

Hearing Health Care Network: the perspective of the user

Rede de Atenção à Saúde Auditiva: perspectiva do usuário

La red de atención y salud auditiva: opinión del paciente

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Abstract

Introduction: analysis of the satisfaction of the person with hearing impairment to health care is of paramount importance. **Purpose:** to describe the satisfaction of the users of the Hearing Health Care Network regarding the conditions of assistance, access and use of the services. **Methods:** cross-sectional observational study with random sample stratified by municipality composed of 228 users of Hearing Health Services. The data collection was performed in 34 municipalities of the micro regions of Sete Lagoas and Curvelo in Minas Gerais, Brazil, through the application of structured script consisting of five themes (identification, socioeconomic data, user perception about their inclusion in the Hearing Health Network, evaluation of the access conditions, expectation, perception and use of the service and objective evaluation of the user satisfaction). **Results:** the evaluation of the satisfaction had a result higher than 80% in all assessed items. Moreover, more than two thirds of the respondents reported that they would recommend the health service to others. However, only half of the respondents reported to be advised about the importance of the follow up by the Hearing Health Service. **Conclusion:** the study revealed that most of the users reported to be satisfied with the network and the assistance as well as to have their expectations met. The proposed instrument has met the purposes because it made possible to measure the satisfaction of the users of the Hearing Health Network.

Keywords: Hearing; Patient Satisfaction; Health Services; Health Care (Public Health); Health Evaluation; Program Evaluation.

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Resumo

Introdução: A análise da satisfação da pessoa com deficiência auditiva com a atenção à saúde é de suma importância. **Objetivo:** descrever a satisfação dos usuários da Rede de Atenção à Saúde Auditiva quanto às condições de assistência, acesso e utilização dos serviços. **Método:** estudo observacional descritivo transversal composto por 228 usuários de Serviços de Saúde Auditiva. A coleta de dados foi realizada em 34 municípios das microrregiões de Sete Lagoas e Curvelo em Minas Gerais por meio da aplicação de roteiro estruturado. **Resultados:** a avaliação da satisfação teve resultado superior a 80% em todos os itens avaliados. Além disso, mais de dois terços dos entrevistados relataram que recomendariam o serviço de saúde para outras pessoas. Contudo, apenas metade dos entrevistados relatou ter sido orientado sobre a importância do retorno ao serviço de Saúde Auditiva. **Conclusão:** o estudo revelou que a maioria dos usuários relatou estar satisfeito com a rede e a assistência prestada, bem como tiveram suas expectativas atendidas. O instrumento proposto atendeu aos objetivos, pois possibilitou a mensuração da satisfação dos usuários da Rede de Saúde Auditiva.

Palavras-chave: Audição; Satisfação do Paciente; Serviços de Saúde; Atenção à Saúde; Avaliação de Programas e Projetos de Saúde.

Resumen

Introducción: El análisis de la satisfacción de la persona con discapacidad auditiva a la atención de la salud es de suma importancia. **Objetivo:** Describir la satisfacción de los pacientes de la red de servicios de salud auditiva con las condiciones del servicio, el acceso y utilización de los servicios. **Método:** Estudio observacional y transversal en el cual 228 pacientes de los servicios de salud fueron entrevistados. La recolección de datos se llevó a cabo en 34 municipios de microrregiones de Sete Lagoas e Curvelo en Minas Gerais por la aplicación del cuestionario estructurado. **Resultados:** La evaluación de la satisfacción fue mas de 80% para todas las preguntas. Además, más de dos tercios de los encuestados reportaron que recomendarían el servicio de salud a los demás. Sin embargo, sólo la mitad de los encuestados reportó haber sido advertido de la importancia de volver al servicio de la salud. **Conclusión:** El estudio reveló que la mayoría de los encuestados informaron estar satisfechos con la red y la asistencia y tenían sus expectativas satisfechas. El instrumento propuesto cumplió los objetivos, ya que hizo posible la medición de la satisfacción de los usuarios de la Red de Salud.

Palabras claves: Audición; Satisfacción del Paciente; Servicios de Salud; Atención a la Salud; Evaluación de Programas y Proyectos de Salud.

Introduction

According to data of the World Health Organization (WHO), in 2005, about 278 million people around the world had from moderate to profound bilateral hearing loss, being 80% of these individuals in developing countries¹. In Brazil, about 9.7 million people have hearing loss, which corresponds to approximately 5.1% of the population, being the third among the deficiencies in the country¹. In addition, also according to the World Health Organization (WHO), the current production of hearing aids (HA) meets less than 10% of the global needs and, in developing countries, less

than one in forty people who need hearing aids has one of them¹.

On September 28, 2004, the National Policy on Hearing Health Care was established in order to promote a wide national coverage in the care of people with hearing loss, to ensure the universality of the access, equity, hearing health integrality and social control, among others². The implementation of this Policy enables the successful intervention in the hearing impairment, encouraging actions of promotion and prevention in all levels of health care, through the work of a multi- and interprofessional specialized team.

One of the strategies of the *Sistema Único de Saúde* (SUS) – Brazilian Unified Health System

for promotion of hearing health was the creation of State Hearing Health Care Networks, established by the Ministerial Decree No. 587 of 07 October 2004, which determines the organization and implementation of the State Hearing Health Care Networks and defines that they consist of Actions in the Primary Care, Medium Complexity Care Services and High Complexity Care Services, comprising actions for promotion of hearing health, prevention and early identification of hearing problems together with the community, as well as informative and educational actions, family counseling and, if necessary, referrals to the Hearing Health Care Service (HHCS)³. Currently, the State Hearing Health Care Network in Minas Gerais counts with sixteen services enabled by the Ministry of Health, being 08 of High Complexity and 08 of Medium Complexity. The regulated access to the HHCS is given by the Hearing Health Regulatory Boards of the Municipal Health Departments of the municipalities where the services are provided. Currently, care is provided to 1,265 (one thousand two hundred and sixty-five) new patients per month in the Medium and High Complexity Services⁴.

Health care is revealed both as practice and research in the current reality of Public Health. It is important to identify, understand and value the health needs of each group of SUS users and its peculiarities, which allows the development of strategies for improvement of the services provided through care shared between the user and the professional, aiming at the well-being of the population⁵.

The evaluation of health actions is very important among the planning initiatives and management practices of this sector⁶, as they provide relevant information for the decision-making process based on evidence, and can focus on the evaluation of programs, services and technologies⁷, seeking the discussion or evaluation of the dimensions of process, structure and results^{8,9}.

The evaluation of the hearing health services often occurs through the study of the benefit and satisfaction of the user regarding the use of hearing aids (HA), and is a way to improve this policy, from the optimization of the use of financial resources for the provision of care with quality for a greater number of individuals with hearing loss¹⁰. Such studies have been conducted in private funding institutions and in public service through the application of questionnaires¹¹⁻¹⁶. The exploration of

the relationships between different aspects of health in the physical, social and cultural environment of the individuals favors an integrated perception of them¹⁷. However, the instruments currently used only evaluate the service used by the user.

The purpose of this study was to describe the satisfaction of the users on the Hearing Health Care Network regarding the conditions of assistance, access and use of the services.

Methods

It is a cross-sectional observational study with random sample stratified by municipality and composed of users of hearing aids (HA) of the Hearing Health Services of thirty-four municipalities of the micro-regions of Sete Lagoas and Curvelo in the State of Minas Gerais. The study was conducted in the period between April 2011 and February 2012.

The Hearing Health Care Network of the micro-regions was studied with reference to users and their healthcare history.

To conduct the study, the managers of 34 municipalities (Health Secretaries or Mayors) were contacted by phone and email in order to obtain the consent for inclusion of the city in the survey. After the consent of the managers, the secondary data of the municipality were analyzed and the sample calculation was performed for inclusion of users. After the definition of the sample of the study in each municipality, contact was held with the technical reference in hearing health of each municipality in order to get a list of patients for evaluation. Following, a random draw for selection and recruitment of the subjects was carried out and a previous phone call was held for presentation of the study and invitation of the users to participate. In positive cases, the interview was scheduled at their homes or in a classroom provided by the Municipal Health Departments in case of appointment already scheduled by the user in the service.

All participants and/or guardians received the guidelines and explanations about the study, and they read and signed the Free and Cleared Term of Consent.

In case of users under 12 years, only their parents or guardians were interviewed. In case of individuals aged 13-17 years, their parents or guardians and the service user were interviewed.

For the recruitment and selection of the users of the hearing health care network, the following

criteria were used in the study: to be included in the data base of the hearing health service, to be submitted to the stages of auditory diagnosis, selection and adaptation of hearing aids (HA) in the Single Health System, have attended at least one medical appointment in the hearing health service in the last 12 months and, in case of children under 18 years, have literate parents or responsible.

Patients with cognitive, neurological or psychiatric impairments that could not understand the questions were excluded from the study.

The structured script (Figure 1), elaborated by the authors, was applied by trained researchers in the form of interview with an average duration of thirty minutes and digitally recorded.

The script consists of five themes, namely:

1. Identification: identification of age, gender, city, education, type of transport used to access the hearing health service, date of entry in the service and date of the diagnosis.
2. Socioeconomic data: family income, conditions of basic sanitation, electricity, use of health insurance and housing.
3. Perception of the users about their inclusion in the Hearing Health Care Network: evaluation of the self-perceived health; prior hearing history; identification of how the users became aware of the Hearing Health Network; waiting time for scheduling the first appointment in the Hearing Health Care Service (HHCN), time of use of the hearing aid (HA), main places of use, quality of the device and quality of the care provided in the HHCN.
4. Evaluation by the users of the access conditions, expectations, perception and use of the service. Description of the satisfaction of the users regarding each stage and care within the Network. Their contact with the decentralized audiologist, the quality of the medical transportation offered by the municipality, the waiting time and efficiency of scheduling of consultations, satisfaction with the hearing aid (HA) and the advices received.

5. Objective evaluation of the satisfaction of the users regarding the service of the Network and the quality of their current communication.

It is important to say, first, a pilot study for calibration of the instrument and verification of the adequacy of the elaborated questions was conducted.

The interviews were transcribed and categorized in a database, checked, and then a descriptive analysis of the distribution of frequency of all categorical variables and analysis of the measures of central tendency and dispersion of the continuous variables were made. For the objective evaluation of the satisfaction of the user, axis 5, the Visual Analogue Scale (VAS) was used, where values from zero to ten were converted to a scale from zero to one for analysis. It was considered that the values close to 0 mean that the user has evaluated the item as very bad, close to 0.5 as indifferent and close to 1.0 as very good. The software R 2.15.0 was used for the data entry, processing and analysis.

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Results

The sample was composed of 228 users, being 127 female and 101 male, 10 children, 9 teenagers, 73 adults and 134 elderly. Table 1 contains information about the users of the hearing care network. It is noteworthy that: 55.7% of users are female, 13.5% are illiterate, 39.2% are literate, 28.8% completed primary education and 11.7% completed high school; 92.1% use public transport provided by the municipality itself to attend appointments in the hearing health service.



I. Identification:	
1. Date:	Age: Gender: Municipality:
2. Education: () Illiterate () Literate () Middle School () Complete High School () Incomplete High School () Incomplete Graduation () Graduate () Master () Doctorate	
3. Informant: () Patient () Parent/Guardian () Companion	
4. Name:	Age: Gender:
5. Education: () Illiterate () Elementary School () Middle school () High school () Higher education	
6. Transport type used for the Service for Hearing Health: () Supplied by the municipality () With own resource	
7. Date of Diagnosis: / / Date of entry into service: / / Location of the diagnosis	
II. Socioeconomic data:	
1. Family income (in Brazilian Real): () < R\$545,00 () From R\$546,00 at R\$1090,00 () From R\$ 1091,00 at R\$ 2180,00 () From R\$2181,00 at R\$4360,00 () Higher than R\$4361,00	
2. Water treatment: () Filtered () Boiled () Chlorinated () No treatment	
3. Water supply: () public network () well or sourcer of the river () Other:	
4. Basic sanitation: () Yes () No	5. Electrical light: () Yes () No
6. Private health plan: () Yes () No	7. House: () Own House () Rented House
III. User perception of their inclusion in Hearing Health Network:	
1. Do you consider yourself sick? () Yes () No Why?	
2. Do you consider your hearing loss as a health problem? () Yes () No Why?	
3. How do you/patient learned of Hearing Health Network? () Otolaryngologist () Speech therapist () Hospital () Health Center () Friend/Family () Other	
4. Why do you/patient searched the Hearing Health Network? () Difficulty to listen () Difficult to understand people () Other Mention:	
5. You/patient searched Hearing Health Network on your own initiative? () Yes () No Who took it?	
6. How long have you / patient has the problem that led him to seek the Hearing Health Service? () Birth () 6m to 1 year () 1 to 2 years () 2 to 3 years () 3 to 4 years () Other:	
7. You / patient know the cause of your hearing loss? () Yes () No Which?	
8. How do you or the family noticed the hearing problem? () The family complained () Delayed development of speech () after disease () Other What?	
9. When you noticed the problem, who was the first professional that you sought? Professional: Specialty: Location: When:	
10. Diagnostic tests were made by the Unified System Health? () Yes () No	
11. How long it takes to complete the diagnosis? () Less than 1 month () 1 to 3 months () More than 3 months () Other How many months?	
12. How long does the selection of hearing aid? () Less than 1 month () 1 to 3 months () More than 3 months () Other How many months? () Not applicable	
13. How long it takes to adapt the hearing aid? () Less than 1 month () 1 to 3 months () More than 3 months () Other How many months? () Not applicable	
14. How do you rate the waiting time for the first referral/service in Hearing Health Care Service? () Very good () Good () Regular () Bad	
15. How many hours a day you or the patient uses the hearing aid? () Does not use Why? () Not applicable	
16. In what situations you / the patient uses the hearing aid? () Home () School () Work () Religious Cults () Family reunion () TV () Phone () Practice sports () Coral () Other: () Not applicable	
17. Do you think the exams, consultations and returns were scheduled and selected according to your expectations? () Yes () No	
18. The family and / or companions were invited to attend the examinations and choice of models of hearing aids? () Yes () No	
19. The guidelines for the use of hearing aids were clear? () Yes () No () Not applicable	
20. Your problem or patient problem was resolved? () Yes () No () Not applicable	
21. You patient is satisfied with the attention received by the hearing care team (otolaryngologist, speech therapist, psychologist)? () Yes () No	
22. There was interest/concern of the staff for their case? () Yes () No	
23. Do you think the relationship with Hearing Health team who attended him was satisfactory? () Yes () No	
24. You're sent to speech therapy after hearing aid adaptation? () Yes () No () Not applicable	
25. You'll return or recommend the Hearing Health Service? () Yes () No Why?	
IV. User-assessment of the conditions, expectations, perception and use of the service:	
1. In your city, what do you think about the access to Care Network Health Hearing? () Very good () Good () Regular () Bad	
2. How was the access to the speech therapist in your city? () Very good () Good () Regular () Bad	
3. How do you rate the quality of medical transportation offered by the city in terms of comfort, safety and times? () Very good () Good () Regular () Bad	
4. Your communication improved after the adaptation of the hearing aid? () Yes () No () Not applicable	
5. The adaptation of the hearing aid has agreed with your expectations? () Yes () No Why? () Not applicable	
6. Therapy with the city speech therapist agrees with your expectations? () Yes () No () Not applicable	
7. How do you rate the Hearing Health actions developed by the speech therapist of the city as reception, evaluation, guidance, referral and therapy? () Very good () Good () Regular () Bad () Not applicable	
8. How do you rate the scheduling efficiency for speech therapy? () Very good () Good () Regular () Bad () Not applicable	
9. How do you rate the time for adaptation and delivery of the hearing aid after evaluation and selection? () Very good () Good () Regular () Bad () Not applicable	
10. Are you satisfied with your Hearing Aid? () Yes () No Why? () Not applicable	
11. You have been well received in Hearing Health Service in Diamantina City? () Yes () No () Not applicable Why?	
12. What did you think of the guidelines received from the Hearing Health service in Diamantina City? () Very good () Good () Regular () Bad () Not applicable	
13. You were instructed about the importance of returning to the Hearing Health Service? (6m - children and 1 year - adults) () Yes () No () Not applicable	
14. How do you rate the guidelines you received with relation in: your hearing problem, your effects in communication, strategies that enhance communication and the benefits provided by the adaptation of hearing aids? () Very good () Good () Regular () Bad () not received () Not applicable	
V. Objective user satisfaction assessment:	
How do you rate from 0 at 10:	
1. Service of health office / reception (0 - dissatisfied at 10 - totally satisfied)	Dissatisfied - () 0 () 1 () 2 () 3 () 4 () 5 () 6 () 7 () 8 () 9 () 10 - Totally satisfied
2. Scheduling appointments/exams	Dissatisfied - () 0 () 1 () 2 () 3 () 4 () 5 () 6 () 7 () 8 () 9 () 10 - Totally satisfied
3. Local of examinations	Dissatisfied - () 0 () 1 () 2 () 3 () 4 () 5 () 6 () 7 () 8 () 9 () 10 - Totally satisfied
4. Number of consultations	Dissatisfied - () 0 () 1 () 2 () 3 () 4 () 5 () 6 () 7 () 8 () 9 () 10 - Totally satisfied
5. Guidelines received	Dissatisfied - () 0 () 1 () 2 () 3 () 4 () 5 () 6 () 7 () 8 () 9 () 10 - Totally satisfied
6. Waiting time for the receipt of hearing aids	Dissatisfied - () 0 () 1 () 2 () 3 () 4 () 5 () 6 () 7 () 8 () 9 () 10 - Totally satisfied
7. Speech therapy	Dissatisfied - () 0 () 1 () 2 () 3 () 4 () 5 () 6 () 7 () 8 () 9 () 10 - Totally satisfied
8. Hearing aid adaptation	Dissatisfied - () 0 () 1 () 2 () 3 () 4 () 5 () 6 () 7 () 8 () 9 () 10 - Totally satisfied
How do you rate from 0 at 10:	
9. Your communication (understand and make understood)	Dissatisfied - () 0 () 1 () 2 () 3 () 4 () 5 () 6 () 7 () 8 () 9 () 10 - Totally satisfied
10. Your listening	Dissatisfied - () 0 () 1 () 2 () 3 () 4 () 5 () 6 () 7 () 8 () 9 () 10 - Totally satisfied
11. Your speak	Dissatisfied - () 0 () 1 () 2 () 3 () 4 () 5 () 6 () 7 () 8 () 9 () 10 - Totally satisfied

Figure 1. Structured script applied to users



Table 1. Frequency distribution of the sample characterization variables

Variable	Variable category	N-valid	%
Gender	Female	127	55.7
	Male	101	44.3
	Total	228	100.0
Education	Illiterate	30	13.5
	Literate	87	39.2
	Elementary School	64	28.8
	Complete High School	26	11.7
	incomplete High School	7	3.2
	Complete Higher Education	5	2.3
	Post-graduate	2	0.9
	Specialization in Public Health	1	0.5
Total	222	100.0	
Transport used for HHCS*	Provided by own city	197	92.1
	With own resource	17	7.9
	Total	214	100.0

Legend: *HHCS: Hearing Health Care Service

The figure 2 shows the data of socio-economic characterization of the users of the hearing care network that have answered the questionnaire. It can be verified that: 54.6% have family income between one and two minimum wages; 82.8% have chlorinated water treatment; 85.0% are provided with water from the public network; 18.5% of users of the hearing care network do not have basic sanitation; 100% of users of the hearing care network have electricity; 65.0% of users of the hearing care network do not have private health insurance; 90.3% of users of the hearing care network have their own home.

Regarding the perception of the users about their inclusion in the Hearing Care Network, the Table 2 shows that: 34.8% of users became aware

of the hearing health network through friends or relatives and 14.1% through the health care unit; 54.2% sought the hearing care network due to their difficulty to listen; 11.9% have the disease from birth; 61.4% the families noticed the hearing problem; 55.3% took less than a month to complete the diagnosis; 39.5% of users took one to three months to select the hearing aid (HA); 30.8% took one to three months to adapt to the hearing aid; 48.9% of users of the hearing care network classified the waiting time of the first referral as good; 91.2% of patients used the hearing aid all day long; 97.3% of patients received clear information about the use of the hearing aid; 81.6% of patients had their problems solved and 51.5% of patients were referred to speech therapy.

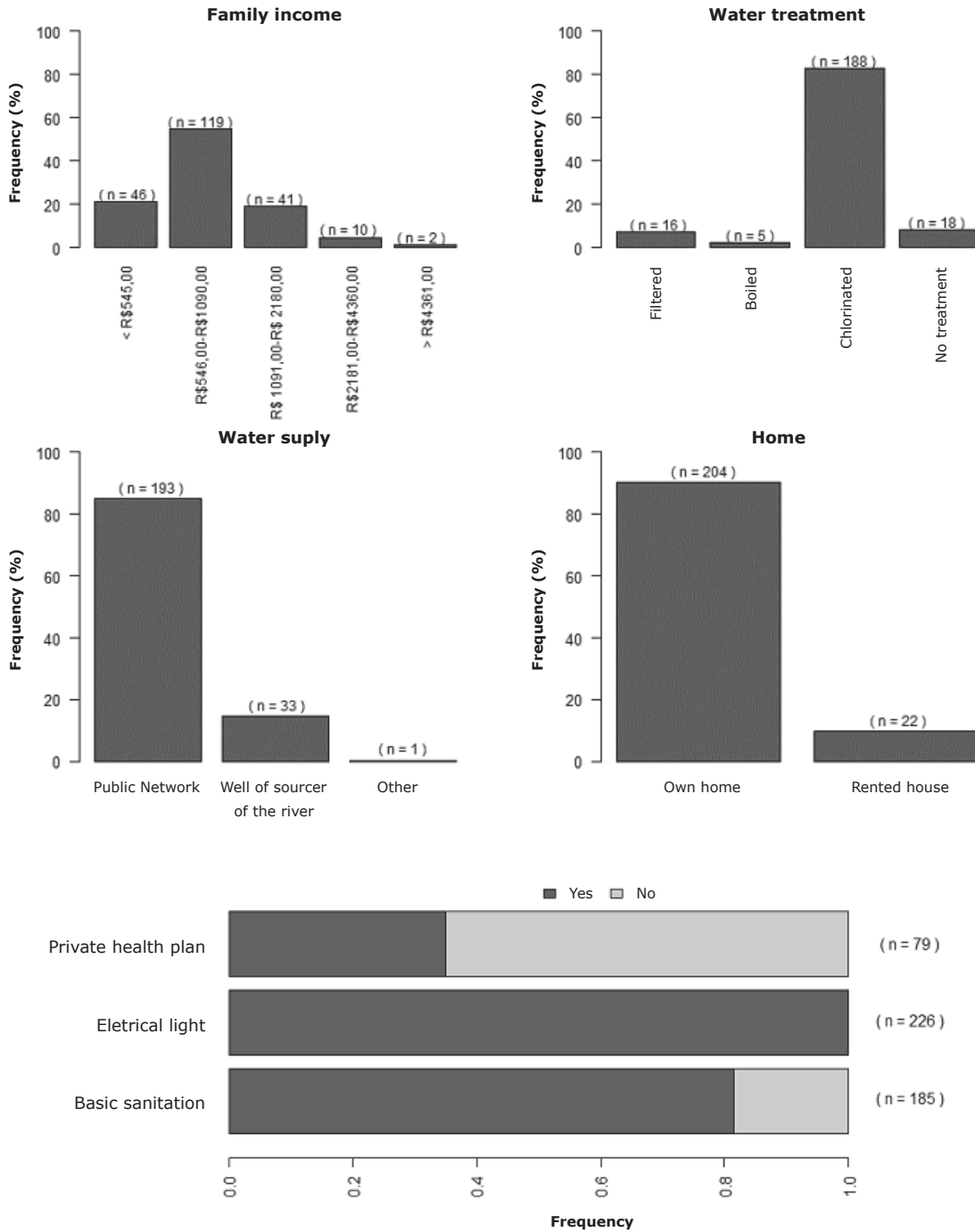


Figure 2. Distribution graph of the socioeconomic characterization of variables

Table 2. Frequency distribution of the variables on the user's perception of its insertion in Health Network Hearing

Variables and categories	N-Valid*	%
How did you learn of the Hearing Health Network		
Otolaryngologist	56	24.7
Speech therapist	19	8.4
Hospital	1	0.4
Health Center	32	14.1
Friend/Family	79	34.8
Others	40	17.6
Total	227	100.0
Why sought the Hearing Health Network		
Difficulty hearing	123	54.2
Trouble understanding people	62	27.3
Others	42	18.5
Total	227	100.0
Time that the patient has the disease		
Brth	27	11.9
6 months to 1 year	5	2.2
1 to 2 anos	8	3.5
2 to 3 years	15	6.6
3 to 4 years	14	6.2
Others	158	69.6
Total	227	100.0
How noted the hearing problem		
The family noticed/complained	140	61.4
Delay in speech development	9	3.9
After disease	10	4.4
Others	69	30.3
Total	228	100.0
Time to complete the diagnosis		
Less than 1 month	121	55.3
1 to 3 months	40	18.3
More than 3 months	12	5.5
Others	46	21.0
Total	219	100.0
Time for the selection of hearing aid		
Less than 1 month	18	8.8
1 to 3 months	81	39.5
More than 3 months	38	18.5
Others	68	33.2
Total	205	100.0
Hearing aid adapting time		
Less than 1 month	59	30.3
1 to 3 months	60	30.8
More than 3 months	36	18.5
Others	40	20.5
Total	195	100.0
Waiting time ranking - First referral		
Very Good	23	10.3
Good	109	48.9
Regular	41	18.4
Bad	50	22.4
Total	223	100.0
How many hours the patient wears the hearing aid		
All day	155	91.2
Does not use	15	8.8
Total	170	100.0
Situations that the patient wears the hearing aid		
Home	2	1.2
Work	1	0.6
Religious cults	1	0.6
Television	1	0.6
Others	1	0.6
House, family reunion, television	35	21.2
Home, work, religious services, family reunion, television, telephone	124	75.2
Total	165	100.0
Clear guidelines for the use of hearing aid		
No	5	2.7
Yes	180	97.3
Total	185	100.0
Patient's problem was solved		
No	33	18.4
Yes	146	81.6
Total	179	100.0
The patient was referred for speech therapy		
No	88	51.5
Yes	83	48.5
Total	171	100.0

Legend: * the number of information varies due to missing data

The Figure 3 shows the responses regarding self-perceived health and the perception of the user about their inclusion in the Hearing Care Network. It is worth noting that 54.2% of users do not consider themselves sick; 70.8% of users consider hearing loss a health problem; 82.5% of users sought the auditory network on their own initiative; 68.3% of users do not know the cause of the hearing loss; 76.5% were submitted to diagnostic tests in the *Sistema Único de Saúde* (SUS) – Brazilian

Unified Health System; 87.2% have scheduled examinations, consultations and follow-ups as expected; 75.4% of family members and companions of the users were invited to participate of the examinations; 99.1% of patients were satisfied with the care received; 96.9% of users noted interest/concern of the team; 99.6% of patients rated the relationship with the team as satisfactory; 98.2% of patients would return or recommend the health service to others.

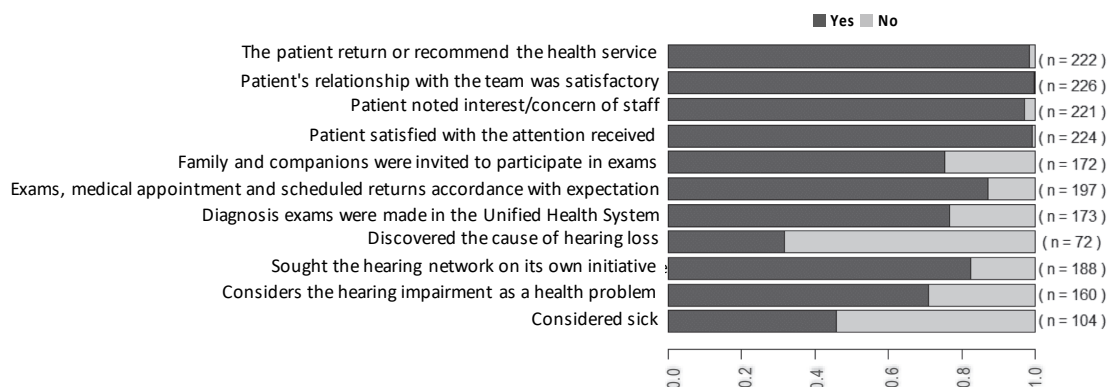


Figure 3. Distribution graph of the variables on self-perceived health of the user and its insertion in the Health Network Hearing

Regarding the evaluation by the users about access conditions, expectations and use of the service, the Figure 4 shows that: 93.6% of users have obtained an improvement in communication after the adaptation of the hearing aid (HA); 88.5% of patients reported that the adaptation of the hearing aid (HA) met their expectations; 98.6% of patients

reported that the speech therapy in the municipality met their expectations; 95.5% of patients were satisfied with the hearing aids (HA); 99.6% of users have been well received in the Hearing Health service of Diamantina City; 54.0% of patients were made aware about the importance of the follow-up visit to the Hearing Health service.

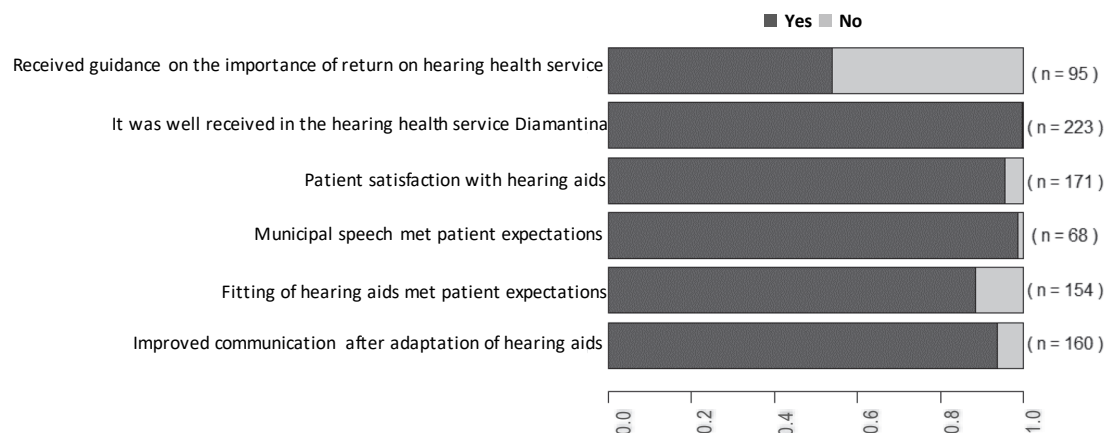


Figure 4. Distribution of graphic user evaluation variables of access conditions, expectations and use of the service

For the objective evaluation of the satisfaction of the user regarding the access conditions, expectation, perception and use of the service, an index ranging from zero to one was created. Values close to zero mean that the user evaluated the criteria as bad and values close to one mean that the user evaluated the criteria as very good. In the Figure 5, it can be observed that the best evaluated items were: “Classification of actions of hearing health”, “Impression of the patient about

the advices received from the service”, “Classification of the medical advices regarding the hearing problem, effects on communication”, “Quality of the transport offered by the municipality regarding comfort, safety and times”, “Access to the audiologist in the municipality” and “Classification of the scheduling efficiency for the speech therapy”, all of them with lower limit over 0.666, which means that they were classified as “good” and “very good”.

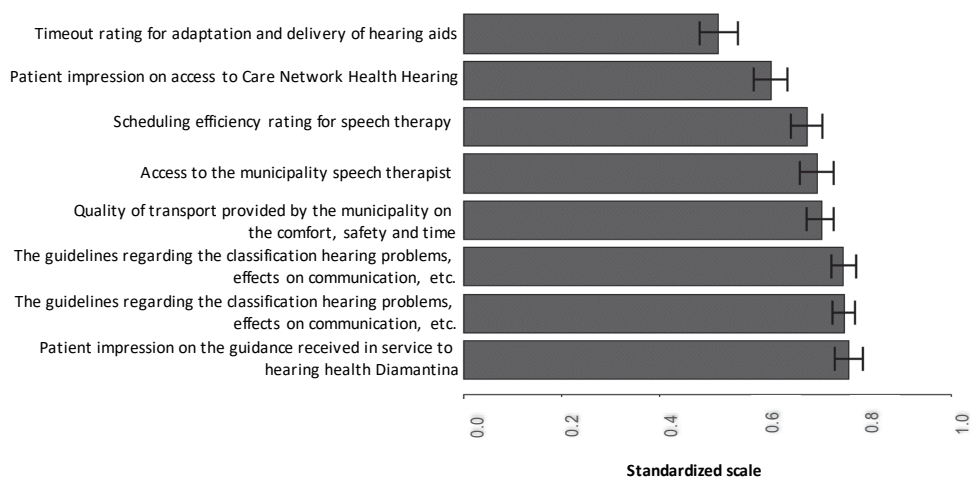


Figure 5. Chart showing the distribution of user evaluation variables of access conditions, expectation, perception and use of hearing health service

Discussion

The instrument proposed in the present study sought to evaluate the Hearing Health Care Network from the perspective of the user by the analysis of different axes, as to monitor the user satisfaction is important for the evaluation of the clinical procedures and to ensure the quality of the services, and also to reflect the reality of the results of the services provided by the Hearing Health Care Network^{10,17}. However, there are limitations that should be considered, such as the design of the study; as it is a descriptive study, association analyses were not performed and the themes presented here only describe the perception of the user.

The identification and socioeconomic data are extremely important as they characterize the profile of the users of the hearing health care network.

The study revealed a similar distribution between genders, with declaration of the education level up to primary education, and mostly elderly.

These data corroborate other findings in the hearing health services^{4,16,18}.

There were no references in the literature about the transport used by the service users, if it was provided by the municipality or not, but most users of the studied Hearing Health Care Network travel with public transport provided by the municipality. It is worth noting that this reality generates substantial costs to ensure the access of the users to the service. In this context, it should be noted that greater distances between the residence of the user and the service leads to greater financial implications for the municipality.

In relation to socioeconomic data, this study revealed values of family income lower than those presented as individual income by people with hearing loss in the city of Canoas, RS¹⁹. Thus, the sample of this study showed worse economic level. However, it should be considered that the study of Canoas was not conducted with users of the public service.

Similar reasoning occurs with regard to the results of the variable health insurance as, also in relation to the study carried out in Canoas, the findings regarding the use of health insurance are different from the profile of users of the present study⁽¹⁹⁾. While in Canoas about two-thirds reported to have health insurance, the present data revealed that about a third of the users have health insurance.

Regarding housing conditions, the results support data revealed by the IBGE in the 2010 Census for the southeast region, where most of the population has own house, electricity, water and sewage treatment²⁰.

In the analysis of the perception of the user regarding the inclusion in the hearing care network, the source of information about the existence of hearing care network is highlighted, as less than half of the users obtained the information through the health system, and of these, about 14% was informed through primary health care. To that extent, it is worth considering the role of primary care as coordinator of the care networks²¹. Thus, there is a need for strategies for clarification about the hearing health policy in the three levels of health care, especially in primary care. On the other hand, the data point to a possible exchange of information of the users and to the formation of support networks and social cohesion.

Regarding the time between the onset of hearing loss and the search for the service, the analyzed data corroborate a study conducted in Bauru²², as more than half of the users have searched the service after four years of the onset of the symptoms. Moreover, the signs were noted predominantly by the family, disagreeing from the same study where the complaint came from the users themselves. Thus, the importance of the family role in the health and treatment process is emphasized²³.

As the time for the conclusion of the diagnosis and adaptation to the hearing aid (HA) had the worst average in the classification of the evaluation of the users about their inclusion in the hearing health care network, it is worth noting that the whole process took less than three months. It is highlighted that in the national and international studies, the average time between diagnosis and receipt of hearing aids (HA) was around three months²⁴⁻²⁶. However, there are studies with longer times. In Finland, the waiting time may be over two years²⁷.

Although the data corroborate findings of national^{24,25} and international²⁷ studies, there are

methodological differences with the design of this study. One of the studies considered only users above 15 years²⁴, while the data presented here consider users of all age groups.

Another study²⁵ conducted in an association of people with hearing loss in Blumenau, State of Santa Catarina, is corroborated by this study as it indicates that the greatest dissatisfaction is related with the waiting time to receive the personal hearing aid.

Most interviewed users state that their hearing problem was solved and reported that they use hearing aids (HA) all day long, especially at home and to watch tv²⁵, but less than half was referred to speech therapy. Such data can justify the time of acclimatization with the personal hearing aid that, for users of the service of this study, took three months or more²⁸, and this reinforces the fragility of the network in relation to the treatment and rehabilitation process. It is also worth noting the importance of medical advice and counseling of the professionals of the Network for the success of the selection and adaptation to the hearing aids (HA), which will be optimized through therapies and the strategies for its use²⁹.

The analysis of the general perception of the user about the actions of hearing health taken, considering the scores of the answers given to the evaluation of the reception, scheduling of appointments, number of appointments and received guidance revealed an overall satisfaction rate close to 80%. This data corroborates the findings of satisfaction of specific study on hearing health³⁰ and satisfaction with the *Sistema Único de Saúde* (SUS)¹¹ – Brazilian Unified Health System. However, it is worth considering the notes of the literature that remind that in satisfaction studies there is the bias of gratitude and the fear of losing the right to the care service¹⁹. Thus, the data should be viewed with caution.

This article brings contributions such as: proposal of a new instrument for evaluation of the of hearing care network from the perspective of the user and results from a data collection realized in a geographical and administrative region (health macro-region) of the hearing care network already established and not just an isolated service.

It is worth mentioning that the instrument can also be submitted to a more detailed analysis, requiring its application in different Hearing Health services.

Conclusion

The study revealed that most of the users reported to be satisfied with the network and with the assistance provided, and to have their expectations met. The evaluation of the satisfaction had a result higher than 80% in all assessed items. In addition, 98.2% of the patients would return or recommend the health service to others. However, only 54% of the users reported to be made aware about the importance of the follow-up by the Hearing Health service and only 48.5% were referred to speech therapy.

For the actual analysis of the service, the users can provide relevant information about its quality and functioning. It was possible to observe that the instrument met the objectives, once it addresses access, quality and satisfaction, which are the key segments for the evaluation of the quality of the health services, with focus on the user.

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