



Perception of patients with hearing disabilities regarding the quality of care received in health centers in Lima and Callao, Peru

Percepción de pacientes con discapacidad auditiva respecto a la calidad de atención recibida en centros de salud de Lima y Callao, Perú

Percepção de pacientes com deficiência auditiva em relação à qualidade do atendimento recebido em centros de saúde de Lima e Callao, Peru

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ABSTRACT

Objective: To determine the perception of the quality of care among individuals with hearing disabilities who seek healthcare services in Lima and Callao during 2024. **Materials and methods:** Observational-descriptive and quantitative cross-sectional research. The study population consisted of 130 deaf individuals affiliated with associations and who met the inclusion criteria. Of these, 98 participants agreed to take part in the study. The SERVQUAL instrument, originally published in 1988 and validated in Peru in 2012, was employed to assess five dimensions: reliability, responsiveness, assurance, empathy, and tangibles. To ensure proper comprehension of the model, it was interpreted in Peruvian Sign Language. **Results:** A widespread perception of dissatisfaction was identified among individuals with hearing disabilities who access healthcare services in Lima and Callao. The dimensions with the highest levels of dissatisfaction were empathy (97.96%), safety (96.94%), and tangibles (91.58%). **Conclusions:** There is a widespread perception of dissatisfaction among individuals with hearing disabilities who seek healthcare services in Lima and Callao.

Keywords: quality of healthcare; health of individuals with disabilities; individuals with disabilities; sign language; deafness.

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Scientific contribution:

The study is framed within the objectives of the 2030 Agenda, specifically SDG 3 (Good Health and Well-Being) and SDG 10 (Reduced Inequalities). Apart from that, it provides scientific evidence that may influence public policy formulation and improve nursing and global health professional practices.

INTRODUCTION

The World Health Organization (WHO) (1) defines disability as an impairment of body structures and a set of participation restrictions experienced by the affected individual, which generates difficulties in coping with everyday situations. According to this organization, approximately 16% of the global population has some type of disability, whether physical, mental, intellectual, or sensory. Among sensory disabilities is hearing impairment, defined as the loss or abnormality of the anatomical and physiological function of the auditory system, resulting in difficulty hearing and negatively affecting access to spoken language (2). Deaf individuals present profound hearing loss; that is, they are unable to perceive sounds below 90 decibels (dB). Therefore, they typically communicate through sign language.

In the same way, the World Federation of the Deaf (WFD) reports that globally there are approximately 72 million deaf individuals, representing more than 5% of the world's population. It is estimated that by 2050, this figure will reach 2.5 billion people (3). This community uses more than 300 different sign languages.

In its Charter on Sign Language Rights for All, the WFD highlights the fundamental value of sign language, the need for qualified interpreters, and brings visibility to various challenges faced by this population, such as limited access to healthcare services. In this regard, professionals from different sectors—particularly healthcare personnel—are urged to receive training in this type of nonverbal language to ensure this community's right to accessible information (3).

In Peru, approximately 7.6% of the population has some type of disability, according to data reported in the Sociodemographic Profile of the Population with Disabilities prepared by the National Institute of Statistics and Informatics (INEI) (4). According to the 2017 National Population Census, over 232,000 individuals with hearing disabilities were living in the country, of whom 8,790 identified Peruvian Sign Language (PSL) as their native language (5). It should be mentioned that this language was officially recognized by the Peruvian government in 2010 through Law No. 29535.

In 2020, INEI reported that 31.2% of individuals with disabilities resided in Lima (6); however, the percentage was not specified by type of disability. For its part, the Office of the Ombudsman (7) urged the inclusion of Peruvian Sign Language interpreter training within the public agenda. This recommendation emerged after the COVID-19 pandemic, during which the communication gap and its consequences for healthcare users became more evident.

The communication barriers faced by this population hinder the receipt of adequate healthcare services. A specific case occurred in 2020, when a deaf patient remained hospitalized for 20 days at the Amazonian Hospital of Yarinacocha, which did not have staff trained in the Peruvian Sign Language. Consequently, the patient remained isolated throughout that period, putting his health at risk as continuity of the required care was not ensured (8). Many individuals with this condition face similar situations.

On the other hand, quality of care is defined as the degree to which healthcare services provided to individuals and communities contribute to achieving optimal health outcomes. This concept represents a relevant indicator because it allows comparison of performance among different healthcare providers, directly influencing user satisfaction and continuity of care within the healthcare center (9). It is an important indicator because it differentiates among healthcare service providers, influencing user satisfaction and loyalty to the healthcare center.

Virginia Henderson stated that the quality of nursing care is composed of characteristics and actions that enable the restoration of patient health, to satisfy their fourteen basic needs. These needs cannot be met if a communication gap exists between the healthcare professional and the patient (10). Consequently, individuals with hearing disabilities may not receive the same quality of care as hearing individuals, since the lack of effective communication prevents clear identification of their needs (11).

Therefore, it is essential that healthcare personnel, including nursing staff, understand patients' perceptions of care quality. Providing appropriate care requires effective communication that enables comprehensive fulfillment of all patient needs. However, when the communicative code is not shared, the quality of care is compromised, negatively impacting patients' health (12).

In addition, in a globalized world with an increasing trend toward multiculturalism, it is necessary to have trained personnel capable of caring for populations with diverse beliefs and lifestyles, as these factors influence health recovery. In this regard, Leininger (13) states that transcultural nursing is particularly relevant due to population mobility and technological advances. The author also emphasized the need for nurses to be prepared to provide culturally competent care to individuals with diverse beliefs and ways of life (14), as they are embedded within cultural frameworks that establish patterns and lifestyles influencing individual decisions (15).

In this regard, the present study is highly relevant, as it seeks to determine the perception of care quality

among members of the deaf community receiving healthcare services in Lima and Callao. Its importance lies in generating useful information about this population to promote changes that ensure high-quality healthcare and humanized care. Apart from that, it contributes significantly to scientific knowledge due to the limited existing literature on perceived quality of care within this population, making it a valuable resource not only for the deaf community but also for the healthcare system and future research.

MATERIALS AND METHODS

This article is derived from a thesis written to obtain the professional degree of Nursing, which was defended on October 10, 2024. This was an observational, descriptive, quantitative, cross-sectional study, as the primary objective was to identify data within the population without any type of intervention by the research team.

The study population consisted of members from the Association of the Deaf in the region of Lima (ASSORELI), Asociación del Trébol, and Club Deportivo de Sordos Inmaculada Concepción, which comprised a population of 130 deaf individuals. A total of 98 participants were recruited for the study, representing an acceptance rate of 75%.

Participant selection was conducted based on inclusion criteria; that is, all individuals who met the following requirements were included: being over 18, belonging to the deaf community, having Spanish reading skills, and being able to communicate through the Peruvian Sign Language (PSL). Participants were required to have an identification card issued by the National Council for the Integration of Persons with Disabilities (CONADIS), which documents disability in the communication domain. Additionally, participants were required to sign an informed consent form, possess adequate cognitive capacity to appropriately respond to the data collection instrument, and have experience attending a healthcare center or service between 2022 and February 2024.

On the other hand, individuals with hearing impairment who used a communication system other than PSL were excluded, as well as those with cognitive disabilities that interfered with their ability to participate.

The data collection technique was based on the SERVQUAL model, developed in 1988 by Parasuraman, Zeithaml, and Berry, and validated in Peru in 2012 by Cabello and Chirinos (16). The instrument demonstrated Cronbach's alpha of 0.984 for outpatient services and 0.988 for emergency services. It consists of 44 items:

22 assessing expectations and 22 assessing perceptions, distributed across five dimensions: reliability (items 1–5), responsiveness (items 6–9), assurance (items 10–13), empathy (items 14–18), and tangibles (items 19–22).

The Peruvian Ministry of Health (MINSA) considers this instrument valid and includes its use in the Technical Guide for the Evaluation of External User Satisfaction in Healthcare Facilities and Medical Support Services (17). Responses were recorded using a 7-point Likert scale: 1 ("Strongly disagree"), 2 ("Disagree"), 3 ("Somewhat disagree"), 4 ("Neither agree nor disagree"), 5 ("Somewhat agree"), 6 ("Agree"), and 7 ("Strongly agree").

The survey took approximately 90 minutes to complete and was provided in printed format. To ensure comprehension, a PSL interpreter was present to translate each question, with approximately 30 seconds per interpretation. A virtual format was also available, consisting of written Spanish questions accompanied by short PSL videos. However, this modality had low acceptance within the community, with only three participants (3% of the total sample) using it.

Once collected, the data were digitized and coded using Microsoft Excel 2019, which was also used for data processing and analysis. Results were expressed as absolute and relative frequencies. For the analysis, participants were classified as satisfied users when positive values were obtained from the difference between perceptions (P) and expectations (E), and as dissatisfied users when this difference was negative.

As for the interpretation in Excel, a comprehensive table was created, which included the perception–expectation difference for the 22 items, considering both relative and absolute levels of satisfaction and dissatisfaction per item. Subsequently, the overall satisfaction level was determined as an indicator. For this purpose, items were prioritized according to the percentage of dissatisfaction: requiring improvement (>60%), in progress (40–60%), and acceptable (<40%), considering that these values may vary depending on the baseline measurement.

The study received approval from the Institutional Research Ethics Committee of Universidad Peruana Cayetano Heredia on February 7, 2024. Participant well-being was prioritized throughout the study; therefore, researchers assumed the responsibility and commitment to avoid causing any harm to participants. Considering this, we promoted the benefits we wanted to generate for the deaf population.

All individuals who met the inclusion criteria participated voluntarily. The study ensured equal and fair treatment for all participants, without allowing any

form of discrimination that could affect the integrity of individuals with hearing disabilities. Furthermore, the research aimed to generate knowledge beneficial to the entire deaf community and to improve the quality of care provided by healthcare professionals in healthcare centers.

Finally, participant autonomy and rights were respected using an adapted informed consent, which facilitated understanding of the study's purpose among individuals with hearing disabilities and ensured voluntary participation. No participant was pressured to join the research, and their decisions were fully respected.

RESULTS

The study included 98 participants aged between 18 and 65, with a mean age of 33.08 years. Male participants predominated, representing 60.20% of the sample. Regarding sociodemographic characteristics, 48.98% of respondents had completed secondary education. In terms of employment, 80.61% were employed. Additionally, 65.31% were enrolled in the Comprehensive Health Insurance (SIS), and 58.16% received care at primary healthcare centers (Table 1).

Table 1. Sociodemographic characteristics of individuals with hearing disabilities attending healthcare services in Lima and Callao, 2024.

Description	n	%
Age*	33.08	(18–52)
Sex		
Male	59	60.20
Female	39	39.80
Marital status		
Single	66	67.35
Married	14	14.29
Cohabiting	12	12.24
Divorced	6	6.12
Educational level		
Secondary education	48	48.98
Primary education	22	22.45
Technical higher education	22	22.45
Completed higher education	5	5.10
Incomplete higher education	1	1.02

* Mean (range).

Table 1. (Continuation).

Description	n	%
Occupation		
Employed	79	80.61
Housewife	14	14.29
Unemployed	3	3.06
Self-employed	2	2.04
Type of health insurance		
SIS (Comprehensive Health Insurance)	64	65.31
EsSalud (Social Health Insurance)	27	27.55
Private insurance	4	4.08
None	3	3.06
Attended a healthcare center		
Healthcare center	57	58.16
Hospital	26	26.53
Clinic	10	10.20
Polyclinic	5	5.10

* Mean (range).

The instrument used was the SERVQUAL model, which includes five quality assessment dimensions: reliability, responsiveness, assurance, empathy, and tangibles. The results obtained after surveying the study population, considering the dimensions, are presented below (Table 2).

Table 2. Distribution of perceived quality-of-care dimensions among individuals with hearing disabilities attending healthcare services in Lima and Callao, 2024.

Dimension	Satisfied		Dissatisfied	
	n	%	n	%
Reliability				
Staff guidance on reporting	1	1.02	97	98.98
Appointment attended at the scheduled time	1	1.02	97	98.98
Scheduling and order of arrival respected	2	2.04	96	97.96
Medical record available in the consultation room	35	35.71	63	64.29
Appointments available and accessible	7	7.14	91	92.86

Table 2. (Continuation).

Dimension	Satisfied		Dissatisfied	
	n	%	n	%
Responsiveness				
Timeliness at billing/registration desk	11	11.22	87	88.78
Timeliness of laboratory testing	18	18.37	80	81.63
Timeliness of radiology services	25	25.51	73	74.49
Timeliness of pharmacy services	13	13.27	85	86.73
Assurance				
Patient privacy was respected	2	2.04	96	97.96
Complete physical examination performed	3	3.06	95	96.94
The physician addressed the patient's questions	3	3.06	95	96.94
Physician inspired confidence	4	4.08	94	95.92
Empathy				
Courteous and respectful treatment	4	4.08	94	95.92
The physician showed interest in helping	4	4.08	94	95.92
Understanding of the physician's explanation about the health problem	1	1.02	97	98.98
Understanding of the physician's explanation about treatment	1	1.02	97	98.98
Understanding of the physician's explanation about diagnostic tests	0	0.00	98	100.00
Tangibles				
Signage (posters/signs)	7	7.14	91	92.86
Staff available to provide guidance and information	0	0.00	98	100.00
Availability of equipment and materials	12	12.24	86	87.76
Cleanliness and comfort of the environment	14	14.29	84	85.71

DISCUSSION

This study aimed to determine the perceived quality of care among individuals with hearing impairment who attend healthcare services in Lima and Callao. The findings indicate that the quality of care perceived by this population requires improvement, with more than 60% reporting dissatisfaction. This determination was made after evaluating the five dimensions of the SERVQUAL instrument, all of which showed values associated with dissatisfaction.

Among the sociodemographic information collected, educational level and occupation were particularly relevant. Regarding the educational level, the highest percentage corresponded to completion of secondary education (48.98%). Concerning occupation, 80.61% of participants reported being employed. These characteristics may influence the perception of individuals with disabilities, as higher educational levels are associated with greater awareness of healthcare rights.

At the national level, no studies were identified evaluating the perception of the quality of care received by this population, which prevented comparisons to assess potential improvements in healthcare delivery. Furthermore, the absence of a consolidated report from the National Superintendence of Health (SuSalud), the entity responsible for supervising Healthcare Provider Institutions (IPRESS), not only reflects the clear fragmentation of our healthcare system but also the limited knowledge regarding this population, their needs, and the challenges faced when providing care.

Nevertheless, similar findings have been reported in Latin America. Barrios et al. (18), through a literature review encompassing different studies in the region on the healthcare experiences of deaf individuals, reported that both access to and the process of healthcare delivery generate feelings of frustration and abandonment among the hearing-impaired population. These results are consistent with those of the present study, probably due to the realities experienced by individuals with disabilities across the continent and the multisectoral policies implemented by different states.

However, compared with the study conducted in Spain in 2019 by Cayuela et al. (19), it was found that participants in that country perceived the healthcare they received as good to fair. Differences between the two studies may be explained not only by the instrument used but also by the frequency of healthcare service evaluations, which were conducted annually in the Spanish study. This evaluation allows healthcare systems to identify deficiencies and establish strategies to reduce gaps in service delivery.

Regarding the reliability dimension of perceived quality of care in individuals with hearing impairment, 98.98% of respondents reported dissatisfaction, considering that healthcare personnel lacked the capacity to deliver the promised service. In terms of responsiveness, an average dissatisfaction rate of 82.91% was observed across the four items evaluated in this dimension. This reflects that participants did not perceive care as prompt, timely, or efficient.

These findings are consistent with national statistics from the National Institute of Statistics and Informatics (INEI) (4), indicating that, on average, a Peruvian citizen must wait approximately 81 minutes to receive outpatient care after arriving at a healthcare center and around 17 days to get an appointment. Delays in medical care significantly reduce accessibility to health services, particularly for individuals with hearing impairment. In this line, Barrios et al. (18) emphasize that limited accessibility generates feelings of frustration and abandonment in this population, negatively affecting their health condition.

Within the responsiveness dimension, which evaluates whether care is effective and timely, a high level of dissatisfaction was also identified. Item 8 showed the lowest dissatisfaction rate (74.49%), referring to the timeliness of radiological examinations. The relatively lower dissatisfaction observed may be explained by the perception that delays in this procedure are partly inherent to the process itself, beyond the direct intervention of healthcare personnel or communication barriers.

In the assurance dimension, it was identified that the expected quality of care was not achieved. Results indicate that patient privacy was not adequately respected and that there was a negative perception regarding the treatment received from the medical staff. These findings are consistent with the study by Cayuela et al. (19), in which participants rated staff treatment as fair.

Regarding the empathy dimension, a critical communication gap was identified. All respondents reported not understanding the healthcare professional's explanations concerning the diagnostic tests to be performed. In addition, 98.98% indicated they did not understand the information provided about their diagnosis or prescribed treatment. This situation represents a significant barrier to ensuring adequate and patient-centered care. In this regard, Castelo et al. (20) argue that communication between healthcare personnel and individuals with hearing impairment is complex; frequently, the specific needs of these patients are not recognized,

which may affect their autonomy. In many cases, communication occurs through family members, compromising the patient's right to make decisions about their own health.

A similar situation was observed in the study by García and Conceiro (21), who analyzed experiences related to communication barriers among deaf individuals treated in emergency departments. The narratives collected revealed violations of fundamental rights, including autonomy, privacy, and access to information. This situation generated feelings of anxiety, insecurity, discomfort, and frustration among patients regarding the care received. In the same study, the perceptions of deaf individuals who received care with the support of an interpreter were also included. The results were notably more positive, as participants reported feeling calmer and more satisfied with the care provided.

These findings highlight the urgent need to ensure the availability of sign language interpreters or healthcare professionals trained in this competency. Consistently, Vaca et al. (22) emphasize that effective communication in healthcare settings requires increased awareness among medical personnel regarding the specific needs of individuals with hearing impairment. Moreover, they mention the importance of promoting sign language acquisition, as it constitutes an essential communication channel to deliver appropriate care.

Finally, in the tangibles dimension, a high level of dissatisfaction was identified. 92.86% of respondents considered that there was inadequate signage within healthcare centers, and 100% expressed dissatisfaction with the care received during the clinical consultation due to the absence of staff to guide or provide information to both the patient and their family members. This situation largely reflects the limited knowledge of Peruvian Sign Language (PSL) among the healthcare staff. In this regard, Castelo et al. (20) reaffirm the need for adequate training in sign language to prevent misunderstandings arising from communication barriers, which may lead to clinical errors and poor care.

In addition to the findings by dimension, it is necessary to consider that the participants' socio-demographic characteristics, such as the predominance of completed secondary education (48.98%) and the high proportion of employed individuals (80.61%), may have influenced the perception of the care received. A higher educational level is often associated with greater awareness of health rights, which may have intensified the perception of dissatisfaction. This aspect should be considered a study limitation when interpreting the results.

CONCLUSIONS

The study revealed a generalized perception of dissatisfaction among individuals with hearing impairment who attend healthcare centers in Lima and Callao, particularly in the dimensions of empathy, assurance, and tangibles. The results indicate that the communication gap constitutes the main limitation to achieving

high-quality care, thereby compromising this population's right to receive adequate and humanized healthcare services. These findings highlight the urgent need to implement inclusive policies, strengthen sign language training among the healthcare personnel, and ensure the presence of interpreters within healthcare services to reduce inequalities and improve healthcare accessibility for the deaf community.

Conflict of Interest:

The authors declare no conflict of interest.

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Authorship Contribution:

XPVH: conceptualization, data curation, formal analysis, research, methodology, resources, supervision, visualization, writing of the original draft, writing - review & editing.

MCCE: data curation, research, methodology, supervision, visualization, writing of the original draft, writing - review & editing.

DECJG: methodology, supervision, visualization, writing - review & editing.

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