of error; nonetheless, only 389 valid observations were obtained. The information was processed using the Statistical Package for the Social Sciences (SPSS Statistics®) and Partial Least Squares Structural Equation Modeling (SmartPLS®) software. It should be clarified that this technique is characterized by working with small sample sizes or with data that are not normally distributed (Hair, Hult, Ringle, & Sarstedt, 2014).

Table 1
 Service satisfaction and loyalty instrument

According to your last experience in any Hospital, select on a scale from 1 to 7, where 1 is “Totally dissatisfied,” and 7 is “Totally satisfied”:	
Factor 1. Satisfaction Level Regarding Care (SLC)	SLC1. Staff friendliness SLC2. Trust that the staff conveys SLC3. Staff training SLC4. Staff interest SLC5. Time spent by staff SLC6. Usefulness of care provided
Factor 2. Satisfaction Level regarding the Conditions of Service (SLCS)	SLCS1. Facilities SLCS2. Materials SLCS3. Procedures to facilitate access SLCS4. Administrative effectiveness SLCS5. Timely services
Factor 3. Loyalty level (LL)	LL1. Fulfillment of expectations LL2. Service Preference LL3. Service recommendation

Source: created by the authors

Results

389 users of healthcare services were surveyed in the Laguna Region, Mexico, who were contacted directly in the facilities of public and private hospitals. They were contacted specifically in the waiting

room and on the recovery floor because during the pandemic some areas were restricted, and thus, it was possible to interview only in these sections.

The survey yielded a diverse sample in terms of demographic characteristics such as gender (women = 52.20% and men = 47.80%), age (18 to 27 years = 13.70%, 28 to 46 years = 59.80%, 47 to 65 years = 22.70%, and over 65 years = 03.80%), education level (completed bachelor's degree = 41.60%, incomplete bachelor's degree = 14.10%, completed high school = 12.30%, postgraduate = 06.70%, and the rest = 25.30%), beneficiary of public or private hospitals (IMSS clinics = 45.20%, private institutions = 26.70%, and general hospitals = 20.8%), and socioeconomic level (A/B = 32%, C+ = 33%, C = 19%, C- = 07%, and the rest = 09%).

It is worth mentioning that every research project must guarantee that its results are reliable, which can be achieved through the validity of the measurement scale (Ruiz, Aguilera, Juárez, & Amarillas, 2021). In the case of this research, the instrument was designed based on previously validated scales, so it is necessary to perform the estimations again due to the different spatial and temporal dimensions.

Table 2
 Convergent and discriminant validity of the measures

	Factor loadings average	Cronbach's Alpha	CRI	IVE	SLC	SLCS	LL
Satisfaction Level Regarding Care (SLC)	0.973	0.989	0.991	0.947	0.973	0.908	0.930
Satisfaction Level regarding the Conditions of Service (SLCS)	0.971	0.985	0.988	0.943	NA*	0.971	0.953
Loyalty level (LL)	0.984	0.984	0.989	0.969	NA*	NA*	0.984

Source: created by the authors

*Not Applicable (NA)

A confirmatory factor analysis was performed, which is used to confirm the dimensional structure of the scales where a good fit of the original model was obtained (see Table 2). First, the factor loadings of the confirmatory model were verified, and those items that were not statistically significant were eliminated. The average of these loadings was observed to be above 0.9, which makes it possible to affirm that the variables measure each factor (Delice, Vargas, & Donoso, 2019).

Furthermore, the reliability and validity of the construct were estimated through tests of internal consistency measures such as Cronbach's Alpha coefficient, the Composite Reliability Index (CRI), and the Index of Variance Extracted (IVE) (Delice et al., 2019). From these tests, data were obtained with values above 0.7 and 0.5, so they were accepted (Nunnally & Bernstein, 1994).

The discriminant validity was also estimated, which allows for testing the confidence interval and, thus, establishing that none of the individual variables of the latent correlation factors has a value of one (Hair et al., 2014). Therefore, and as shown in Table 2, it is confirmed that the model of satisfaction and loyalty in healthcare services has the reliability and validity of the constructs.

Finally, tests are performed to determine the degree of fit of the original model. The fit statistics used are the Normalized Fit Index (NFI) and the Standardized Root Mean Square Residual (SRMR). The first indicator must have values greater than 0.8, and the second must be less than 0.05 to be considered a reasonable degree of fit (Delice et al., 2019). It is observed that the values obtained meet the acceptance criteria (NFI = 0.941, SRMR = 0.015) and a significant Chi-square distribution ($\chi^2 = 581.523$) and P-value ($p < 0.000$).

It is worth mentioning that the levels of collinearity were reviewed due to the high values in the validity statistics and critical levels of collinearity were observed with Variance Inflation Factors (VIF) above five in the predictor constructs. The data had to be analyzed using SPSS Statistics® to diagnose collinearity through various linear regressions to verify the dependent variable and the independent variables. Once the above was estimated, the tolerance values were adequate, with values above 0.20 (Hair et al., 2014). Therefore, the structural equation modeling could be continued.

Table 3
 Hypotheses testing

Hypothesis	Relation	R ² adjusted	Path (β)	t-value >1.96	P-value <.05	Result
H1	SLC – LL	0.931	0.369	3.572	0.000	Supported
H2	SLCS – LL		0.618	5.935	0.000	Supported

Source: created by the authors

The proposed hypotheses are tested using structural equation models, which consist of linear equations that test at the same time two or more relations between directly observable latent variables (Shook, Ketchen Jr., Hult, & Kacmar, 2004). It is worth mentioning that this technique is selected because it allows for including measurement error in the structural coefficients and evaluating and interpreting correlations of complex dependence (Davicik, 2014). Similarly, the structural equation model based on covariance is used because it is a confirmatory method that tends to replicate the existing covariation between measures (Hair et al., 2014).

The results observed in Table 3 confirm that the relations proposed are positive and significant. The model's result supports hypothesis H1, concluding that the satisfaction level regarding care positively and significantly influences the loyalty level. Likewise, hypothesis H2 confirms that the satisfaction level regarding the conditions of service positively and significantly influences the loyalty level. Once the

instrument's design has been addressed, the model of satisfaction and loyalty in healthcare services has been validated, the linear regressions have been estimated, and the relations between variables have been measured, the present investigation is concluded.

Conclusions

Among the findings of the present investigation, the high levels of satisfaction on the part of the respondents stand out, a situation that can be explained from several perspectives. In the first months of the pandemic, the population could not make regular appointments with their family physicians or specialists because health institutions only provided care to patients with COVID-19—a situation that generated fear due to the lack of access to the service. The population felt vulnerable due to the high mortality rates, so it was necessary to raise awareness among all the beneficiaries of the health sector. Moreover, a factor of great influence was the concept and definition of satisfaction since, as mentioned above, the term is addressed from approaches that would have to be analyzed in greater depth.

This study coincides with research by Jaráiz, Lagares, and Pereira (2013), Martínez and Oller (2019), Panezai, Ahmed, and Saqib (2019), and Manzoor, Wei, Hussain, Asif, and Shah (2019), who found that interpersonal relations are the factors that most determine patient satisfaction, i.e., intangible aspects are better evaluated than tangible elements. In other words, the satisfaction level regarding care is more important for patients than the satisfaction level regarding the conditions of service.

Regarding the model of satisfaction and loyalty in healthcare services, the analysis and measurement of the relations reveal that the satisfaction level regarding care and the satisfaction level regarding the conditions of service are antecedents of the loyalty level of healthcare services in the Laguna Region, Mexico. It is worth noting that service conditions have a greater relation with loyalty, as opposed to care. This is because facilities, materials, procedures to facilitate access, administrative effectiveness, and services are more important in generating satisfaction. Conversely, friendliness, trust, training, interest, time, and usefulness of the care provided by the staff are less important for users.

Among the variables with the highest factor loadings was the health personnel, so it is recommended to strengthen and consolidate this human capital, especially physicians. It is also necessary to pay attention to the variables with the lowest factor loadings, specifically in the questions related to pharmacies, and it is suggested that strategies or mechanisms be sought to improve this area, especially since medication is an external factor.

To this end, this research focuses on two recommendations. The first is to develop a health policy that promotes an increase in the number of physicians, both specialists and family physicians, since such personnel are a key factor in increasing patient satisfaction and, therefore, patient loyalty. The second

is to direct greater resources and public investment to provide better pharmacy conditions as the population considers the prescription and supply of medicines to be of utmost importance.

Overall, the findings suggest that better quality of healthcare services generates higher satisfaction and loyalty intentions as patients gain trust, which could lead, at some point, to word-of-mouth recommendations. Likewise, it is important to strengthen the focus on patient-oriented strategies since patients are the key factor in building a good image of hospitals. In conclusion, patient satisfaction has a mediating role in increasing patient loyalty; therefore, the patient-centered approach is a mechanism to obtain service quality and an important key to maintaining the loyalty of healthcare service users.

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