The Quality of Care and Loyalty of External Users in Peruvian Ophthalmological Centers

Cynthia Lilibeth Sullón-Cuchupoma[1], Mónica Elisa Meneses-La-Riva[2], Víctor Hugo Fernández-Bedoya[3], Josefina Amanda Suyo-Vega[4]
[1]Complejo Hospitalario Alberto Leonardo Barton Thompson, Peru
[2,3,4]Division of Research, Universidad César Vallejo, Peru

Article Information	Abstract
	Health services are created with the aim of fulfilling health needs in accordance with the needs and expectations of patients. The objective of the study was to determine the correlation of the quality of care and the loyalty of external users in a private ophthalmic center in Lima, Peru. The method used a descriptive cross-correlational quantitative approach with non-experimental design. The population consisted of 210 external users who received therapies for at least 1 month in an ophthalmologic center located in Lima, Peru; the sample (statistically calculated) consisted of 137 users randomly selected, who responded to a series of reagents through a survey. A questionnaire was used to measure the quality of care through SERVPERF model, while the loyalty was measured through reagents developed by the authors, based on the scientific theory of Alcaide. Spearman's Rho determined that there was a moderate positive correlation between the quality of care and loyalty (sig. < 0.05; r = 0.594). Likewise, it was determined that there was a positive correlation between the dimensions of tangibility, empathy, responsiveness, security and reliability with the loyalty variable, since the sig. were < 0.05 and the values of r = 0.497, 0.381, 0.342, 0.109 and 0.452, respectively were obtained. There was not enough statistical evidence obtained to find the correlation between the loyalty variable and the security dimension, since a sig. value > 0.05 was obtained. The results found were related to other finding by previous authors in other contexts. Finally, we recommend other researchers to carry out similar research internationally, in order to increase the literature on the variables of loyalty and quality of service and generate discusion. © 2020 Jurnal Ners dan Kebidanan

INTRODUCTION

The health services are created with the purpose of satisfying an identified health need, their activities are centered on the patient, who requires a service within a safe environment that responds in a timely manner to their needs and expectations.

According to the World Health Organization (2003), there should be universal access and coverage of health, according to the needs of the population through different structures that provide health services; on the other hand, institutions such as the Joint Commission International (2016) seek to ensure the quality of health services through resolutions prior to compliance with basic quality standards.

Deming (1993) defined that quality is measured "in terms of the subject who has to judge the product or service. The proposed idea is that whoever buys or demands a service does so according to needs and expectations that will determine whether or not the service is of good quality.

Subsequently, Donabedian (1984) conceptualized that quality in health services is the application of science and technological innovations in the field of medicine in such a way as to make maximum use of the advantages for health.

In the case of loyalty, the theoretical framework revolves around the theory of Alcaide (2015), who mentions that loyalty is establishing a great emotional sense with clients, which must go hand in hand with the functions offered by either a product or a service by increasing quality. Burgos (2017) also states that loyalty is being able to maintain relationships with customers for long periods, making them more profitable.

Regarding the quality of service nowadays, Ostrom, Parasunaman, Bowen, Patricio and Voss (2015), identified that the environment is highly changing, in which advances in technology cause services to proliferate where the client can perform all the functions. For this reason, it is necessary to delve into the transforming service and performance optimization, as well as establish interdisciplinarity without limits and appreciate its evolution in different contexts.

In the Peruvian context, according to La Contraloría General de la República Peru (2018), it is reported that there are deficiencies in health services. There is lack of specialists at all levels of care evidenced by 26.45% of health centers that do not have sufficient human capital for emergency cases, 43.72% that do not have a specialist in trauma, 23.48% that lack a specialist in anesthesiology, 23.48% pediatrics, 18.22% general surgery. It is enough to remember that all these specialties are considered as minimum human capital in hospitals.

On the other hand, the Ministry of Health of Peru (2017) establishes as a priority that all health care must be of a high level, and that good management of resources must be given so that citizens receive quality service care.

According to Sausa (2018, February 17), she maintains that patient complaints generally stem from the reasons for an ill-advised medical consultation or surgical intervention (44%), lack of explanation about their health status (28%) and the non-conformity of the consultation they received (9%), leading to users making the decision to go to private health services.

In view of the above, it is necessary to assess health care in order to assume the problem or reasons that afflict and limit or obstruct the possibility of general quality of services provided to the user. In the case of ophthalmological centers, it can be seen that there is a high level of competition in the labor market for the services offered, so it is important to ensure the loyalty of the services demanded by the population, to which it is also important to provide a timely and humane response.

In an ophthalmology center, it was observed that users are served at different stages of life seeking to solve a visual health problem; however, people demand timely and immediate attention. The high turnover of human resources can be seen, as well as the need to receive training to raise the professional skills that offer quality service and good treatment to the patient.

In view of this problematic reality observed, the researchers raised the following general research question: How is the relationship between quality of care and loyalty of external users in Peruvian ophthalmological centers in the year 2020?

The following specific research questions were also raised: How is the relationship between tangibility and loyalty of external users in Peruvian ophthalmological centers in the year 2020? How is the relationship between empathy and loyalty of external users in Peruvian ophthalmological centers in the year 2020? How is the relationship between responsiveness and loyalty of external users in Peruvian ophthalmological centers in the year 2020? How is the relationship between security and loyalty

of external users in Peruvian ophthalmological centers in the year 2020? How is the relationship between reliability and loyalty of external users in Peruvian ophthalmological centers in the year 2020?

As for the objectives of the study, it was to determinate the relationship between the variables quality of care (and its five dimensiones) and loyalty.

With regard to international background, it is worth mentioning Melián-Alzola and Martín-Santana (2019), who carried out a study in Spain, which allowed them to determine that the effect that quality of care has on user loyalty is user loyalty. On the other hand, Dubey and Sahu (2019), in India, expressed that the positive relationship between service quality, perceived value, customer satisfaction and customer loyalty in hospitals promotes a harmonious relationship between the health center that applies it and the community where it is inserted.

Likewise, Sitio and Ali (2019) conducted a study at the Rawamangun Special Surgery Hospital, located in Jakarta, Indonesia, where they determined that service quality has a positive and significant effect on patient loyalty; however, the facilities or infrastructure do not have this effect, since it is only attributed to human capital.

In Germany, Guhl, Blankart and Stargardt (2019), concluded that the service elements of personal interaction, tangible aspects, store policy and availability have a positive effect on perceived customer value and consultation, while reliability does not predominate. On the other hand, Wahyuni, Nurhayani and Indar (2019), concluded that there is a positive relationship between health services and patient loyalty, with a positive effect on the responsiveness and safety dimensions, while no correlation was found between the quality of service or health services variable in terms of the tangibility dimension in Indonesia.

Askar, Sartika, Hasan, Haerani, Nur, and Citrawati (2019) established that the quality dimensions of distribution services in a hospital located in Makassar, Indonesia, had satisfied patients, starting with the most prominent level of safety, reliability, empathy, tangibility, and responsiveness. These five dimensions correlate strongly with loyalty to hospital reuse and willingness of the tolerant to suggest these facilities to others.

Authors Boadi, Wenxin, Bentum-Micah, Asare and Bosompem (2019) concluded that of the five dimensions of quality, safety stands out as having a

positive, direct relationship and impact on patient loyalty in the Ghanaian context.

Other authors such as Afridi, Khan and Bangash (2019), in a study conducted in Peshawar, Pakistan, concluded that quality of health care services has a direct positive impact on patient complaints, demonstrating that when the patient is loyal to the organization he will come for repeated purchases and become its advocate.

Likewise, Anabila, Kumi and Anome (2019), after an investigation in Ghana, concluded that there is a significant positive relationship between quality of care and satisfaction, and in turn, satisfaction has a significant positive relationship with user loyalty, since it was observed that the quality of care is better in private hospitals, showing that the private side obtained better results in quality of care and satisfaction.

Pekkaya, Ýmamoðlu, and Koca (2019) applied a similar instrument to that of Anabila, Kumi and Anome (2019) in a hospital located in Zonguldak, Turkey, finding that the tangibility dimension was extremely high in terms of the causes that generate increased client loyalty.

Abbasi-Moghaddam, Bagherzadeh, and Farrokhi (2019) in a research conducted at Tehran University Hospital, Iran, concluded that the best clinical health care services in Iran were considered to be good in the overall quality of services category, but in their counterpart the information given to patients left much to be desired.

Hussain, Sial, Usman, Hwang, Jiang and Hafiq (2019) conducted research on Pakistan's public health systems, interacting with services (tangible and environmental), doctor-patient communication, and pharmacy and laboratory services based on patient satisfaction and services, concluded that significant positive effects are generated on patient satisfaction, and loyalty.

For Husain, Pasinringi and Hair Awang (2019), in a study conducted in Indonesia, determined that there is evidence that tangibility, reliability and assurance have the greatest effect on service quality while responsiveness dimensions have the lowest effects.

Rostami, Ahmadian, Jahani and Niknafs (2018) considered that empathy has a significant impact on patient return to the teaching hospital and is important for their choice to suggest the hospital to others. In the study all dimensions were of significant impact on the hospital setting, the services provided

as well as the timely information to the patient were decisive for patient loyalty. Samad, Akbar, Pasiga, Pratiwi, Anwar, Djamaluddin and Afiyah (2018), conducted a similar study in a hospital in Indonesia, which concluded that in terms of perceived quality of services, tangibility was the dimension with the highest level of satisfaction in the sample evaluated, while the dimension of dental health care showed the least satisfaction.

Other results (Rehaman and Husnain, 2018), obtained in Pakistan, determined that the most notable factors, which go hand in hand with better health care provision, were the dimensions of tangibility and empathy, considering them important for user satisfaction; in contrast, reliability and responsiveness proved to be insignificant.

Mahendrayana, Yasa and Indiani (2018), after conducting a study at Bali Siloam Hospital (Indonesia), demonstrated that quality of service has an effective and relevant impact on patient satisfaction, generating patient attachment to the hospital or clinic.

Marcellia (2018), carried out an investigation in an Indonesian public hospital, where they determined that reliability is a critical factor within the best health care services, since this dimension enhances the influence of quality on patient loyalty.

Authors Husain, Daeng, Montho, and Rezky (2017), in research conducted in Indonesia, concluded that all elements within a hospital organization, such as pharmacy, medical records, infrastructure, and health care personnel have a positive effect on patient satisfaction.

On the other hand, Al-Damen (2017), in a study carried out in Jordan, confirmed that there is a positive influence between service quality and patient satisfaction, and among the dimensions that predominated were reliability, empathy and safety.

According to the results of Surydana (2017) in Indonesia, health care services and patient satisfaction have a personalized value, significantly influencing customer satisfaction.

Haeba (2017), also in Indonesia, analyzed the relationship between hospitalised patient satisfaction, hospital image and patient loyalty. The results obtained showed that high patient satisfaction has a positive impact on loyalty, and the same effect has an image of the hospital.

In the Latin American context, Ampuero (2017) in an ophthalmology clinic located in Lima, Peru conducted a correlation study where it was found that there is a significant relationship between better health care performance and patient attachment, 53.4% of patients showed empathy towards the staff that attended them.

Cajusol and Ortiz (2018), in a study carried out in Lambayeque, Peru, found that better health care services influence the loyalty of users of public hospitals, but with the tangible elements, 32% of users agreed that the center never has the necessary equipment.

Horna (2018), in a research conducted in Lima, concluded that the better the service provided, the higher the loyalty, and in his research he found enough evidence to determine an average positive correlation between the variables.

In Colombia, Yépez, Cepeda and Jurado (2018), showed that the user should be the axis on which to focus quality care. They were able to distinguish limitations in access to care, above all due to administrative processes; it is important to know how the user perceives the care received through his or her experience at the center where it was provided.

In Quevedo, Ecuador, Bravo (2017) conducted research on customer empathy and marketing. This study determined that the reputation or name of the company is the most valuable, and should be strengthened with strategies; it suggested that complaint handling, after-sales service and sales advice should be corrected, in order to reduce customer turnover.

The World Health Organization (2003) defines quality as the adequate exercise of reliable health benefits for the user, in which the monetary value is in accordance with the possibilities of the people who access health care and which leads to the reduction of the rate of diseases in the population.

With respect to the quality of care variable, Donabedian (1984), who has one of the most widely accepted concepts of quality worldwide, says that it is the application of science and technological innovations in the field of medicine in such a way as to maximize the advantages for health, while at the same time reducing the risks.

The range of quality is, therefore, the desired level that the care provided reaches and therefore the most appropriate stability of risks and benefits.

Within the document in question are other important points to take into account when describing quality in the health system: "quality is not synonymous with luxury or complexity, but on

the contrary, quality in health services must be the same in all health facilities at all three levels of care (Sistema de gestión de la calidad en salud / Ministerio de salud. Dirección general de salud de las personas. Dirección ejecutiva de calidad en salud, 2007).

The SERVPERF quality mediation scale, proposed by Cronin and Taylor (1994), states that there are five dimensions (D) to this variable, which are mentioned below.

a) D1: Tangible elements: the user will observe it and the perspective that the user has, such as the physical appearance of the facilities, infrastructure, the state of the medical material and the human personnel that will take care of it

b) D2: Reliability: refers to the skill or competence of the health staff to execute the service offered in the medical appointment, users will see it in the way they receive information about their health, the confidence that the staff transmits,

(c) D3: Responsiveness: when the human resources of the organizations have the desire to support patients by providing accurate and appropriate care,

d) D4: Security: is the confidence that the staff reflects, guarantee of discernment and gentleness of the health personnel to transmit what the patient expects is confidence,

e) D5: Empathy or warmth: personal attention given to each user, is the dimension that generates good references on the service provided, with which the level of satisfaction is determined.

With respect to the loyalty variable, this term is defined as establishing relationships that allow a profitable and lasting relationship to be maintained with the beneficiaries, generating actions that provide value and thus increasing levels of satisfaction.

To achieve success, it is important to know what the client wants, which will make it possible to adjust activities to his predilections (2013).

On the other hand, Bastos (2006) refers that loyalty is used to increase the level of service with respect to the competition, being aware of their share in the market and that they want to achieve.

Burgos (2017) states that loyalty is the ability to maintain long-lasting relationships in the most profitable time.

Alcaide (2015) mentions that a great emotional sense must be established with the clients, it is necessary to go in depth with the functions that are offered since it is a product or service increasing the quality, a loyal client is the goal of all company.

It is necessary to arrive at this goal developing oriented guidelines to the client, creating techniques that offer an excellent quality in the offered service and to go of the hand with the relational marketing arriving thus to maintain the clients in the time.

Alcaide (2015) clarifies that loyalty is the mixture of acquisitions with an attachment interest that the customer has developed towards the service provider.

Another definition of loyalty is given by Oliver (1999) and says that the customer will continue to invest in the transactions or operations of their interest generating a strong commitment between the customer and the brand.

Loyalty will then be a guided influence to achieve that the beneficiaries maintain constant and invariable union with the company for long and continuous periods.

According to Promove Consultoría e formación SLNE (2012), loyalty has performance since to keep customers happy means to give them benefits and thus ensure contact links and ensure that the purchase is repeated in the future.

Loyal customers become the first to recommend the brand, they know it perfectly, they give ideas for improvements or repairs for the company; these customers are imperceptible to the rise in costs or values as they appreciate the service offered to them, thus it is easier to sell something new to a loyal customer than a new customer.

There are three pillars of loyalty, which are presented in the following dimensions of the loyalty variable postulated by Alcaide (2015):

a) D1: Company culture: in every company in the areas of the organizations will work among themselves looking for a single objective.

b) D2: Customer experience: the customer's experience within the organization should be attractive so that they can advise their acquaintances of the experience they have had.

c) D3: Relational strategy: nowadays the modern tenure of marketing is to get and increase the business with productive or advantageous customers for the company.

Finally, in view of the revised theoretical bases and the background explored, this study formulated

six hypotheses, shoed in Picture 1 and which will be tested by means of scientific procedures detailed in the corresponding sections.

General hypothesis: There is significant relationship between quality of care and loyalty of external users in Peruvian ophthalmological centers in the year 2020.
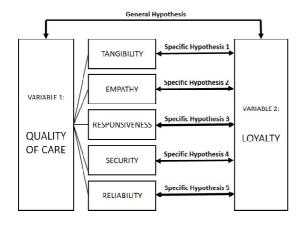
Specific hypothesis 1: There is significant relationship between tangibility and loyalty of external users in Peruvian ophthalmological centers in the year 2020.

Specific hypothesis 2: There is significant relationship between empathy and loyalty of external users in Peruvian ophthalmological centers in the year 2020.

Specific hypothesis 3: There is significant relationship between responsiveness and loyalty of external users in Peruvian ophthalmological centers in the year 2020.

Specific hypothesis 4: There is significant relationship between security and loyalty of external users in Peruvian ophthalmological centers in the year 2020.

Specific hypothesis 5: There is significant relationship between reliability and loyalty of external users in Peruvian ophthalmological centers in the year 2020.

Picture 1 Hypothesis raised

METHODS

Descriptive, cross-correlational, quantitative approach with non-experimental design. The population was made up of 210 external users of both sexes who received therapies for at least 1 month in an ophthalmologic center located in Lima, Peru. The sample consisted of 137 users; the sampling was of simple randomized probabilistic type. The survey technique was used to collect the information.

For the quality of care variable, an instrument based on the SERVPERF model was used, which includes dimensions of tangibility, empathy, responsiveness, safety and reliability with 13 items and a Likert scale, with a range of levels of bad 17-39, regular 40-62 and good 63-85.

For the loyalty variable, an instrument based on Alcaide's theory (2015) was developed, the dimensions of which are company culture, customer experience and relational strategy, with 15 items and a Likert scale with a range of levels from low 15-34, regular 35-55 and high 56-75. It should be emphasized that for the validation of this instrument, it was pertinent to present it to a judgment of 5 experts, who evaluated it according to the pertinence, relevance and clarity of the statements, obtaining in a general way the coefficient of 0.96 of Aiken's V., and concluding in this way that it is valid. As for the reliability, Cronach's alpha was applied, obtaining as a result the coefficient of 0.86, concluding that the instrument is very reliable.

Data processing in graphs and tables was done in the SPSS program, supported by Microsoft Office.

RESULT

As detailed in Table 1, it can be seen that the level of significance was lower than the level of significance (sig<0.05), which affirms that there is a relationship between the quality of care and the loyalty of external users in Peruvian ophthalmological centers in the year 2020.

Likewise, there is a considerable positive relationship between both variables, due to the correlation coefficient obtained (r = 0.594).

As detailed in Table 2, it can be seen that in the case of the specific hypotheses 1, 2, 3 and 5, the level of significance was lower than the level of significance (sig<0.05).

Therefore, there is a relationship between tangibility, empathy, responsiveness, reliability and loyalty, with an average positive relationship in the results obtained.

On the other hand, in the case of the specific hypothesis 4 the level of significance was higher than the level of significance (sig<0.05) so it is stated

Table 1 Spearman's rho correlation test between quality of care and loyalty of external users in Peruvian ophthal-mological centers

Spearman's Rho	Correlation	Quality of care	Loyalty
Quality of care	Correlation Coefficient	1.000	0.594
	Sig. (2-tailed)	-	0.000
	N	137	137
Loyalty	Correlation Coefficient	0.594	1.000
	Sig. (2-tailed)	0.000	-
	N	137	137

Table 2 Spearman's rho correlation test between quality of care and dimensions of loyalty of external users in Peruvian ophthalmological centers

Spearman's Rho	Correlation Results	Loyalty	Tangibility	Empathy	Responsiveness	Security	Reliability
Loyalty	C. Coefficient	1.000	0.497	0.381	0.342	0.109	0.452
	Sig.	-	0.000	0.000	0.000	0.205	0.000
	N	137	137	137	137	137	137
Tangibility	C. Coefficient	0.497	1.000	0.384	0.266	0.145	0.327
	Sig.	0.000	-	0.000	0.002	0.090	0.000
	N	137	137	137	137	137	137
Empathy	C. Coefficient	0.381	0.384	1.000	0.559	0.353	0.280
	Sig.	0.000	0.000	-	0.000	0.000	0.001
	N	137	137	137	137	137	137
Responsiveness	C. Coefficient	0.342	0.266	0.559	1.000	0.462	0.408
	Sig.	0.000	0.002	0.000	-	0.000	0.000
	N	137	137	137	137	137	137
Security	C. Coefficient	0.109	1.145	0.353	0.462	1.000	0.154
	Sig.	0.205	0.090	0.000	0.000	-	0.072
	N	137	137	137	137	137	137
Reliability	C. Coefficient	0.452	0.327	0.280	0.408	0.154	1.000
	Sig.	0.000	0.000	0.001	0.000	0.072	-
	N	137	137	137	137	137	137

that there is no relationship between safety and loyalty of external users in Peruvian ophthalmological centers in the year 2020.

DISCUSSION

Health institutions are responsible and must be committed to offering the user a safe environment to provide a service that provides confidence and be recognized for their treatment and prestige, generating an environment where customer loyalty flows.

The results obtained were the global measurement of the quality of care which was of a good level in 97.08 %, likewise, in the dimensions empathy, responsiveness, security and reliability was of a good level in 100%, while in the case of the tangibility dimension it reached the good level in 23.4% being a lower figure.

In the case of overall loyalty, 86.86% obtained a high level while 13.14% found a regular level. In addition, the results obtained for its dimensions were of a regular level at 97.8%, a high percentage at 2.2% and a low percentage at 0% in the case of the business culture dimension; Secondly, a regular level percentage of 81%, a high level percentage of 19% and a low level percentage of 0% was obtained for the user experience dimension and finally a regular level percentage of 52.6%, a low level percentage of 47.4% and a high level percentage of 0% was obtained for the relational strategy dimension.

In relation to the objective set was to determine the relationship between quality of care and external user loyalty in Peruvian ophthalmological centers in Lima, it was obtained that there is a considerable positive correlation between both variables. These results can be compared with Horna (2018) and Mahendrayana, Yasa and Indiani (2018) who found a considerable positive correlation between both variables in the study while Husain, Daeng, Montho and Rezky (2017) found that all elements within the organization (pharmacy, medical records, infrastructure, health personnel) have a positive effect on patient loyalty.

It follows that the user care process needs a measurement and identification of problems and constraints because the environment where the care process occurs undergoes changes according to the factors, institution and collaborators who have within the institutional objectives to quality as policy and regulations, which establish the control and monitoring to ensure the quality of services provided to users. It is important to emphasize that the quality indicator has implications on the expectations and perception of the users to achieve the loyalty and confidence that the users have with respect to the services provided.

In terms of determining the relationship between tangibility and the loyalty of external users in Peruvian ophthalmological centers, the results obtained were that the tangibility dimension has an average positive correlation with the loyalty variable. This result coincides with Cajusol and Ortiz (2018) where it is mentioned that there is a relationship between service quality and user loyalty, with the tangibility dimension being a relevant factor in the relationship between both variables.

It is evident that tangibility is important since the better this dimension is, the higher the loyalty of external users will be. On the other hand, it should be pointed out that, in addition to its verifiable dimension quality, it is the first factor by which users can perceive the materialization of the service received. However, for Samad, Akbar, Pasiga, Pratiwi, Anwar, Djamaluddin and Afiyah (2018) in their study it is concluded that tangibility is the dimension with the highest level of satisfaction having a positive correlation between tangibility and quality of care and on the other hand the dimension of dental health care shows the lowest satisfaction.

In order to determine the relationship between empathy and loyalty of external users of a private

ophthalmological center in 2020, it was taken into account that the empathy dimension is the dimension that seeks to give personalized attention and that generates good references of the service provided. The result shows that there is an average positive correlation between this dimension and the loyalty variable, which coincides with the results of Rehaman and Husnain (2018) where they conclude that all the dimensions are positively related and that tangibility and empathy are relevant factors in user loyalty.

In relation to determining the relationship between responsiveness and loyalty of external users of a private eye care center in 2020, it is taken into account that the responsiveness dimension is related to meeting user demand promptly and quickly. An average positive correlation was found between this dimension and the loyalty variable, which is similar to Wahyuni, Nurhayani and Indar (2019) in this study on health care services and loyalty of hospitalised patients in India, data was collected by questionnaire from 95 patients. In conclusion, there is a relationship between health services and patient loyalty with a positive effect on responsiveness and safety dimensions. Therefore, it follows that both responsiveness and confidence are important to increase user expectations. In this respect, it should also be pointed out that, for the responsiveness dimension, the previously mentioned background obtained similar results to those obtained in the present study. It should be noted that this dimension is the one that interacts directly with the user's needs and the one that should receive the most attention.

As for determining the relationship between security and the loyalty of external users of a private eye care center in 2020, the security dimension, which is the knowledge and courtesy of the human resource, was found to have no correlation between security and the loyalty variable. On the contrary, Al-Damen (2017) points out that all its dimensions are positively related but that reliability, empathy and security are predominant factors in user loyalty. It should be noted that despite the results obtained in this research, this dimension should be taken into account as it expresses the user's feelings so as not to be at risk. On the other hand, although it is true that the previously described precedent indicates a service model where security is a relevant dimension, it is necessary to consider the situation in which the study was carried out. In the

case of the fifth specific objective of determining the relationship between reliability and the loyalty of external users of a private ophthalmological center in 2020, the reliability dimension, which is understood as the way in which the service offered is carried out by providing health information in a timely and careful manner, was found to have an average positive correlation between this dimension and the loyalty variable, whose results are similar to those of Sausa (2018, February 17) whose research found a relationship between reliability and user experience because the lack of confidence in the services provided in public health institutions leads to the experience of users being affected by migrating to the private health service, this is understood to mean that the greater the reliability of the services provided, the better the user experience will be.

Likewise, it is important to know what the user perceives with respect to the services offered in order to implement strategies and improvement plans that are in accordance with the expectations of the user profile. Finally, quality is a cornerstone that promotes user confidence and safety in the health services provided to the user, so that loyalty is the result of the processes defined and known by the health team who are committed and assume responsibility for the ophthalmic care of users who choose to voluntarily care.

CONCLUSION AND SUGGESTION

CONCLUSION

There is a considerable positive correlation (sig<0.05; r = 0.594) between the quality of care and the loyalty of external users in Peruvian ophthalmological centers in the year 2020.

There is an average positive correlation (sig<0.05; r = 0.497) between tangibility and loyalty of external users in Peruvian ophthalmological centers in the year 2020.
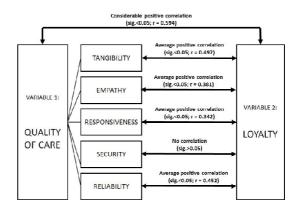
There is an average positive correlation (sig<0.05; r = 0.381) between empathy and the loyalty of external users in Peruvian ophthalmological centers in the year 2020.

There is an average positive correlation (sig<0.05; r = 0.342) between responsiveness and the loyalty of external users in Peruvian ophthalmological centers in the year 2020.

There is no correlation between (sig>0.05) security and the loyalty of external users in Peruvian ophthalmological centers in the year 2020.

There is an average positive correlation (sig<0.05; r = 0.452) between reliability and loyalty of external users in Peruvian ophthalmological centers in the year 2020.

Picture 2 shoes all established correlations found in the study.

Picture 2   Established correlations

As was found in the empirical research, it is necessary to reinforce the quality of service, while this phenomenon increases user loyalty.

SUGGESTION

It is suggested that hospital directors and administrators should consider measuring the quality of care in their institutions in order to evaluate its reinforcement through talks and training, since it has been demonstrated through this and previous studies that the quality of care is significantly related to user loyalty.

We suggest that other researchers conduct research in other settings using the same methodology used in this study, in order to generate discussion that will enrich this line of research.

This research is made available to undergraduate and graduate students in careers related to health administration so that it can serve as a background for their final papers.

REFFERENCES

Abbasi-Moghaddam, M., Zarei, E., Bagherzadeh, R., Dargahi, H., & Farrokhi, P. (2019). Evaluation of service quality from patients' viewpoint. *BMC Health Services Research,* 19(170), 1-7. doi: https://doi.org/10.1186/s12913-019-3998-0

Afridi, S. A., Khan, W., & Bangash, R. (2019). Impact of Service Quality on Customers' Advocacy;

Mediating Role of Customers' Loyalty: A case of selected Private Hospitals of Peshawar. *Sarhad Journal of Management Sciences*, 5(1), 157-174. doi: https://doi.org/10.31529/sjms.v5i1.363

Alcaide, J., Bernues, S., Diaz-Aroca, E., Espinosa, R., Muñiz, R., & Smith, C. (2013). *Marketing y Pymes: Las principales claves de Marketing en la Pequeña y Mediana Empresa*. Madrid: Marketing Y Pymes.

Alcaide, J.C. (2015). *Fidelización de clientes*. Madrid: ESIC Editorial.

Al-Damen, R. (2017). Health Care Service Quality and Its Impact on Patient Satisfaction "Case of Al-Bashir Hospital". *International Journal of Business and Management*, 12(9), 136-152. doi: https://doi.org/ 10.5539/ijbm.v12n9p136

Ampuero, C. (2017). *Calidad del servicio y Fidelización del paciente en la Clínica oftálmica Instituto de la Visión en el Distrito De San Borja 2016* (Bachellor thesis, Universidad Inca Garcilaso de la Vega, Lima Peru). Retrieved from http://repositorio.uigv.edu.pe/ handle/20.500.11818/1714

Anabila, P., Kumi, D., & Anome, J. (2019), Patients' perceptions of healthcare quality in Ghana: A review of public and private hospitals. *International Journal of Health Care Quality Assurance*, 32(1), 176-190. doi: https://doi.org/10.1108/IJHCQA-10-2017-0200

Askar, M., Sartika, D., Hasan, Z. A., Haerani, H., Nur, M., & Citrawati, C. (2019). Level of satisfaction and loyalty of mothers towards delivery services at Labuang Baji Hospital Makassar. *Health notions*, 3 (2), 84-91. doi: https://doi.org/10.33846/hn.v2i12.363

Bastos, A (2006). *Fidelización del cliente. Introducción a la venta personal y a la dirección de ventas*. Madrid: Ideas Propias Editorial.

Boadi, E. B., Wenxin, W., Bentum-Micah, G., Asare, I. K., & Bosompem, L. (2019). Impact of Service Quality on Customer Satisfaction in Ghana hospitals: A PLS-SEM Approach. *Canadian Journal of Applied Science and Technology*, 7(3), 503-511.

Bravo, S. (2017). *Marketing de Servicio que permita la Fidelización de los Clientes de la Empresa de Medicina prepagada Salud S.A. en la ciudad de Quevedo* (Bachellor thesis, Universidad Laica Vicente Rocafuerte de Guayaquil, Guayaquil, Ecuador). Retrieved from http:// repositorio.ulvr.edu.ec/handle/44000/1399

Burgos, E. (2017). *Marketing Relacional*. La Coruña: Editorial Gesbiblo.SL

Cajusol, S. y Ortiz, F. (2018). *Calidad de servicio y su Influencia en el grado de lealtad de los usuarios de dos Hospitales Públicos del Departamento de Lambayeque* (Master's thesis, Universidad Nacional Pedro Ruiz Gallo, Lambayeque, Peru). Retrieved from http://repositorio.unprg.edu.pe/handle/UNPRG/ 5942

Cronin, J., & Taylor, S. (1994). SERVPERF versus SERVQUAL: Reconciling performance-based and perceptions-minus-expectations measurement of service quality. *Journal of Marketing*, 58(1), 125-131. DOI: http://dx.doi.org/10.1177/ 002224299405800110

Deming, W. E. (1993). *Calidad, Productividad y Competitividad*. Madrid: Editorial Díaz de Santos.

Donabedian A. (1984). *La Calidad de la atención médica: definición y métodos de evaluación*. México City: La Prensa Médica Mexicana.

Dubey, P., & Sahu, S. K. (2019). Effect of Service Quality on Perceived Value, Satisfaction and Loyalty of Customers: A Study on Selected Hospitals of Chhattisgarh. *International Journal of Computer Sciences and Engineering*, 7(3), 55-62. Retrieved from https://www.ijcseonline.org/pdf_spl_paper_ view.php?paper_id=678&12-ICIRSTM-IJCSE-112.pdf

Guhl, D., Blankart, K. E., & Stargardt, T. (2019). Service quality and perceived customer value in community pharmacies. *Health services management research*, 32(1), 36-48. doi: http://dx.doi.org/10.1177/ 0951484818761730

Haeba, R (2017). Patient Satisfaction, Hospital Image and Patient Loyalty in West Sulawesi Province. *Business and Entrepreneurial Review*, 17 (1), 1-14. doi: http:/ /dx.doi.org/10.25105/ber.v16i2.5088

Horna, I. (2018). *Calidad de servicio y fidelización del usuario externo del Instituto Peruano de Neurociencias, Lima - 2018* (Master's thesis, Universidad César Vallejo, Lima, Peru). Retrieved from http://repositorio.ucv.edu.pe/handle/ 20.500.12692/22549

Husain, F., Pasinringi. S., & Awang, A. (2019) Factors Affecting Dental Center Service Quality in Indonesia. *Pesquisa Brasileira em Odontopediatria e Clínica Integrada*, 19(e4269), 1-11. doi: http:// doi.org/10.4034/PBOCI.2019.191.53

Husain, F., Daeng, B., & Montho, R. (2017). Association between service health quality and patient satisfaction – a case study of people in north Mamuju, Indonesia 2017. *International Journal of Management (IJM)*, 8(1), 168-174. Retrieved from http://www.iaeme.com/MasterAdmin/ Journal_uploads/IJM/VOLUME_8_ISSUE_1/ IJM_08_01_019.pdf

Hussain, A., Sial, M. S., Usman, S. M., Hwang, J., Jiang, Y., & Shafiq, A. (2019). What Factors Affect Patient Satisfaction in Public Sector Hospitals: Evidence from an Emerging Economy. *International Journal of Environmental Research and Public Health*, 16(6), 994. doi: https://doi.org/10.3390/ ijerph16060994

Joint Commission International (2016) [Internet]. https:/ /www.jointcommissioninternational.org.

La Contraloría General de la República Perú (2018). *Operativo de control «Por una salud de calidad*. Lima: LCGR.

Marcellia, S. (2018). Service Quality, Satisfaction and Trust: a Study of Public Hospitals in Bandung, Indonesia. *International Journal of Engineering & Technology*, 7(3.3), 393-396. doi: http://dx.doi.org/10.14419/ijet.v7i3.30.18340

Mahendrayana, I. M. A., Yasa, P. N. S., & Indiani, L. P. (2018). The Effect of Service Quality on Patient Loyalty Mediated by Patient Satisfaction in Bali Siloam Hospital. *Jurnal Ekonomi & Bisnis JAGADITHA*, 5(1), 1-7. doi: http://doi.org/10.22225/jj.5.1.440.1-7

Pekkaya, M., Ýmamoðlu, O. P., & Koca, K. (2019) Evaluation of healthcare service quality via Servqual scale: An application on a hospital. *International Journal of Healthcare Management*, 12(4), 1-8, doi: https://doi.org/10.1080/20479700.2017.1389474

Melián-Alzola, L., Martín-Santana, J. D. (2019). Service quality in blood donation: satisfaction, trust and loyalty. *Service Business*, 14(1), 101-129. https://doi.org/10.1007/s11628-019-00411-7

Ministry of Health of Peru. (2017). *Plan de fortalecimiento de la gestión de calidad en salud. Unidad funcional de Gestión de Calidad en Salud.* Lima: Ministerio de Salud.

Oliver, R. L. (1999). Whence consumer loyalty? *Journal of Marketing*, 63(1), 33-44. doi: http://dx.doi.org/10.2307/1252099

Ostrom, A. L., Parasuraman, A., Bowen, D. E., Patricio, L., & Voss, C. A. (2015). Service Research Priorities in a Rapidly Changing Context. *Journal of Service Research*, 18(2), 127-159. doi: https://doi.org/10.1177/1094670515576315

Promove Consultoría e Formación SLNE. (2012). *Atraer y fidelizar clientes*. Madrid: Editorial Producciones Khartum SL.

Rehaman, B., & Husnain, M. (2018). The Impact of Service Quality Dimensions on Patient Satisfaction in the Private Healthcare Industry in Pakistan. *Journal of Hospital & Medical Management*, 4(1), 1-8. doi: http://doi.org/10.4172/2471-9781.100048

Rostami, M., Ahmadian, L., Jahani, Y., & Niknafs, A. (2018). The effect of patient satisfaction withacademic hospitals on their loyalty. *International Journal of Health Planning and Management*, 34(1), 1-10. doi: https://doi.org/10.1002/hpm.2685

Samad, R., Akbar, F. H., Pasiga, B. D., Pratiwi, R., Anwar, A. I., Djamaluddin, N., & Afiyah, N. (2018). Evaluation of patient satisfaction on quality of public dental health service from different dimensions in Indonesia. *Pesquisa Brasileira em Odontopediatria Clínica Integrada*, 18(1), 1-8. doi: https://doi.org/10.4034/PBOCI.2018.181.49

Sausa, M. (2018, February 17). Situación de la salud en Perú: Ineficiencias del sector están afectando a millones de peruanos. *Perú 21*. Retrieved from https://peru21.pe/peru/situacion-salud-peru-ineficiencias-sector-afectando-millones-peruanos-396225

Sistema de gestión de la calidad en salud / Ministerio de salud. Dirección general de salud de las personas. Dirección ejecutiva de calidad en salud. (2007). *RM 519-2006/MINSA*. Lima: Ministerio de Salud. Retrieved from http://bvs.minsa.gob.pe/local/dgsp/000_SGCALIDAD-1.pdf

Sitio, T., & Ali, H. (2019). Patient Satisfaction Model and Patient Loyalty: Analysis of Service Quality and Facility (Case Study at Rawamangun Special Surgery Hospital). *Scholars Bulletin*, 5(10), 551-559. doi: https://doi.org/10.36348/sb.2019.v05i10.002

Surydana, L. (2017). Service Quality, Customer Value and Patient Satisfaction on Public Hospital in Bandung District, Indonesia. *International Review of Management and Marketing*, 7(2), 187-192. Retrieved from https://www.econjournals.com/index.php/irmm/article/view/3839/pdf

Wahyuni, S., Nurhayani, & Indar, H. (2019). Relationship of Health Service Quality with Inpatients' Loyalty at RSUD Makassar City. *Indian Journal of Public Health Research & Development*, 10(7). doi: https://doi.org/10.5958/0976-5506.2019.01719.4

World Health Organization. (2003). Chapter 7: Health Systems: principled integrated care. Retrieved from https://www.who.int/whr/2003/chapter7/en/

Yépez-Chamorro, M. C., Ricaurte-Cepeda, M., & Jurado, D. M. (2018). Calidad percibida de la atención en salud en una red pública del municipio de Pasto, Colombia. *Universidad y Salud*, 20(2), 97-110. doi: http://dx.doi.org/10.22267/rus.182002.114