

QUALITY OF LIFE OF DEAF SIGN LANGUAGE USERS IN THE SOUTH OF BRAZIL

Israel Bispo dos Santos

Master's Degree in Communication Disorders by the Universidade Tuiuti do Paraná (UTP); Pedagogue at SEED and Sign Language Interpreter at IFPR, Curitiba, Brazil.

Jair Mendes Marques

Doctor's Degree in Geodesic Sciences. Professor in the Master's and Doctor's Program in Communication Disorders by Universidade Tuiuti do Paraná (UTP), Brazil.

Ana Paula Berberian

Post-doctoral Degree in Linguistics by the Universidade Federal do Paraná. Professor in Undergraduate Courses in Phonoaudiology and in the Master's and Doctor's Program in Communication Disorders at the Universidade Tuiuti do Paraná (UTP), Curitiba PR Brazil.

Giselle Aparecida de Athayde Massi

Doctor's Degree in Linguistics by the Universidade Federal do Paraná. Professor in undergraduate courses in Phonoaudiology and in the Master's and Doctor's Program in Communication Disorders at the Universidade Tuiuti do Paraná (UTP), Curitiba PR Brazil.

Rita de Cássia Tonocchi

Doctor's Degree in Language & Literature by the Universidade Federal do Paraná. Professor in undergraduate courses in Phonoaudiology and in the Master's and Doctor's Program in Communication Disorders at the Universidade Tuiuti do Paraná (UTP), Curitiba PR Brazil.

Ana Cristina Guarinello

Doctor's Degree in Linguistics by the Universidade Federal do Paraná. Professor in undergraduate courses in Phonoaudiology and in the Master's and Doctor's Program in Communication Disorders at the Universidade Tuiuti do Paraná (UTP), Curitiba PR Brazil.

Corresponding author:

Israel Bispo
israelbbispo@gmail.com

ABSTRACT: This study aims to investigate deaf users of the Brazilian Sign Language, who live in the South of Brazil, quality of life using the WHOQOL-Bref, and to analyze health related quality of life factors that influence this population. It is a quantitative transversal study, and data was collected by application of WHOQOL-Bref, in addition of a questionnaire with the sample profile. Sixty deaf sign language users from the South of Brazil participated in the survey. Statistical analysis was used by description statistic methods and inferential methods at a 5% level of significance. The results showed that the mean score of the WHOQOL-Bref questionnaire was 43,3%. The highest scores was in the domain of social relations (64,31%), and the lowest ones is in the environment domain (54,77%). Deaf participants with better education levels, which perceive themselves as proficient users of the Portuguese language, had higher quality of life scores. The commitment to the QoL of the Brazilian society, including deaf population, focus of this research work, presupposes the formulation and fulfillment of public policies that aim the development of affirmative action's that should overcome conditions of inequality and exclusion of these people, in order to assist the elimination of barriers that impede or hinder their participation in society.

KEY WORDS: Deafness; Quality of life; Sign language; Health promotion.

QUALIDADE DE VIDA DE SURDOS USUÁRIOS DE LIBRAS NO SUL DO BRASIL

RESUMO: O objetivo deste estudo foi investigar a qualidade de vida (QV) de surdos usuários da Língua Brasileira de Sinais que vivem no sul do Brasil, por meio do WHOQOL-Bref, e analisar os fatores que influenciam uma qualidade de vida mais favorável a esta parcela da população. Trata-se de um estudo transversal de natureza quantitativa, cuja coleta de dados se deu por meio da aplicação do questionário WHOQOL-Bref e de um questionário de caracterização da amostra. Participaram 60 surdos usuários de Libras moradores da região Sul do Brasil. Utilizou-se análise estatística por meio de métodos de estatística descritiva e métodos inferenciais considerando-se o nível de significância de 0,05 (5%). Os resultados apontaram que a média do escore total do WHOQOL-Bref foi de 43,3%. O domínio com maior escore foi o de relações sociais (64,31%) e o de menor escore o meio ambiente (54,77%). Os participantes surdos com nível maior de escolaridade e que se percebem proficientes no uso da língua portuguesa tiveram melhores escores de qualidade de vida. O compromisso com a QV da população brasileira, incluindo, a parcela surda, foco deste trabalho, pressupõe a formulação e o cumprimento de políticas públicas que visem o desenvolvimento de ações afirmativas direcionadas a superar condições de desigualdade e exclusão dessas pessoas, a fim de auxiliá-las a eliminar as barreiras que impedem ou dificultam sua participação na sociedade.

Received in: 07/08/2019
Accepted on: 07/02/2020

PALAVRAS-CHAVE: Surdez. Qualidade de vida. Linguagem de sinais. Promoção da saúde.

INTRODUCTION

According to data from Instituto Brasileiro de Geografia e Estatística from 2015¹, 6.2% of the Brazilian population has some type of hearing, visual, physical and/or intellectual disability. Among these people, there are some with hearing impaired who represent 1.1% of the population, which corresponds to almost 10 million people, from which 0.9% of the Brazilian people have become deaf due to either any disease or accident and 0.2% have been born deaf. From the total amount of hearing impaired, 21% have a severe degree of hearing loss, which, in general, impairs the customary activities in society and can lead to a series of restrictions, especially the linguistic ones.

Part of this population is user of Libras (Brazilian Sign Language), nationally recognized, through the sanction of law number 10,436 from 2002², as a legal means of communication and expression, being considered a linguistic system from a visual-motor nature, with its own grammatical structures, it is capable to transmit ideas and facts that come from deaf people communities in Brazil. That legislation has also determined institutionalized means to guarantee the use and spread of Libras as an objective mean of communication and current use among deaf communities in Brazil, and it must be also guaranteed by public authorities and public concessionaires where public and health services are offered to guarantee adequate care and treatment to people with hearing impairment, according to the current legal regulations.

It is worth emphasizing that besides the fact that there are laws and public policies that favor accessibility for people with disabilities, such as the law mentioned before, they have been implemented in the country in recent decades, Brazilian studies^{3,4} have pointed out that there are several barriers that need to be faced so that such initiatives are effectively adopted in all social spheres. Thus, it can be learned from it, that the accessibility of deaf people, especially Libras users is still a challenge, once that not recognizing this linguistic difference makes it difficult the access for this part of the population to

many public services offered in the country, including basic health assistance offered by Sistema Unico de Saude (SUS)^{3,4,5}, these Brazilian studies mentioned before have demonstrated the lack of interpreters and the lack of preparation among the employees working in public service in general to assist the deaf people are some of the aspects that weaken interactions during the adequate treatment^{3,4,5}, especially the part of deaf population who are using sign language.

Analyzing and measuring the population quality of life from the deaf people who use sign language around the world have been proving that it has been a great challenge^{3,5}. First of all, it has been necessary to elucidate that the part of the population who are Libras users is considered a minority part of linguistic community recognized at first for its cultural and linguistic differences. According to this concept, the deaf people are no longer perceived only by hearing loss and they are respected for their identity and cultural values as well. Thus, to understand the deaf sign language user, it is necessary to consider their linguistic and cultural needs^{4,5,6}.

Although this perspective has been growing in the academic environment in recent years^{5,6,7}, the concept that still predominates, especially in Brazil, is that people with deafness do need hearing rehabilitation and oralization. According to this way of thinking, it is based on the rehabilitation history of the deaf people, which is marked by people who have worked only with the development in orality area among the deaf people, without taking into account the use of sign language. Analyzing in a critical way the negative effects and implications from this approach, some authors^{3,4,8} assert that the communication difficulties of the deaf are not organic, but social and cultural. According to that, the authors argue that, in the health area, deafness should be perceived in cultural and linguistic terms, and not only the organic ones.

The activity programs implementation and support that take into account the health of the population with disabilities in general linked to public policies are objectives of the Health Ministry, in order to promote their health and quality of life^{9,10}. So, such programs elucidate that promoting quality of life and reducing vulnerability and health risks related to determinants and conditions,

such as working conditions, housing, environment, education, leisure, culture, access to essential goods and services, the objective of Política Nacional de Prevenção de Saúde, implemented by the Health Ministry, should plan, carry out, analyze and evaluate the work in health area⁹.

On the other hand, the National Health Policy for people with disabilities instituted in Brazil in 2002⁹ establishes that quality of life and its promotion are a shared social responsibility and the improvement of information mechanisms, as a stimulus to health and disability research, must be accessible in braille and Libras. Based on that, it is understood that promoting quality of life for this part of the population is crucial and to make it really happen, it is necessary instruments which are able to measure the quality of life also from the deaf people who use Libras⁹.

QOL is being understood as a multidimensional concept in this article, which reflects people's perception of their social and cultural position, their educational, work, health, housing, security conditions and personal relationships. According to WHO, QOL^{9,10,11} is defined as "the individual's perception of his position in life, according to its own cultural and value environment where he lives and in relation to his goals, expectations, standards and concerns"¹¹. The health related QOL evaluation has been increasingly used for both purposes, clinical studies and broaden certain diseases impact understanding in an individual^{11,12}.

When verifying the international literature that emphasizes QOL and deafness, it was possible to verify that, in general, researches¹³⁻¹⁸ on this topic are carried out with deaf users of hearing aids and cochlear implants, focusing only on hearing rehabilitation, showing all the rehabilitation process of the individual focusing on his speech and the receptivity of hearing instruments. However, researches^{3,4,5,6,7,8,12} that discuss deaf sign language users and relevant aspects to their accessibility appear in smaller numbers and indicate difficulties that this part from the population faces to access health care, in addition to reduced knowledge about their own health and QOL.

Through these researches^{5,6,12}, it can be noticed that the deaf person who uses sign language has greater

difficulty in crossing the communication barrier and gaining access to informational means, so measuring their QOL becomes something pertinent, as it can be ascertained whether the use of a visual and non-oral language may influence their QOL or not.

Regarding to deaf people QOL who use Libras, an integrative review⁴ study has assured that deafness may reduce deaf people QOL and cause psychological, social and emotional changes. Such a study has also revealed that the probability of deaf people suffering psychological alterations is about three to five times greater than those who hear. This study mentions 14 international surveys relating QOL and sign language users, its authors has concluded that there is a research gap in Brazil that makes this relation, besides that there is the lack of methodological means that measure QOL translated into sign language.

New studies related to deaf users of Libras QOL can expand from the epidemiological deafness knowledge, as well as the deaf people accessibility conditions in various social spheres. In addition to that, these studies can contribute in order to advance the understanding in which social, educational, economic and cultural determinants can influence the population groups QOL that have organic limitations. Therefore, it is necessary to consider that in order to assess deaf people QOL, it is crucial to offer access equity and expand the evaluated subjects autonomy degree, thus it may reduce the public health vulnerability and offer comprehensive care. This paper meets these criteria since it uses one of the instruments for measuring QOL used by WHO, the WHOQOL-Bref, which was adapted in a Brazilian survey³ for the deaf population using sign language between 2011 and 2013, WHOQOL-Bref for the Brazilian sign language³.

The Brazilian research that has adapted this WHOQOL-Bref Libras³ instrument into the Brazilian sign language and has adopted the established criteria by WHO in its methodological procedures, which has 13 stages⁸ included, consequently it has become a great credibility instrument in scientific community.

Based on the previous considerations, this study has aimed to investigate deaf people users of Libras QOL who live in cities in southern Brazil, Curitiba and

the metropolitan region through WHOQOL-Bref¹¹. In addition to that, we have analyzed some more favorable QOL factors that influence this part of the population.

METHODS

It was a cross-sectional study from a quantitative nature, with data collection based on the application of two instruments: the WHOQOL-Bref Libras^{3,11} and a questionnaire aimed at characterizing the sample.

This instrument, in addition to being available in more than 20 languages, it is a self-administered questionnaire, which contains 26 questions involving everyday aspects of life and the domains of QOL: physical, psychological, environment and social relations¹¹.

The data collection was carried out with 60 deaf people in places previously scheduled by one of the researchers, through e-mail or telephone messages from July 2015 to February 2016. Participants who have agreed to participate in the research, they have signed the informed consent form (IC). The research was carried out in Curitiba, a city located in the south of Brazil, and in cities in the metropolitan region, São José dos Pinhais, Campo Largo, Pinhais and Colombo. Such cities have been chosen because they are close to the research center in which the research was carried out and due to the presence of deaf people who use sign language. It is worth clarifying that in the researched place there are more than 2,000 deaf people according to data from IBGE/2015¹.

For the participants selection, the following inclusion criteria were used: people diagnosed with deafness using Libras, over 18 years old, living in cities located in southern Brazil.

For data collection, initially we have contacted institutions where deaf people usually go, such as schools, universities, associations, religious establishments located in those cities. In this contact, the study objectives and instruments were explained and those who were deaf and who have met the inclusion criteria of the research have been invited to participate in it.

Conducting the data collection, one of the responsible researchers, a Brazilian sign language proficient, has explained to the participants in Libras

that they have had the option to choose between the written Portuguese version and the sign language version of the WHOQOL-Bref instrument. The Libras version was shown through a video and the answers could be marked on a printed sheet. Each participant can choose either watching the videos and respond in writing or only responding in writing to the printed version of the questionnaire. After clarification, each participant has individually answered the questionnaires and without any researcher's interference.

It is worth to clarify that the WHOQOL-Bref¹¹ questionnaire has been chosen because it contains 26 questions that involve daily life different aspects and includes four QOL domains: physical, psychological, environment and social relations. For each QOL aspect expressed in the WHOQOL-Bref questionnaire, the person can present his answer through scores ranging from one to five, with the worst condition being one and the best one being five. The domains results present values between 0 and 100, the worst ones, the closest to 0, and the best, those ones closest to 100. The answers follow a scale, the Likert scale (from 01 to 05), in which the higher the score, the better the QOL.

Besides that, this instrument has been chosen because it is the only Brazilian instrument that has a validated version in the Brazilian sign language (WHOQOL-Bref in Libras)^{3,11}.

The sample characterization instrument, which was developed by the researchers, have included questions about participants socio-cultural aspects, such as sex, age, deafness types, salary, either current employment or unemployment situation, use of Libras at work, training, education, each participant's view of himself in relation to the use of Libras and the Portuguese language, and the use of Libras by his family members.

This questionnaire was applied in order to obtain information about how each participant evaluates their QOL and, based on that, to allow the crossing data and comparisons between the answers provided from the application of the QOL questionnaire, making the necessary complementations for measuring deaf users of Libras QOL, considering any other factors that may influence it.

The collected data have been submitted to statistical analysis through descriptive statistical methods such as frequency, mean, deviation standard, minimum value, maximum value, Box-plot and inferential methods ANOVA Spearman's correlation and Chi-square test, considering the significance level of 0.05 (5%).

This study was approved by the Ethics Committee, by number 50438915.5.0000.5529.

RESULTS

The 60 participants average age was 28 years old with a deviation standard of 9.97 years old (minimum age 18 and maximum 58). The participants profile, according to sex, deafness types, salary and education level is represented by their absolute and relative frequencies, in Table 01. Higher percentages were found among women 66.67% (n = 40), congenital hearing loss 91, 67% (n = 55), people who work and receive between one and four minimum wages 65% (n = 39) and 60% (n = 36) have completed higher education, including specialization and master degree. Regarding to questions in general, when applying the WHOQOL-Bref Libras, it was noticed that a little over half of the sample (51.7%) have rated their QOL as either good or very good, and 55% have said they were satisfied with their health.

Table 1. Sample general characteristics (n = 60)

VARIABLES	FREQUENCY	%
Sex		
Masculine	20	33,33%
Feminine	40	66,67%
Deafness types		
Congenital	55	91,67%
Acquired	5	8,33%
Salary		
1 to 2 salaries	26	43,33%
3 to 4 salaries	13	21,67%
More than 4 salaries	09	15,00%
Unemployed	12	20,00%
Educational Level		
Elementary school	06	10,00%
High school	18	30,00%
Graduation	19	31,67%
Specialization	13	21,67%
Master degree	04	06,67%

Source: Research data

The scores average obtained from each domain (physical, psychological, social relations and environment) is shown in Table 02, it was applied the test Friedman ANOVA with a significance level of 0.05 (5%), making it possible to look over the expressive differences availability ($p = 0.0355$) among the domains results. The differences identification shows the results between the environment and physical domains ($p = 0.0085$), environment and psychological ($p = 0.0032$), environment and social relations ($p = 0.0069$).

Table 2. Descriptive statistics per domain and Friedman ANOVA result

Domains	N	Average	Mínimum	Maximum	Standard deviation	(P) Environment
Physical	54	58,40	35,71	92,86	11,80	0,0085
Psychological	57	61,26	29,17	91,67	14,13	0,0032
Social relations	46	64,31	25,00	100,00	21,06	0,0069
Environment	57	54,77	54,77	84,38	14,49	-

Source: Research data

In Table 3, it is observed that the environment domain average presents a significantly lower result than the other domains 54.77%. This domain concerns about daily life and physical environment security, the financial situation regarded to basic needs, information access, leisure activities and housing conditions, the means of transport and health services and the impact of these aspects in the QOL of the deaf people¹¹.

Table 3. QOL domains scores Average and standard deviation

Domains	N		Average	Mínimum	Maximum	Standard deviation
	R	N/R				
Physical	54	6	58,40	35,71	92,86	11,80
Psychological	57	3	61,26	29,17	91,67	14,13
Social relations	46	14	64,31	25,00	100,00	21,06
Environment	57	3	54,77	21,88	84,38	14,49

R = Number of people who answered ; N/R = number of people who did not answer.

Source: Research data

Table 4 shows all the responses scores provided during the WHOQOL-Bref questionnaire application. It may be noticed that some questions were not answered by the participants, especially the question Q21 “How satisfied are you with your sex life?” it may be realized that 14 deaf people did not answer that question. It was observed that during the questionnaire application, some participants, especially women, they were embarrassed and ashamed to answer that. Another hypothesis is that they did not answer that question because they did not understand the reason for the question.

Table 4. WHOQOL-Bref Instrument scores per question

Question	N		Average	Minimum	Maximum	Standard deviation
	R	S/R				
1	60	0	3,28	1	5	1,28
2	60	0	3,35	1	5	1,10
3	59	1	2,71	1	5	1,20
4	60	0	2,58	1	5	1,05
5	60	0	3,52	1	5	1,10
6	60	0	3,45	1	5	0,91
7	59	1	3,20	1	5	0,80
8	59	1	3,39	2	5	0,77
9	59	1	2,95	1	5	1,06
10	60	0	3,23	1	5	0,91
11	58	2	3,57	2	5	0,88
12	60	0	3,08	1	5	0,87
13	60	0	3,27	1	5	0,97
14	60	0	3,07	1	5	1,09
15	59	1	3,69	1	5	1,07
16	60	0	3,23	1	5	0,95
17	59	1	3,27	2	5	0,78
18	57	3	3,44	1	5	0,93
19	60	0	3,53	2	5	0,93
20	60	0	3,67	2	5	0,86
21	46	14	3,54	1	5	1,15
22	60	0	3,40	1	5	0,89
23	59	1	3,34	1	5	1,08
24	60	0	3,12	1	5	1,14
25	60	0	3,27	1	5	1,04
26	60	0	2,48	1	5	1,13

R = Number of people who answered; N/R = number of people who did not answer.

Source: Research data

Through the Chi-square test, at a level significance of 0.05 (5%), it is realized that there is a significant relationship ($p > 0.05$), this significant correlation among training with orality ($p = 0.0001$), writing ($p = 0.0005$) and reading ($p = 0.0005$), with the frequencies showing that the best results come from the training improvement. To make it possible the application of the Chi-square test, two training categories were considered (fundamental + high school and college degree).

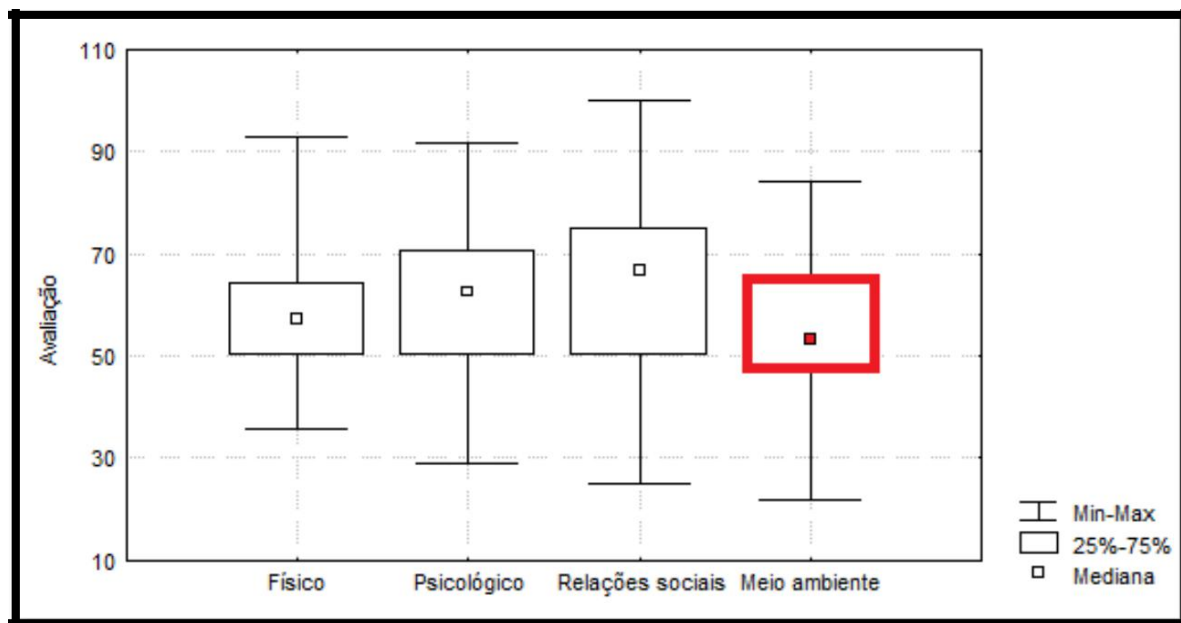
In Table 5 significance was perceived because deaf people who use Libras but they are proficient in speaking and written areas, it makes them to have more social goods and information access and to judge positively their quality of life, that is, the higher the level of education is, in the view of the participants, the best the use of Portuguese in oral and written areas.

Table 5. Salary/ Speaking/ Writing/Reading Relation; Chi-Square

Variable	Educational Background			Total	p
	Elementary	High school	College		
Speaking					
Bad	-	17	2	19	*0,0001
Regular	-	11	9	20	
Good	1	2	18	21	
Writing					
Bad	-	9	1	10	*0,0005
Regular	-	20	15	35	
Good	1	1	13	15	
Reading					
Bad	-	7	1	8	*0,0005
Regular	-	22	14	36	
Good	1	1	14	16	

Source: Research data.

Graphic 1 highlights again that the environment was the worst evaluated. For this reason, the box-plot (box graphic) was used, which serves to the empirical distribution of the data access and it is formed by the first and third quartiles and the median. The lower and upper stems extend, respectively, from the lower quartile to the lowest value not lower than the lower limit, and from the upper quartile to the highest value not higher than the upper limit.



Graphic 1. Domains results Box-Plot , together with the median results , minimum value, maximum value and quartile.

DISCUSSION

The discussion will be held by domains, following the order of the WHOQOL-Bref questionnaire which is divided into the domains: physical, psychological, social and environment. We have chosen to discuss the questions that scored better or worse. During the discussion, data from the WHOQOL-Bref Libras questionnaire and the sample characterization questionnaire will be cross-checked.

It was realized that 51.7% of the participants using Libras assess their general QOL as good or very good, and 55% are satisfied with their health. This number can be considered low compared to national and international surveys on QOL conducted with hearing impaired implanted pre and post-linguistic, which shows that 70% or more of these people consider their health to be good^{5,12-18}.

These studies¹²⁻¹⁸ show that either the hearing impaired implanted or the ones with the use of hearing aids significantly improve their QOL in many aspects, both physical and mental health, thus being able to have better family and social interaction than those who do not use any type of prosthesis or implant^{16,17}, some families report that communication and interaction skills have improved a lot with implants¹⁸, so we understand why QOL in applied self-questionnaires scored better.

Starting our focus on the domains, with a small increase in relation to the QOL assessment in general, the first domain that we will talk about is the physical domain, in this domain the participants responses scored around 58.40% on average. This domain relates to working conditions, the ability to work and daily activities, energy for daily living, the need for medical treatment, body pain and changes in sleep. It was observed that in this domain the worst scores are related to issues of body pain and medical treatment, which indicates that most participants are not satisfied with some health-related issues. So, the answers that scored the least were given the questions (Q3) To what extent does your (physical) pain prevent you from doing what you need? and (Q4) How much do you need any medical treatment to lead your daily life?

The fact that the aspects contained in the above questions were assessed by the participants as negative

may be explained because Brazilian deaf people significant portion have difficulties in health services accessing, which undoubtedly affects any citizen^{9,10} quality of life. The mentioned research, one of the only ones carried out in Brazil that addresses deaf Brazilian users of Libras, corroborates the findings of this study showing that access to health services is not effective among this part of the population.

Still regarding to this domain, answers provided to the question (Q18) How satisfied are you with your ability to work? it allows to consider that the participants, in general, are satisfied with the work. However, they reported dissatisfaction in the sample characterization questionnaire, even graduated and postgraduated deaf people, in relation to low salaries.

About that¹⁹, an Australian research shows that some deaf people revealed that they remained in the same role at work and received unequal salaries because they did not have the same level of information and communication access as listeners. Another study²⁰, in which 224 deaf people from a city in the southern United States participated, it has also demonstrated that communication difficulties and the lack of assistive technologies in the work environment prevented the deaf from reaching higher positions and salaries.

Still related to work, the sample participants were asked about how they interacted with listeners in the work environment. Six, that is, 10% answered that they interact at work from speaking, as their colleagues are unaware of sign language. Eight participants, 13.33%, explained that in the work environment they used the written Portuguese language. It is worth clarifying that these participants earned more than four salaries, they worked either at universities or in vehicle assemblers, and they had at least a college degree. This fact seems to demonstrate that the use of the written Portuguese language may be a differential for better positions and salaries, thus facilitating accessibility in the work environment.

Research¹⁹ points out that many Australian deaf people have low levels of literacy, which harms them in the work environment, especially in relation to the use of electronic communication methods based on written texts. The author explains that the deaf in

his research suffered from the prejudice shown in the work environment. As a result, countries should invest more heavily in support services for the deaf, through specialized teachers/professors who mediate learning to read and write so that they can get better jobs

Regarding to the next domain to be analyzed, Psychological, the answer given to question 26 was listed. (Q26) "How often do you have negative feelings such as bad mood, despair, anxiety, depression?", Because it reveals the worst performance among all aspects evaluated.

Studies^{8,12,21,22} have shown that depression and negative feelings were highlighted in research conducted with deaf people, which justify that the interaction problems between deaf people and their families may be the psychological problems causes such as stress and low self-esteem. The lack of effective interactions at home may aggravate psychological conditions related to deafness, increasing the risk of social isolation, reducing emotional relationships and QOL⁴.

Regarding to interactions with the family, from the sample characterization questionnaire data collected, it may be seen that only 25% of the participants use Libras at home. Among the other participants, nine answered that the use of sign language is prohibited at home, and only the use of orality/speaking is allowed. Such data demonstrate that even if the deaf are sign language users, there are still few family members that use it, which leads us to believe that these deaf people use other language modalities at home, such as speaking, writing and gestures to interact with their relatives. These data reveal what is often observed in the literature, that is, that most hearing families that have deaf children prioritize the use of oral language and devalues sign language, which may compromise the interaction between deaf people and their families.

In the social domain, the most favorable one was shown (Table 02), the question (Q20) (How satisfied are you with your personal relationships (friends, relatives, acquaintances, colleagues) obtained positive responses, probably because these deaf people are Libras users and interact with others in this language.

A survey^{23,24} confirms that social relationships are crucial for a good quality of life perception. When

assessing the students perception with hearing loss in relation to the established interactions, significant correlations were found among good satisfaction, social contact with people, mental health and global QOL. The author has concluded that the student's QOL, whether he is a deaf user of sign language or a hearing impaired person who does not use sign language, It is highly related to good interactions and social experiences in regular school.

Also regarding to social relations, these participants replied that in the work environment they interact more with listening people, who are not sign language users, which means that they have to use the Portuguese language basically, either in oral and / or written areas. It is necessary to clarify that the linguistic accessibility that should be a right of the deaf in the most diverse social spheres, including obviously the work environment, often does not happen. International studies^{20,25} demonstrate that the exclusion of deaf people in the work environment due to the lack of linguistic accessibility, causes to deaf people, many times, to receive unequal salaries in comparison with listeners, as they do not have the same level of information access and communication. than the ones who listen..

Among the 60 participants in the present study, the majority who work say that they receive up to a maximum of four minimum wages. Since the nine participants who stated that they receive more than four wages have explained that in the work environment they need to use the written Portuguese language, demonstrating that the use of this language modality may be fundamental to think about better positions and salaries. It should be noted that these participants worked at universities and in vehicle manufacturers, and they attended at least one college degree.

From the answers provided to the question (Q22) "How satisfied are you with the support you receive from your friends?" it was noticed that the participants have positively answered, probably because they have deaf friends and interact through the use of both languages (sign language and Portuguese), which contributes to not being isolated and having a satisfactory social life. The communication facets and interaction in society were the ones that scored the best, demonstrating this population's

satisfaction with their ability to communicate with other people and, as a consequence, greater chances of getting involved in social activities.

From the sample characterization questionnaire application, when asked about their proficiency in the use of the Portuguese language, almost half of the sample consider themselves proficient in the orality use, and more than 80% consider that they use reading and writing in a reasonable or good way.

The participants in this research, probably have a satisfactory perception regarding to their communication and interaction with others, because they live with other deaf people and they are part of the deaf community. It can also be inferred that because a large part of the sample graduated in Letters-Libras or work in universities as Libras professors, that they live with other deaf people, which according to the survey²¹ can improve QOL. The authors state that in institutions where there are more deaf students studying, there is a better QOL predominance, because the more deaf people who are together, the more they can linguistically relate to one another, which affects their QOL.

In addition, the participants in our research have a satisfactory perception of their communication and interaction with others, as many of them have declared that they make proficient use of written language. Research²⁶ shows that a large part of the Brazilian deaf population has difficulties in using the written language. The authors also reveal that the use of the Portuguese language through more effective social practices can improve the quality of life of the deaf ones. In addition to that²⁷, they emphasize that the use of reading and writing is fundamental for both, in the daily life sphere and in the appropriation of non-daily human existence productions. The authors also observe that in a literate society, the citizenship conquest demands reading and writing mastery, since it is, privileged, through this way that individuals will be able to appropriate the information and knowledge produced by humanity.

Finally, the environment domain was the one that scored less. This domain had significantly worse answers when comparing the responses of the three other domains. Most of the responses provided by the participants had low scores. An example of that were

questions Q8 and Q9 How safe do you feel in your daily life? How healthy is your physical environment (climate, noise, pollution, attractions).

The answers provided to the questions (Q13) How available is the information you need in your daily life? and (Q24) How satisfied are you with your access to health services? demonstrate that the deaf participants are not satisfied with their information access. It may be inferred that this occurs because this part of the population, in general, faces difficulties to be able to perform daily activities due to the lack of interpreters, especially in the health area^{8,12,19}. In addition, the lack of basic sanitation, health resources, accessibility and leisure are also mentioned as aggravating issues in the environment in other studies^{8,12,19,20,28}.

It was noticed in this study that a good part of the sample has satisfactory levels of literacy and schooling. So, many of the participants refer to themselves as bilingual, as they consider that they make proficient use of the Portuguese language, both in oral and written form, as well as Libras to interact socially. This fact seems to demonstrate that the use of the Portuguese language, in addition to sign language, is one of the factors that can improve quality of life for this part of the population.

It should be considered that the present study has some limitations. Considering that a factor that limits the results generalization is that the sample was made up of deaf people who, in addition to sign language, were also users of the Portuguese language, so, the results must be considered within this context. It was also noted that the WHOQOL-Bref itself does not prioritize the individual aspects of the evaluated subjects, and does not aim to present causes for the lowest or highest score obtained. However, the present work, by means of correlations, allowed to raise new questions regarding such aspects that deserve to be deepened in other investigations. Despite these limitations, WHOQOL-Bref is worthy as a viable instrument in the QOL perception, especially when it is used together with other instruments that allow for a more in-depth discussion.

CONCLUSION

The present study results indicate that there is a relationship between a better QOL of deaf people using sign language and proficiency in Portuguese. It is worth clarifying that despite the vast formulation of Brazilian public policies that aim at deaf through sign language accessibility, there are still many obstacles for this part of the population to have effective access to the material and cultural assets of humanity in that language. Among these we can mention the lack of linguistic access to public health and education services.

Without financial investments in these policies, it is impossible to think about QOL. It can be mentioned, therefore, that research that analyzes a group of the population QOL may be important, since they help to direct attention to public health and improve services for the population benefit. In addition to that, it can be conjectured that the increase in QOL research in Brazil provides a broader picture of Brazilian people needs, including deaf users of Libras, which could assist in understanding and creating mechanisms and strategies for the promotion of their citizenship.

The commitment to the Brazilian population QOL, including the deaf part, this paper focus, presupposes the formulation and compliance with public policies aimed at developing affirmative actions aimed at overcoming conditions of inequality and exclusion of these people, in order to help them to remove barriers that prevent or make it more difficult their participation in society.

REFERÊNCIAS

1. IBGE. Censo Demográfico: Características Gerais da População, Religião e Pessoas com Deficiência. Rio de Janeiro: Ministério do Planejamento, Orçamento e Gestão; 2015.
2. Brasil. Presidência da República. Lei Federal no 10.436, de 24 de abril de 2002. Dispõe sobre a Língua Brasileira de Sinais – Libras –. Brasília, DF: CC; 2002.
3. Chaveiro N, Duarte SBR, Freitas AR, Barbosa MA, Porto CC, Fleck MPA. Instrumentos em Língua Brasileira de Sinais para avaliação da qualidade de vida da população surda. *Rev Saude Pub* 2013; 47(3):616-23.
4. Chaveiro N, Duarte SBR, Freitas AR, Barbosa MA, Porto CC, Fleck MPA. Quality of life of deaf people who communicate in sign language: integrative review. *Interface* 2014; 18 (48):101-14.
5. Lopes R.M, Vianna N.G e Silva E.M. Comunicação do surdo com profissionais de saúde na busca da integralidade. *Revista Saúde e Pesquisa*, 2017; 10(2): 213-21. DOI: <http://dx.doi.org/10.177651/1983-1870.2017v10n2p213-221>
6. McKee R, Manning V. Evaluating effects of language recognition on language rights and the vitality of New Zealand sign language. *Sign Language Studies* 2015; 15:473-97. DOI:10.1353/sls.2015.0017
7. Napier J, Leeson L. Sign language in action. New York, NY: Palgrave Macmillan; 2016.
8. Chaveiro N. Quality of life of the deaf people that communicate through sign languages: construction of the LIBRAS version of the WHOQOL-BREF and WHOQOL-DIS instruments. 252 f. Tese (Doutorado em Ciências da Saúde) - Universidade Federal de Goiás, Goiânia; 2016.
9. Brasil. Presidência da República. Secretaria Nacional de Promoção dos Direitos da Pessoa com Deficiência. Secretaria de Direitos Humanos da Presidência da República. Avanços das Políticas Públicas para as Pessoas com Deficiência: Uma Análise a partir das Conferências Nacionais. Brasília: Presidência da República; 2012.
10. Brasil. Ministério da Saúde. Portaria GM/MS nº 399, de 22 de fevereiro de 2006. Divulga o pacto pela saúde 2006 - consolidação do SUS e aprova as diretrizes operacionais do referido pacto. 2006. Diário Oficial [da] União. Brasília, DF. 22 fev. 2006. Disponível em: http://bvsms.saude.gov.br/bvs/publicacoes/prtGM399_20060222.pdf. Acesso em: 13 nov. 2018.
11. The WHOQOL Group. The World Health Organization quality of life assessment (WHOQOL): position paper from the World Health Organization. *Social Science and Medicine* 1995; 10: 1403-09.

12. Garcia RR. Qualidade de vida da pessoa surda no ambiente familiar. 145 f. Dissertação (Mestrado em Ciências da Saúde) - Universidade Federal de Goiás, Goiânia; 2016.
13. Almeida P, et al. Avaliação da qualidade de vida em crianças usuárias de implante coclear. *CoDAS* 2015; 27(1): 29-36.
14. Arndt S, et al. Cochlear implantation in children with single-sided deafness: Does etiology and duration of deafness matter? *Audiol Neurootol* 2015; 20(1): 21-30. Doi: 10.1159/000380744. Epub 2015 May 19.
15. Angelo TCS, et al. Qualidade de vida em adultos usuários de implante coclear. *CoDAS* 2016; 28(2): 106-112.
16. Himit T, Takano K. Excellence in Otolaryngology. 70 Years of the Department of Otolaryngology of the Sapporo Medical University. *Adv Otorhinolaryngol* 2016; 77: 1-6.
17. Razafimahefa-Raoelina, et al. Auto et hétéroévaluation de la qualité de vie des enfants implantés cochléaires. *Annales françaises d'Oto-rhino-laryngologie et de Pathologie Cervico-faciale* 2016; 133(1): 29-33.
18. Talarico TR. Qualidade de vida de pacientes deficientes auditivos adultos pré e pós-linguais usuários de implante coclear [dissertação]. São Paulo (SP): Faculdade de Ciências Médicas da Santa Casa de São Paulo; 2013.
19. Willoughby L. Sign Language Users' Education and Employment Levels: Keeping Pace with Changes in the General Australian population? *J Deaf Stud Deaf Educ* 2011; 16 (3): 401-13. DOI: <https://doi.org/10.1093/deafed/enq067>.
20. Perkins-Dock RE, Battle TR, Edgerton JM, McNeill JN. A survey of barriers to employment for individuals who are deaf. Published by WestCollections: digitalcommons@wcsu, 2015 Jadara, 49(2). Retrieved from [http://repository.wcsu.edu/jadara/vol49/iss2/3\(02/02/2017\)](http://repository.wcsu.edu/jadara/vol49/iss2/3(02/02/2017)).
21. Fellingner J, Holzinger D, Pollard R. Mental health of deaf people. *Lancet* 2012; 379: 1037-44. DOI:10.1016/S0140-6736(11)61143-4.
22. Zöller MET, Archer T. Emotional Disturbances Expressed by Deaf Patients: Affective Deaf Syndrome. *Clin Exp Psychol* 2015; 2:109. DOI: 10.4172/2471-2701.100109
23. Hintermair M. Health-related quality of life and classroom participation of deaf and hard-of-hearing students in general schools. *J Deaf Stud Deaf Educ* 2011; 16 (2): 254-71.
24. Freire DB, Gigante LP, Béria JU, Palazzo LS, Figueiredo ACL, Raymann BCW. Acesso de pessoas deficientes auditivas a serviços de saúde em cidade do Sul do Brasil. *Cad Saude Pub* 2009; 25(4): 889-97.
25. Black PA, Glickman NS. Demographics, psychiatric diagnoses, and other characteristics of North American Deaf and hard-of-hearing inpatients. *J Deaf Stud Deaf Educ* 2006; 11: 303-21. DOI:10.1093/deafed/enj042.
26. Guarinello AC, MASSI G, Berberian AP, Tonocchi R, Valentin S. Speech language group therapy in the context of written language for deaf subjects in Southern Brazil. *Deafness & Education International* 2017, 1: 1-11.
27. Lustosa S, et al. Análise das práticas de letramento de ingressantes e concluintes de uma instituição de ensino superior: estudo de caso. *Rev CEFAC* 2016; 18(4):1008-19.
28. Penteadó RZ, Pereira IMTB. Qualidade de vida e saúde vocal de professores. *RevSaúde Pú* 2007; 41(2): 236-43.