



PERCEIVED QUALITY IN PUBLIC AND PRIVATE HOSPITALS DURING THE PANDEMIC

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Summary:

State organizations and leaders continue to face the consequences caused by the Covid-19 pandemic, specifically, in the health sector. In this sense, the great challenge faced by hospitals, both public and private, is to achieve the quality of their service, with the aim of generating satisfaction in their users. According to the above, the objective of this work is to analyze the perceived quality in public and private hospitals in the La Laguna Metropolitan Area (ZML) during the pandemic caused by Covid-19. The methodology is based on the design of an instrument, which allowed evaluating various areas of care. Finally, the results indicate that the quality of the doctors obtained the best evaluations, however, the quality of the pharmacy was the worst evaluated.

Keywords: Perceived quality, public and private hospitals, pandemic

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CALIDAD PERCIBIDA EN HOSPITALES PÚBLICOS Y PRIVADOS DURANTE LA PANDEMIA

Resumen:

Las organizaciones y los dirigentes estatales siguen enfrentando las consecuencias ocasionadas por la pandemia por el Covid-19, específicamente, en el sector salud. En este sentido, el gran desafío que enfrentan los hospitales, tanto públicos como privados, es lograr la calidad de su servicio, con la finalidad de generar satisfacción en sus usuarios. De acuerdo a lo anterior, el objetivo de este trabajo es analizar la calidad percibida en hospitales públicos y privados en la Zona Metropolitana La Laguna (ZML) durante la pandemia derivada por Covid-19. La metodología parte del diseño de un instrumento, el cual permitió evaluar diversas áreas de atención. Por último, los resultados indican que la calidad de los médicos obtuvo las mejores evaluaciones, en cambio, la calidad en farmacia fue la peor evaluada.

Palabras clave: calidad percibida, hospitales públicos y privados, pandemia.

QUALIDADE PERCEBIDA EM HOSPITAIS PÚBLICOS E PRIVADOS DURANTE A PANDEMIA

Resumo:

As organizações e dirigentes do Estado continuam a enfrentar as consequências causadas pela pandemia da Covid-19, especificamente, no sector da saúde. Neste sentido, o grande desafio enfrentado pelos hospitais, tanto públicos como privados, é alcançar a qualidade do seu serviço, com o objetivo de gerar satisfação nos seus usuários. De acordo com o exposto, o objetivo deste trabalho é analisar a qualidade percebida em hospitais públicos e privados da Área Metropolitana de La Laguna (ZML) durante a pandemia causada pela Covid-19. A metodologia baseia-se na concepção de um instrumento, que permitiu avaliar diversas áreas do cuidado. Por fim, os resultados indicam que a qualidade dos médicos obteve as melhores avaliações, porém, a qualidade da farmácia foi a pior avaliada.

Palavras chave: Qualidade percebida, hospitais públicos e privados, pandemia.

1. INTRODUCTION:

The COVID-19 pandemic brought significant changes at the international level, notably a global economic crisis that led governments to propose transformations in public policies, cuts in public services, and innovations in the health and education sectors, which brought diverse perceptions and concerns to a significant portion of the population. National public health systems pose a significant challenge for policymakers, since the population is aging in developed countries, this leads to a greater demand for healthcare services. Likewise, new generations are citizens with high expectations, and therefore they demand and require quality services. However, it is important to note the increasing costs of technology and the limitation of economic resources (Martínez & Oller, 2019).

The increase in health-related concerns and high economic levels have significantly improved the demand for medical care and shifted population trends towards adopting a healthier lifestyle. Therefore, a variable that has gained relevance in recent years is the global competition of healthcare services, as it drives patients' curiosity and stimulates them to make the best decision in selecting any hospital (Manzoor, Wei, Hussain, Asif & Shah, 2019). On the other hand, health institutions have begun to emphasize improving the quality of medical care services because there is greater competition among hospitals, both public and private, which prompts patients to conduct prior research for the appropriate selection of a hospital. In this regard, service quality is the most vital key element for service providers to gain an advantage, so it must be greatly improved and well measured (Fatima, Malik & Shabbir, 2018).

In Mexico, healthcare is predominantly public, and despite the population growth, the medical and hospital infrastructure is insufficient to meet the demand and, in general, all users' needs. The quality of healthcare service is closely linked to compliance with health regulations. This means that quality implies the timely, efficient, and safe provision of healthcare, which is perceived when the service conditions and the care provided by health institution personnel are adequate. Therefore, the objective of this work is to analyze the perceived quality in public and private hospitals in the

Laguna Metropolitan Area (LMA) during the period of the COVID-19 pandemic.

2. THEORETICAL FRAMEWORK:

The quality of service is gaining relevance as the health sector has been perceived as a service lacking the desired quality by its users. Hence, the continuous improvement of health institutions focuses on achieving the quality that leads to patient satisfaction (Martínez & Oller, 2019). One of the main factors determining patients' perceptions of the quality of healthcare services is their experience regarding access to medical care (Santos-Jaén, Valls Martínez, Palacios-Manzano & Grasso, 2022).

Currently, it is evident how the growing intention of citizens to participate in the identification of public health policies has led to identifying a series of elements demanded by health users. The factors that stand out are mutual responsibility regarding health decisions; likewise, the verification of treatment compliance, the utilization of health resources, and the monitoring of results through a satisfaction analysis. (Jaráiz, Lagares & Pereira, 2013, p. 163).

Likewise, it has been documented that when a user perceives that the offered attributes are fulfilled, it generates the perception of meeting their expectations and a general feeling of satisfaction (Vera & Trujillo, 2018). In this sense, satisfaction depends on the perceived quality of the service; however, both quality and satisfaction can be measured as different constructs. This demonstrates that patient satisfaction is a crucial element in evaluating the quality of care.

Perceived Quality

Theoretical models of quality involve concepts related to user expectations and perceptions. These models detail the central element of the approach to service quality. These models detail the central element of the approach to service quality. Among the most cited and referenced models internationally is SERVQUAL. The initial efforts to conceptualize the quality of healthcare services were numerous. Donabedian (2005) is considered the first author to achieve consensus, both in academia and in service delivery, on the application

of concepts for evaluating the quality of care. It was not until 1966 that a text was published laying the foundations for the systematic evaluation of medical care quality (Silberman, Granados, Delgado & López, 2014).

The model developed by Ishikawa consists of a proposal to improve the quality of health services, that is based on identifying processes or activities that do not meet quality protocols and involves a technical analysis of probable causes, which, after confirming hypotheses, form the basis for proposing improvements (Aspajo, 2021). The service quality model, SERVQUAL, was proposed by Parasuraman, Zethaml & Berry (1988), to evaluate service quality. This model includes five dimensions: reliability, responsiveness, assurance, empathy, and tangibles. Similarly, to assess quality from the user's perspective in the hospital sector, the SERVQHOS model is implemented, which is an adaptation of the SERVQUAL scale, allowing for the assessment of perceived quality.

The SERVQHOS model considers part of the quality evaluation by taking into account healthcare, and it measures both the objective and subjective aspects of the tangible structure and the intangible process of the received healthcare. Therefore, in health research, applying any of these instruments is crucial for quality verification and investigating service standards (Numpaque-Pacabaque & Rocha-Buelvas, 2016). In this regard, when analyzing the criteria of the previous models, it is necessary to select the variables to be considered for measuring the perceived quality of health services in the ZML. Based on the mentioned authors, it is possible to evaluate the staff as well as the facilities of both public and private hospitals to achieve conditions that meet users' needs.

Hypotheses and Model

Similarly, scales have been used to measure patient satisfaction and loyalty in various countries. An example of this is the SERVQCON questionnaire, which was developed in the context of outpatient hospital consultations based on SERVQHOS, designed to evaluate the quality of healthcare from the patient's perspective. It is worth noting that the SERVQUAL scale has been slightly modified to adapt to different contexts (Meesala & Paul, 2018).

This research did not consider the previous scales because they are not deemed the most appropriate for the ZML context, where variables related to care and service conditions, especially staff attention, are more relevant. Thus, it is based on the premise that interpersonal and intangible aspects, as well as tangible factors of care, influence patient evaluations, with the aim of identifying the elements that generate the greatest patient satisfaction and loyalty (Jaráiz, Lagares & Pereira, 2013).

Based on the literature review and national and international empirical evidence, a research model is proposed that represents the relationships between the quality of staff, nurses, and doctors, as well as the facilities, clinical analyses, and pharmacy, concerning the quality perceived by users. Therefore, the following research hypotheses are proposed:

H1: The quality of nursing, medical staff, pharmacy, facilities, and clinical analyses explains the quality perceived by users.

3. METHODOLOGY:

This theoretical research is descriptive and has a causal and cross-sectional approach. Information was collected through the design and application of an online questionnaire, which included six factors and 27 variables. Based on their last experience at a hospital, respondents were asked to rate their satisfaction on a scale from 1 to 7, where 1 is "Completely dissatisfied" and 7 is "Completely satisfied".

Table 1. Research Technical Sheet

Universe	Men and women users of health services in the ZML
Sample size	389 valid questionnaires
Sampling error	05%
Confidence level	95%
Sampling procedure	Simple random sampling
Fieldwork period	August 2021
Data processing	SPSS 25 and Smart PLS 3.3.

Source: Own elaboration.

The calculated sample was 385 people; however, 400 responses were obtained in total, of which 389 questionnaires were valid. This was due to the elimination of missing values found in various

observations. For data processing, the statistical software SPSS 25 was used. Subsequently, from the obtained database, reliability, validity, confirmatory factor analysis, and hypothesis testing were conducted using the quantitative software SmartPLS 3.3.

Table 2. Instrument for Perceived Quality in Hospitals.

Variable	Items
Quality of nurses	<ul style="list-style-type: none"> - Attention of on-duty nurse. - Nurse's experience. - Nurse's kindness. - Clarity of nurse's explanations. - Nurse's knowledge.
Quality of doctor	<ul style="list-style-type: none"> - Doctor's knowledge. - Perception of the doctor. - Evaluation of doctor's care. - Clarity of doctor's explanations. - Doctor's kindness.
Quality in pharmacy	<ul style="list-style-type: none"> - Availability of medication in pharmacy. - Kindness of pharmacy staff. - Knowledge of pharmacy staff. - Attention of pharmacy staff.
Quality of facilities	<ul style="list-style-type: none"> - Consulting rooms, waiting room, restrooms, and cafeteria within the facilities. - Image of the facilities. - Functionality of the facilities. - Cleanliness of the facilities.
Quality in clinical analysis	<ul style="list-style-type: none"> - Attention of the staff conducting clinical analysis. - Knowledge of the staff conducting clinical analysis. - Experience of the staff conducting clinical analysis. - Kindness of the staff conducting clinical analysis.
Quality of staff	<ul style="list-style-type: none"> - Clarity of instructions from appointment staff. - Clarity of instructions at reception. - Attention of receptionists. - Evaluation of appointment and ticket delivery staff.

Source: Own elaboration.

To develop the online questionnaire and maximize this method's effectiveness, this research followed the recommendations of Illum, Ivanov & Liang (2010), who emphasize the importance of brevity and ensuring participant anonymity. It is important to highlight that measurement scales used in previous international studies were employed when generating the questionnaire. However, due to temporal and spatial constraints, reliability tests, construct validity, content validity, and confirmatory factor analysis had to be conducted to determine if the items correspond to each factor and if the factors measure what they are

intended to measure. In this regard, and after applying the aforementioned instrument, the results of this research are presented.

4. RESULTS AND DISCUSSION

First, the descriptive statistics of the analyzed data are observed. Regarding the quality of nurses, it is noteworthy that 84.7% of users are completely satisfied with the nurse's level of knowledge. In terms of the quality of doctors, 86.5% are completely satisfied with the friendliness of the doctor. However, the values for pharmacy quality show that 68% of respondents found all the prescribed medication in the pharmacy, while 13.2% disagreed.

Regarding the quality of staff, 80.5% of respondents are completely satisfied with the attention received from receptionists. Concerning the knowledge level of the staff performing clinical analyses, 83.8% are completely satisfied with their knowledge level. On the other hand, the quality of facilities showed that 83.2% are completely satisfied with the functionality of medical equipment (stretchers, scales, stethoscopes, and chairs). Similarly, the reliability and validity of the construct were estimated (Ruiz, Aguilera, Juárez & Amarillas, 2021) by obtaining the average factor loadings, Cronbach's alpha, Composite Reliability Index (CRI), and Average Variance Extracted (AVE) (Delice, Vargas & Donoso, 2019).

Table 3. Reliability and Validity of the Construct

	Average Factor Loadings	Cronbach's Alpha	IF C	IV E
Nursing Quality	0,885	0,931	0,948	0,784
Doctor Quality	0,896	0,939	0,953	0,803
Staff Quality	0,910	0,948	0,960	0,829
Pharmacy Quality	0,927	0,919	0,949	0,861
Facilities Quality	0,978	0,955	0,978	0,957

Clinical Analysis Quality	0,889	0,934	0,950	0,793
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Source: Own elaboration.

From the confirmatory factor analysis, factor loadings below the optimal value were obtained, so items that did not have an ideal loading were eliminated. These included the quality in pharmacy and facilities, specifically related to consulting rooms, waiting rooms, restrooms, and cafeteria within the facilities, as well as the availability of medication found in the pharmacy. This is explained by the fact that the worst-rated area was the pharmacy, as the shortage of medicine caused concern among public hospital users.

Once the model was adjusted, the average factor loadings were observed to be above 0.9, which allows us to assert that the variables measure each factor (Delice et al., 2019). Regarding the CRI and AVE, the data obtained were above 0.7 and 0.5, respectively, thus the values are accepted (Nunnally & Bernstein, 1994). Discriminant validity was also estimated, which showed that none of the individual variables of the latent correlation factors have a value of one (Hair et al., 2014). Once this was estimated, the hypothesis test was conducted, positing that the quality of nursing, doctors, staff, pharmacy, facilities, and clinical analyses explains the quality perceived by users.

Table 4. Hypothesis Testing

Hypothesis	R ² adjusted	t-value >1.96	P-value <.05	Result
H1	0,978	30,016	0,000	Supported

Source: Own elaboration.

Table 4 shows that the proposed relationships are positive and significant. Therefore, the result supports the hypothesis, concluding that the quality of nursing, doctors, staff, pharmacy, facilities, and clinical analyses explains the quality perceived by users. After analyzing the information, we proceed to conclude this research.

5. CONCLUSIONS

The perceived quality model in public and private hospitals was developed considering the existing theoretical framework on the subject and estimated through confirmatory factor analysis, as well as with structural equation modeling. Based on the results, it is affirmed that users' perceived quality is largely driven by the quality of nurses, doctors, staff, clinical analyses, pharmacy, and facilities. These findings align with previous research such as that by Fatima, Malik & Shabbir (2018), who address the gap between public and private hospitals in Pakistan, concluding that private institutions make greater efforts to achieve quality. Similarly, other studies agree on the active role that patients should play, meaning that users must be involved in all types of decisions made by health organizations (Chang, Tseng & Woodside, 2013).

As part of the recommendations, it is suggested that health institutions increase investment in the pharmacy sector to meet the demand for medications within hospitals, especially for medications that are in high scarcity. Another recommendation is to improve the facilities in waiting rooms, consulting rooms, restrooms, cafeterias, and hallways, due to the importance of physical infrastructure for users. It is worth mentioning that at the time the data was collected in person, a "courtesy bias" was observed. This bias occurred when some individuals tended not to fully express their dissatisfaction with the service during questioning, due to being polite to the interviewer. This was most prevalent when the nurse was present in the room, either administering medication or performing a routine check-up.

Finally, this article is not without limitations, which could serve to establish future research directions. This study only addresses public and private hospitals in the ZML, therefore, the results obtained are not generalizable to other regions; thus, future research could employ a similar model in other geographic areas. so the results obtained are not generalizable to other regions; therefore, future research could apply a similar model in other geographic areas. Additionally, one could focus solely on the sample of public hospitals, with the aim of contributing to public health policies for both entities. Likewise, qualitative methodologies could deepen the analysis of variables through various techniques such as observation or in-depth interviews. Lastly, future studies could replicate the proposed model with the

intent of further consolidating the analysis of perceived quality.

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