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Responsiveness of Specialized Hearing Rehabilitation Centers in Maceió: User Evaluation

Responsividade dos Centros de Saúde Auditiva de Maceió: Avaliação dos Usuários

Keywords

Responsiveness
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Descritores

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ABSTRACT

Purpose: To evaluate the responsiveness of hearing health services as a measure of user satisfaction. **Method:** Cross-sectional study conducted in four Specialized Hearing Rehabilitation Centers (SHRC), accredited by the National Health System (SUS) in Maceió, state of Alagoas, Brazil, henceforth named SHRC-A, -B, -C and -D. The sample size was calculated proportional to the number of users aged >18 years who received hearing aids by SHRC. The Multi-country Survey Study (MCSS) was applied with assessment of seven domains: dignity, autonomy, clear communication, confidentiality, prompt attention, choice of health care provider, and quality basic amenities, using a Likert scale ranging from 1 to 4 points, with results presented in graphs and tables (in number and percentage). Responsiveness classification was as follows: very low/low (sum of responses one and two) and good/very good (sum of responses three and four). **Results:** “Dignity” was evaluated as good by over 90% of the respondents, and “confidentiality” was assessed as good by 80% of them, except for one SHRC. “Autonomy” was classified as good by 66.5% of the respondents in SHRC-C and 55.5% in SHRC-A. “Choice of health care provider” was considered poor responsiveness by 27.5% of the respondents in SHRC-B and 35.9% in SHRC-D. Regarding “prompt attention” in receiving hearing aids, 41.2% of the respondents reported that they had to wait six to nine months in SHRC-D and three to six months in the other SHRC 41.8-48.5%. **Conclusion:** Most users evaluated the responsiveness of hearing health services as good, but some MCSS domains need improvement. Studies of this nature provide useful results for the planning and reorganization of services, aiming to improve the assistance process.

RESUMO

Objetivo: Avaliar responsividade dos serviços de saúde auditiva como medida da satisfação dos usuários. **Método:** Estudo de corte transversal em quatro Centros Especializados de Reabilitação (CER) em Maceió-AL, nomeados aqui A, B, C e D, habilitados no Sistema Único de Saúde (SUS). Amostra calculada proporcional ao número de usuários maiores de 18 anos que receberam próteses auditivas por Centro. Aplicou-se o *Multi-Country Survey Study*, com os domínios: dignidade/ respeito profissional; autonomia; comunicação; confidencialidade; agilidade/ pronto atendimento; escolha profissional, e serviços básicos/amenidades. Respostas em escala *Likert*, variando de um (1) a quatro (4) pontos, apresentadas em gráficos, tabelas e percentuais. Classificação: responsividade baixa/muito baixa (somatório respostas um e dois) e boa/muito boa (três e quatro). **Resultados:** “Dignidade/ respeito” avaliado com boa responsividade por mais de 90 % e “Confidencialidade” com 80 %, exceto em um CER. “Autonomia” foi classificada como boa responsividade por 66,5 % (CER C) e 55,5 % (CER A). “Escolha profissional” julgada com pobre responsividade, 27,5% no CER B e 35,9% no D. “Agilidade” na concessão da prótese auditiva, 41,2% esperaram seis a nove meses no CER D, e nos demais, três a seis meses (41,8-48,5%). **Conclusão:** A maioria avaliou a responsividade dos serviços de saúde auditiva como boa, mas há domínios que necessitam melhorar. Estudos dessa natureza fornecem resultados úteis ao planejamento e à reorganização dos serviços, visando melhorar o processo de assistência.

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INTRODUCTION

Hearing loss is a public health problem due to the important cognitive and social sequelae⁽¹⁾ and economic impacts that it can cause. According to estimates of the World Health Organization (WHO) for 2018, over 5% of the world's population - or 466 million people - has disabling hearing impairment, and this is the fourth contributing cause of years lived with disabilities worldwide. It affects approximately one-third of persons over 60 years, mainly in low-income countries, and this prevalence decreases exponentially with increasing income^(1,2). According to the 2010 census, there were approximately 9.4 million people with some reported hearing complaint in Brazil, and 186,729 people in the state of Alagoas⁽³⁾.

Due to the magnitude and negative consequences of this disability, the Brazilian Ministry of Health (BMH) instituted the National Policy on Hearing Health Care (PNASA)⁽⁴⁾ in 2004, which created specialized services that provided hearing aids and rehabilitation; this policy has been updated and expanded over the years^(5,6). In the state of Alagoas, the Specialized Hearing Rehabilitation Centers (SHRC) were implemented later, in 2013 (Ordinance 1.357 of December 2, 2013, published in issue 235 of Dec 4, 2013 of the Official Gazette of the Federal Government of Brazil)⁽⁷⁾. Although the PNASA and its updates recommend routine assessment, this process has not yet been implemented in the state of Alagoas.

Quality health care is based on some pillars, and can be assessed from different angles, including user satisfaction⁽⁸⁾. The two terms, quality and satisfaction, are multidimensional concepts difficult to be assessed because they are not static, but subjective measures that vary according to the expectations and educational and economic levels of users⁽⁹⁾.

In view of this difficulty, the WHO introduced the term responsiveness, which is defined by the services' ability to respond to user expectations, as a measure alternative to satisfaction. Responsiveness assessment is based on non-medical and non-therapeutic activities associated with user expectation and experience⁽¹⁰⁾.

In order to measure responsiveness, the WHO developed the Multi-country Survey Study (MCSS) instrument, which is composed of domains, or dimensions, that value the patients' respect and dignity, professional secrecy, waiting time, conditions of the infrastructure, right to choose the health professional, and participation in treatment selection⁽¹⁰⁾. In this instrument, the questions are formulated more objectively about what occurs in the patients' care than about their satisfaction with the service or professionals⁽¹¹⁾.

The MCSS instrument has been applied in several countries to varied populations, translated and adapted to several languages and cultures, including Brazilian Portuguese⁽¹¹⁻¹⁸⁾, but no studies addressing people with hearing impairments using this instrument have been conducted in Brazil.

This study aimed to assess the responsiveness of hearing health services from the perspective of people with disabilities.

METHODS

A descriptive cross-sectional study evaluating responsiveness

in four of the five Specialized Hearing Rehabilitation Centers (SHRC) qualified to assist users of the Unified Health System (SUHS) with hearing impairments in Maceió, state of Alagoas, Brazil, was carried out from July to December 2016. The fifth SHRC was excluded because it was discredited by UHS during the study period.

Maceió is the largest city in the state of Alagoas, with 932,748 inhabitants out of a total of 3,120,494 in that state. It has a low Human Development Index (HDI=0.721) according to the 2010 Census, and its *per capita* Gross Domestic Product (GDP) was BRL 20,853.41 in 2015⁽¹⁸⁾.

The study population were users aged >18 years who received hearing aids (H.A.) and were being monitored at the four SHRC assessed: SHRC-A, -B, -C and -D. The sample size was calculated using the OpenEpi 3.0 software, based on the number of hearing aid beneficiaries from the previous year (2015) of each SHRC (A=720; B=323; C=180; D=120), using 50% prevalence for good responsiveness (16), 5% sampling error, and 95% confidence level, which resulted in the following number of users per SHRC: SHRC-A=117, SHRC-B=66, SHRC-C=79, and SHRC-D=87. Participants were approached consecutively in the SHRC waiting rooms on public service days. Users with communication/understanding difficulties and unaccompanied were excluded in order to avoid possible errors in the interpretation of the questions on the interview form.

The World Health Organization - Multi-country Survey Study (WHO-MCSS) instrument was used to measure responsiveness (10). This instrument comprises eight domains: dignity, autonomy, confidentiality, clear communication, prompt attention, quality basic amenities, choice of health care provider, and access to social support networks. The last domain was suppressed because it applied only to inpatient units.

In the "dignity" domain, interviewees are asked whether they are being shown respect and having physical examinations conducted in privacy. As for "autonomy", they are asked whether they are involved in deciding on their care or treatment. Regarding "confidentiality", they are asked whether they are having conversations in privacy and their medical histories are being kept confidential. Concerning the "clear communication" domain, participants are asked whether information is presented to them clearly so that they can understand it, including the right to complain and ask health care providers questions. "Prompt attention" refers to the time users have to wait until their needs were met. A for "choice of health care provider", interviewees are asked whether they were given the right to choose the professional of their preference. The domain "quality basic amenities" is related to the quality of the service facilities, such as cleanliness, ventilation, and mobility/accessibility.

Responses are arranged on a Likert scale: for each question, there are four alternatives numbered from one to four, with one (1) meaning never; two (2), sometimes; three (3), usually; four (4), always⁽¹⁰⁾. Questions left blank because the users did not want to answer them were assigned zero points.

The data were entered and analyzed in an Excel® 2010 spreadsheet, and the answers were presented in frequency (absolute and relative) in tables after categorization and in graphs. The responses *usually* and *always* (3 and 4 points on the scale)

were grouped and classified as good responsiveness, whereas the responses *never* and *sometimes* (1 and 2 points on the scale) were also grouped and classified as low responsiveness⁽¹⁶⁾.

For the responses regarding the waiting time for receiving hearing aids, the categorization of the form was maintained. As for the waiting time for receiving professional care, the answers were grouped in ≥ 3 h; 1-2 h, and ≤ 1 h.

This study was approved by the Research Ethics Committee of the State University of Health Sciences of Alagoas under protocol no. 1.234.299. The interviews were conducted in a closed room and all participants signed an Informed Consent Form (ICF) prior to study commencement.

RESULTS

The study sample was composed of 359 hearing impaired users, aged >18 years, who received hearing aids (H.A.) in 2015, assisted at the Specialized Hearing Rehabilitation Centers (SHRC), distributed as follows: SHRC-A=117; SHRC-B=66; SHRC-C=79; SHRC-D=97. The sample showed slight predominance of elderly (aged >60 years) and female participants (54.5 and 55.1%, respectively). Analyzing each SHRC separately, higher percentage of males was observed at SHRC-B and SHRC-C.

Results of seven responsiveness domains of the Multi-country Survey Study (MCSS) by SHRC are illustrated in the four graphs of Figure 1. Among all domains, “choice of health care provider” was the worst evaluated, classified as good responsiveness by only 27.5% of the respondents at SHRC-B and 35.9% at SHRC-D. The “dignity” domain received the best assessment in all SHRC, which ranged from 97.2% at SHRC-B to 79.3% at SHRC-D for good responsiveness.

Analysis of “dignity” by professional category showed that the vast majority of users answered that they *always/usually* received treatment, especially by speech-language pathologists, who reached a percentage $>90\%$ in all SHRC; however, 10% of the participants did not respond to the questions relative to this domain, mostly in relation to physicians.

Table 1 shows the users’ perception of “autonomy”, where it can be observed that over 50% of the respondents in all SHRC answered that they are *always/usually* “offered care/treatment options”, and that they “participated in treatment/examination choice”; meanwhile, for “freedom of choice of health care provider”, approximately 90% of the users reported low responsiveness (Table 1).

Tabela 1. Responsividade dos Centros Especializados de Reabilitação (CER) em saúde auditiva quanto à Autonomia. Maceió, 2017

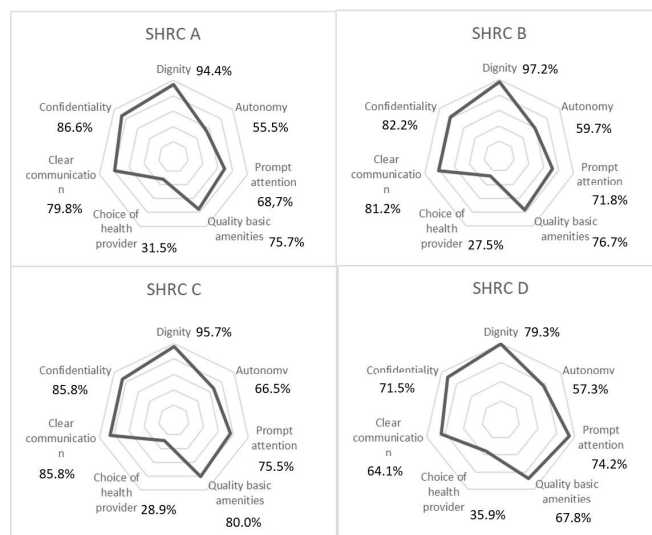
Autonomy	Offer of care/ treatment options		Participation in treatment/ examination choice		Freedom of choice of health care provider	
	n	%	n	%	n	%
SHRC-A (n=117)						
Low	47	40.2	46	39.3	113	96.3
Good	70	59.8	71	60.7	4	3.7
SHRC-B (n=66)						
Low	21	32.8	16	24.2	64	97.0
Good	45	67.2	50	73.8	2	3.0

Table 1. Continuation...

Autonomy	Offer of care/ treatment options		Participation in treatment/ examination choice		Freedom of choice of health care provider	
	n	%	n	%	n	%
SHRC responsiveness						
SHRC-C (n=79)						
Low	19	24.1	15	19.0	69	87.3
Good	60	75.9	64	81.0	9	11.4
No information	-	-	-	-	1	1.3
SHRC-D (n=97)						
Low	32	33.0	37	38.1	94	96.9
Good	65	67.0	60	61.9	3	3.1

“Confidentiality” had good responsiveness in all SHRC, approximately 80%, and the **lowest** percentage (71.5%) was observed for SHRC-D (Figure 1).

Figure 1. Perception of users regarding responsiveness of the Specialized Hearing Rehabilitation Centers (SHRC) assessed using seven domains of the Multi-country Survey Study (MCSS). Maceió, 2017



The “clear communication” domain consists of four items (Table 2), which were overall classified as good responsiveness in almost all SHRC, with SHRC-C showing the highest percentages (100, 94.1, 92.6, and 85.3%). One item of this domain, communication “about the right to complain” presented a higher percentage of low responsiveness (80.4%) at SHRC-D, where 60.9% of the respondents classify the item communication “about asking health providers questions” similarly.

Table 2. Responsiveness of the Specialized Hearing Rehabilitation Centers (SHRC) assessed concerning the “communication” domain of the Multi-country Survey Study (MCSS). Maceió, 2017

Clear communication	About treatment		About location		About asking health providers questions		About the right to complain	
	n	%	n	%	n	%	n	%
SHRC responsiveness								
SHRC-A (n=117)								
Low	3	2.6	12	10.3	19	16.2	27	23.1
Good	114	97.4	105	89.7	98	83.8	90	76.9

Table 2. Continuation...

SHRC-B (n=66)								
Low	-	-	5	7.6	6	9.1	13	19.7
Good	66	100.0	61	92.4	60	90.9	53	80.3
SHRC-C (n=79)								
Low	-	-	4	5.1	5	6.3	11	13.9
Good	79	100.0	75	94.9	74	93.7	68	86.1
SHRC-D (n=97)								
Low	9	9.3	35	36.1	61	62.9	78	80.4
Good	88	90.7	62	63.9	35	36.1	19	19.6
No information	-	-	-	-	1	1.0	-	-

As for “prompt attention”, approximately 40% of the respondents pointed out that the “waiting time for receiving hearing aids” varies between three and six months. SHRC-C had a best evaluation, where 25% of the sample waited less than three months to have its needs met, whereas the longest waiting time (nine to 12 months) was reported by 34.5% of the respondents at SHRC-D (Table 3).

Table 3. Responsiveness of the Specialized Hearing Rehabilitation Centers (SHRC) assessed with respect to the “prompt attention” (waiting time for receiving hearing aids) domain of the Multi-country Survey Study (MCSS). Maceió, 2017

Prompt attention	CER A		CER B		CER C		CER D	
	n	%	n	%	n	%	n	%
Up to 3 months	11	9.4	3	4.5	19	24.0	7	7.2
3 -- 6 months	51	43.6	32	48.5	33	41.8	18	18.6
6 -- 9 months	32	27.3	17	25.8	12	15.2	40	41.2
9 -- 12 months	23	19.7	14	21.2	15	19.0	32	33.0
Total	117	100.0	66	100.0	79	100.0	97	100.0

Still in this domain, social workers had the best assessment for waiting time (<1 h), with percentages ranging from 61.9 (SHRC-D) to 18.8% (SHRC-A), with most respondents (53.0%) reporting waiting time of 1-2 h at the latter. Users of all SHRC classified physicians as the professionals who make them wait the longest (≥3 h), with percentages of 47.9 at SHRC-A; 63.6 at SHRC-B, and 51.9% at SHRC-C. Exception was observed for SHRC-D, where the highest percentages for this category were 37.1 and 25.8% for 1-2 h and ≥3 h, respectively (Table 4)

Table 4. Responsiveness of the Specialized Hearing Rehabilitation Centers (SHRC) assessed as for the “prompt attention” (waiting time for receiving professional care) domain of the Multi-country Survey Study (MCSS). Maceió, 2017

Professional by SHRC	Prompt attention (waiting time for receiving professional care)					
	< 1 h		1 a 2 h		> 3 h	
	n	%	n	%	n	%
SHRC-A (n = 117)						
Social worker*	22	18.8	62	53.0	10	8.5
Physician*	16	13.7	45	38.5	56	47.9
Speech-language pathologist (evaluation)	22	18.8	89	76.1	6	5.1

Table 4. Continuation...

Speech-language pathologist (prosthesis test)	26	22.2	68	58.1	22	18.8
SHRC-B (n = 66)						
Social worker	17	25.8	43	65.1	6	9.1
Physician*	11	16.7	12	18.2	42	63.6
Speech-language pathologist (evaluation)	15	22.7	46	69.7	5	7.6
Speech-language pathologist (prosthesis test)	15	22.7	35	53.1	16	24.2
SHRC-C (n = 79)						
Social worker	30	38.0	43	50.4	6	7.6
Physician*	20	25.3	17	21.5	41	51.9
Speech-language pathologist (evaluation)	30	38.0	46	58.2	3	3.8
Speech-language pathologist (prosthesis test)*	27	34.2	35	44.3	15	19.0
SHRC-D (n = 97)						
Social worker *	60	61.9	27	27.8	3	3.1
Physician*	30	30.9	36	37.1	25	25.8
Speech-language pathologist (evaluation)	40	41.2	52	53.6	5	5.2
Speech-language pathologist (prosthesis test)*	42	43.3	47	48.5	4	4.1

Captions: * The percentage does not add up to 100% as some participants preferred not to answer the questions

The users’ responsiveness assessments of the “quality basic amenities” domain comprised three items; shown in Table 5. “Cleanliness” was classified as good, ranging from **96.0%** at SHRC-C to 69.8% at SHRC-D. Regarding “ventilation”, approximately 50% of the participants considered it as low at SHRC-A, -B and -C; in contrast to “mobility/accessibility”, which was considered good at these SHRC by over 90% of the interviewees.

Table 5. Responsiveness of the Specialized Hearing Rehabilitation Centers (SHRC) assessed with regard to the “quality basic amenities” domain of the Multi-country Survey Study (MCSS). Maceió, 2017

Quality basic amenities/SHRC responsiveness	SHRC-A		SHRC-B		SHRC-C		SHRC-D	
	n	%	n	%	n	%	n	%
Cleanliness*								
Good	414	88.5	244	92.4	382	96.7	274	70.6
Low	52	11.1	20	7.6	13	3.3	106	27.3
Ignored	2	0.4	-	-	-	-	8	2.1
Ventilation								
Good	60	51.3	37	56.1	40	50.6	23	26.4
Low	57	48.7	29	43.9	39	49.4	64	73.6
Mobility/accessibility								
Good	107	91.4	65	99.6	78	98.7	54	62.1
Low	10	8.6	-	-	1	1.3	33	37.9
Ignored	-	-	1	0.4	-	-	-	-

Captions: * As the item “cleanliness” consists of four sub-items, numbers are shown in quadruplicate

“Choice of health care provider” was the domain with the lowest responsiveness, judged by **64.1** to **72.5%** of the users, regardless of professional category and SHRC (Figure 1).

DISCUSSION

This study showed that users report good responsiveness of hearing health services in Maceió for some domains of the Multi-country Survey Study (MCSS), especially for “dignity”, “confidentiality” and “clear communication”, reaffirming that responsiveness is an indicator of non-medical quality of the Specialized Hearing Rehabilitation Centers (SHRC)^(10,11); however, low responsiveness was observed in the “autonomy” and “choice of health care provider” domains, which need to be improved.

According to the World Health Organization (WHO), users have the right to choose who will care for them and hear different opinions about their disease and/or treatment⁽¹⁰⁾; however, a study addressing responsiveness in the Unified Health System (UHS) carried out in Brazil reported that it is almost impossible for users to have the right of choice in public health units, without further elaborating on the issue⁽¹¹⁾.

The “autonomy” and “choice of health care provider” MCSS domains are conceptually interconnected, considering that it is necessary to guarantee autonomy to make choices. Since the early 1990s, autonomy has been discussed as one of the principles of Bioethics, alongside beneficence and justice, which are manifested in the acceptance or refusal of the proposed treatment, in addition to the professional that is indicated to them⁽¹⁹⁾ and reinforced by the WHO⁽¹⁰⁾.

This principle is recognized in ministerial policies as an important aspect of health care, recommended in the UHS National Humanization Policy of 2003, in which autonomy was encouraged and the exchange of knowledge and co-responsibility in conducting the health production process was highlighted⁽²⁰⁾. This right was also reaffirmed in the Guidelines for the Care of the Elderly at UHS: Proposed Model for Comprehensive Care, based on the National Health Policy for the Elderly (N.H.P.E.), created in 2006 by Ordinance GM no. 2.528/2006, which values autonomy as an essential function for healthy aging⁽²¹⁾.

In localities with large social inequalities, such as Africa and low-income countries, this principle is often not considered, because it is understood that health professionals are the ones who retain knowledge, and patients of public services are the beneficiaries that should only be grateful to them⁽²²⁾. Users of UHS are in a similar situation, with little access to health treatments, especially of high and medium complexity⁽²³⁾, and due to their vulnerability, they respond with gratitude^(11,22).

In order for users to have autonomy in decision making, it is necessary to strengthen “clear communication”, although in the present study it was judged as good at all SHRC, except for communication “about the right to complain” at one of the SHRC assessed, which again refers to the perception of professionals about users as recipients of assistance⁽²³⁾. It is emphasized that “clear communication” is only established when the other understands the content of the message, which was not investigated in this study, and is thus one of its limitations. However, it is the professionals’ duty to explain the health problem and its possible solutions in

simple and accessible language at the level of understanding of the users, so that they can participate in the decision.

It is possible that the gratitude bias also influenced the responses to “prompt attention”, when users classified the waiting time of up to six months for receiving hearing aids as good, as if it were not a guaranteed right. Similar results have been reported by other studies that evaluated this domain with the worst responsiveness^(17,23).

In the item “waiting time for receiving hearing aids”, the type of management may have especially influenced the assessment, because, in the present study, the only public SHRC was the one with the lowest responsiveness. Public organizations of direct administration follow a normative procurement process established by Law 8.666/93⁽²⁴⁾ and its subsequent updates, differently from the purchasing processes in private services, as the other private SHRC accredited by UHS, despite following the State standardization.

Studies addressing responsiveness of outpatient care have been conducted in African countries. In Nigeria, after expansion of the national health insurance to universal coverage, the “prompt attention” domain was judged as low due to the high demand and low absorption capacity^(25,26). Those authors suggest a reduction in the difference between the expectations of users and their experiences so that an active monitoring of the services can be carried out^(15,22), which could be adopted in the SHRC in Maceió with the participation of users, thus strengthening associations and local health councils, that is, social control.

In contrast, in a study conducted in Primary Health Care (PHC) units in Brazil with the “*Mais Médicos*” Program, the assessment of responsiveness was good, and the items that contributed to this result were prompt attention, privacy, respect, and confidentiality; however, infrastructure was classified as deficient. The importance of an adequate physical space, with good lighting and ventilation, as well as other aspects, helps to provide comfort, security, safety, and satisfaction with the assistance provided⁽¹⁵⁾. In the present study, infrastructure was assessed in the “quality basic amenities” domain, for which only the item “ventilation” at one SHRC presented low responsiveness.

Limitations to this study include its non-probabilistic sample, absence of socioeconomic data, which would enable its characterization and ensure the sample representativeness, and of application of statistical tests to verify the differences between users and services. It is also worth mentioning that judgment was based only on the participants’ responses, with no other source of verification to compare them even in face of the possibility of a gratitude bias. Despite these limitations, this study is useful in providing managers with a quick response regarding user expectations of the services, as well as with tools for planning interventions, especially in low-responsive domains.

CONCLUSION

Specialized Hearing Rehabilitation Centers (SHRC) in Maceió respond to user expectations, but some Multi-country Survey Study (MCSS) domains still need to be improved, especially “autonomy”. Further studies addressing this theme should be conducted aiming to encourage the institutionalization

of evaluation, having responsiveness as one of the measures of the legitimacy and effectiveness of health services.

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Author contributions

NGCF, RPFJSJ and SAV: study design and planning. NGCF and SAV: collection, analysis and interpretation of data and writing of the manuscript. NGCF, RPFJSJ and SAV: review and approval of the final version of the manuscript. All authors assume public responsibility for the contents of this study.