

Self-perception of oral expression and comprehension skills and contact with speech-language therapy in institutionalized elderly: a cross-sectional study

Autopercepção de habilidades de expressão e compreensão oral e contato com a fonoaudiologia em idosos institucionalizados: estudo transversal

Autopercepción de las habilidades de expresión y comprensión oral y contacto con la logopedia en personas mayores institucionalizadas: un estudio transversal

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Abstract

Introduction: The period of senescence causes various changes in the individual's body over the years. With the increase of longevity, more families are opting for the institutionalization of the elderly, which generates changes in routine, social interactions, and habits, potentially influencing their sociability. This study aimed to evaluate the self-perception of institutionalized elderly individuals regarding oral expression and comprehension skills, as well as their previous contact with speech-language therapy. **Method:** This research is characterized as a cross-sectional study, including individuals over 60 years

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Authors' contributions:

GLL: Conception of the idea, drafting and submission of the project to the ethics committee, data collection, manuscript drafting, approval of the final version.

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old residing in Long-Term Care Institutions. Sociodemographic and clinical data of the participants were collected, and the questionnaire on communicative difficulties from the Montreal Communication Evaluation Battery – short version (Bateria MAC Breve), adapted for this research, was applied. **Results:** The sample included 15 elderly individuals, the majority of whom were female, with an average age of 76.6 years. Approximately half of the sample noticed changes in their communication with aging. Nevertheless, most participants had a positive self-perception regarding the expression and comprehension of communication. There was a significant association between self-perception of communication expression and the gender of the participants. **Conclusion:** The elderly individuals studied perceived changes in their communication due to aging, but did not consider them negative.

Keywords: Speech, Language and Hearing Sciences; Self-image; Aging; Communication.

Resumo

Introdução: O período de senescência provoca diversas alterações no organismo do indivíduo ao longo dos anos. Com o aumento da longevidade, mais famílias têm optado pela institucionalização do idoso, a qual gera mudanças de rotina, convívio e hábitos, podendo influenciar em sua sociabilidade. Este estudo teve como objetivo avaliar a autopercepção de idosos institucionalizados quanto à expressão e compreensão oral e o contato prévio deles com a fonoaudiologia. **Método:** A presente pesquisa caracteriza-se como um estudo transversal, no qual foram incluídos indivíduos com idade superior a 60 anos e residentes de Instituições de Longa Permanência. Foram coletados dados sociodemográficos e clínicos dos participantes e aplicado o questionário de dificuldades comunicativas da Bateria Montreal de Avaliação da Comunicação Breve – versão abreviada – (Bateria MAC Breve), o qual foi adaptado para esta pesquisa. **Resultados:** A amostra incluiu 15 idosos, sendo a maioria do sexo feminino e com idade média de 76,6 anos. Aproximadamente metade da amostra percebeu mudanças na sua comunicação com o envelhecimento. Apesar disso, a maioria dos participantes apresentou autopercepção positiva em relação à expressão e compreensão da comunicação. Houve associação significativa entre a autopercepção da expressão da comunicação e o gênero dos participantes. **Conclusão:** Os idosos estudados perceberam alterações na sua própria comunicação em decorrência do envelhecimento, mas não as consideraram negativas.

Palavras-chave: Fonoaudiologia; Autoimagem; Envelhecimento; Comunicação.

Resumen

Introducción: El período de senescencia provoca diversos cambios en el organismo del individuo a lo largo de los años. Con el aumento de la longevidad, más familias están optando por la institucionalización de los ancianos, lo que genera cambios en la rutina, las interacciones sociales y los hábitos, pudiendo influir en su sociabilidad. Este estudio tuvo como objetivo evaluar la autopercepción de los adultos mayores institucionalizados en cuanto a la expresión y comprensión oral, así como su contacto previo con la logopedia. **Método:** Esta investigación se caracteriza como un estudio transversal, incluyendo a individuos mayores de 60 años que residen en Instituciones de Cuidado a Largo Plazo. Se recopilieron datos sociodemográficos y clínicos de los participantes y se aplicó el cuestionario de dificultades comunicativas de la Bateria Montreal de Evaluación de la Comunicación Breve – versión abreviada (Bateria MAC Breve), adaptada para esta investigación. **Resultados:** La muestra incluyó a 15 ancianos, la mayoría de los cuales eran mujeres, con una edad promedio de 76,6 años. Aproximadamente la mitad de la muestra notó cambios en su comunicación con el envejecimiento. Sin embargo, la mayoría de los participantes tuvo una autopercepción positiva con respecto a la expresión y comprensión de la comunicación. Hubo una asociación significativa entre la autopercepción de la expresión de la comunicación y el género de los participantes. **Conclusión:** Los ancianos estudiados percibieron cambios en su comunicación debido al envejecimiento, pero no los consideraron negativos.

Palabras clave: Fonoaudiología; Autoimagen; Envejecimiento; Comunicación.



Introduction

The process of senescence, or aging, is associated with morphological, functional, and chemical changes that occur throughout the lifespan of organisms, progressively advancing with the passage of time¹. Aging leads to modifications in critical systems involved in communication, such as the anatomy and physiology of hearing, voice, language, and orofacial motricity^{2,3}. Speech-Language Pathology (SLP) is the healthcare profession that addresses communication disorders, whether or not they result from pathological conditions. This profession intensified research on aging-related alterations in the mid-1990s⁴. As a result, studies have been conducted to investigate the communication processes of this population, focusing on both healthy and pathological aspects, as well as aging-related processes in literacy, reading, writing, and speech⁵. Despite this body of research, further studies are needed to characterize communication during aging across different populations and to assess access to SLP services, which is considered the most appropriate treatment for communication difficulties.

The ability to receive and transmit messages, speech intelligibility, comprehension, reading, and other aspects involve both verbal and non-verbal communication. The effectiveness of the communicative process enables functionality related to the needs demanded by the environment in which the individual is embedded, providing efficiency and independence to the person. Therefore, individuals possess unique characteristics, even within language, which result from the relationships formed in their daily lives⁶. Language, thus, is shaped by the historical and social context, where the individual is also constituted by the discourses to which they are exposed throughout their life⁷. The losses resulting from the non-pathological aging process, such as cognitive changes and muscle mass reduction, affect communicative abilities, impairing the use of language as a means to establish one's individuality.

With the increase in longevity and the changes related to the aging process, elderly individuals live more, but may develop greater dependence in maintaining their autonomy in certain daily activities. It is common for some elderly individuals to require intensive care, and families then choose to place their loved ones in Long-Term Care Facility

(LTCF)⁸. The institutionalization of the elderly can lead to changes in their routine and habits, also impacting socialization and communication among the elderly themselves. Healthy aging appears to be one in which the individual continues in a state of experimentation, making their own choices and occupying a place in society⁹. Thus, it is expected that the elderly continue making such choices and occupying their space as individuals, even while residing in an LTCF¹⁰.

Given the importance of communication for social relationships and the maintenance of the individual, and also considering the use of language as a mediator of their identity, this study aimed to investigate the self-perception of institutionalized elderly individuals regarding their own oral expression and comprehension abilities. Additionally, the study examined these individuals' contact with the SLP profession and the association between self-perception of oral expression and comprehension abilities and the clinical and sociodemographic aspects of the sample.

Method

This is a cross-sectional quantitative observational study conducted with field data collection, approved by the research ethics committee of the institution of origin registered under number 5.802.862. Confidentiality regarding the information provided by the participants was ensured, along with the possibility to refuse participation at any time, explanations about the study methodology, as well as its risks and benefits.

The sample was convenience-based, consisting of institutionalized elderly individuals from a group of LTCFs located in the city of Porto Alegre, state of Rio Grande do Sul, Brazil, in February 2023. Individuals aged over 60 years residing in these institutions were included. Participants were excluded if they had: uncorrected hearing deficits or noticeable hearing difficulties observed by the evaluator, which could interfere with the comprehension of the questions; changes in the level of consciousness observed by the evaluator or reported by the institution's staff; or if they did not agree to participate in the study.

Data collection was conducted in person, at the participants' place of residence, and always by the same evaluator to minimize bias. The data were collected in a quiet location with minimal foot



traffic to avoid distractions. The informed consent form was presented, and, upon agreement, it was signed by the participant, followed by the application of the following instruments and collection of the respective variables:

Sociodemographic and Clinical Data Questionnaire: This questionnaire was used to collect information such as gender, age, education, race, medical history (previous and current diseases, grouped according to similarities and frequency), number of medications in use, and history of contact with SLP. The questionnaire was developed by the authors, considering the variables of interest for describing the sample and the outcomes of interest.

*Questionnaire on Awareness of Communication Difficulties, from the Montreal Communication Assessment Battery – Abbreviated Version (Bateria MAC Breve)*¹¹: This questionnaire consists of three questions directly asked to the elderly individual, generating a maximum score of 3 points. The responses to these questions were the primary outcome of the study. The questions were adapted for this study to address communication in the context of aging. The questions were as follows:

In comparison to when you were younger, have you noticed any changes in the way you communicate when speaking with others? (*This question assessed self-perception of changes in communication related to aging.*)
() Yes () No

Do the people you interact with understand you well most of the time? For example, when you want to explain something, do others ask you to repeat or say they do not understand you? (*This question*

assessed self-perception of oral expression ability.)

() Yes () No

Do you understand well when people speak to you? For example, when they explain something to you or make jokes? (*This question assessed self-perception of oral comprehension ability.*)

() Yes () No

The collected data were stored in an Excel spreadsheet and analyzed using the Statistical Package for Social Sciences (SPSS) software by IBM, version 25. Categorical variables were described in terms of relative (%) and absolute (n) frequencies, while continuous variables were described as means and standard deviations. The data distribution was checked using the Shapiro-Wilk test. Comparisons between categorical variables were performed using the Chi-square test and Fisher's exact test. Comparisons between continuous variables were conducted using the Mann-Whitney U test. The significance level adopted was 5%. No missing data were reported.

Results

Sample Description

The study initially had a potential sample of 18 participants; however, three participants did not agree to sign the informed consent form presented during the explanation of the study. The final sample consisted of a total of 15 elderly individuals, the majority of whom were female, with a high school education, white race, and widowed marital status (Table 1).

Table 1. Sociodemographic characterization of the sample

Variable	N(%)	Mean(SD)
Age (years)	-	76.6 (6.8)
Gender (F)	11 (73.3)	-
Education		
Illiterate	1 (6.7)	-
Up to elementary school complete	4 (26.7)	-
Up to high school complete	7 (46.7)	-
Up to higher education complete	3 (20)	-
Race		
White	14 (93.3)	-
Black	1 (6.7)	-
Marital Status		
Single	6 (40)	-
Married	1 (6.7)	-
Widowed	8 (53.3)	-
LTCF time (months)	-	17.3 (10)
Daily number of medications	-	8.6 (3)
Non-pharmacological treatments		
Speech and Language Pathology	1 (6.7)	-
Physical Therapy	15 (100)	-
Occupational Therapy	15 (100)	-
Medical Diagnoses		
Psychiatric disease	7 (46.7)	-
Neurological disease	5 (33.3)	-
Hypertension	6 (40)	-
Diabetes	5 (33.3)	-
Others	4 (26.7)	-

F= female; LTCF= long-term care facility; N=sample size in the given category; SD= standard deviation

Self-perception of oral expression and comprehension abilities and contact with SLP professional

Figure 1 presents the results regarding awareness of communication difficulties, showing that almost half of the sample reported noticing changes in their communication with aging. A larger percentage of participants rated their oral expression ability as good, as well as their oral comprehension ability.

Of all the study participants, only one (6.7%) reported having had previous contact with SLP for treatment. Moreover, this participant stated that the treatment was beneficial, in their opinion. The remaining participants reported never having had contact with SLP (N = 14; 93.3%). When asked about the reason for never having received any services from SLP professionals, all of them stated that it was because they did not feel the need.

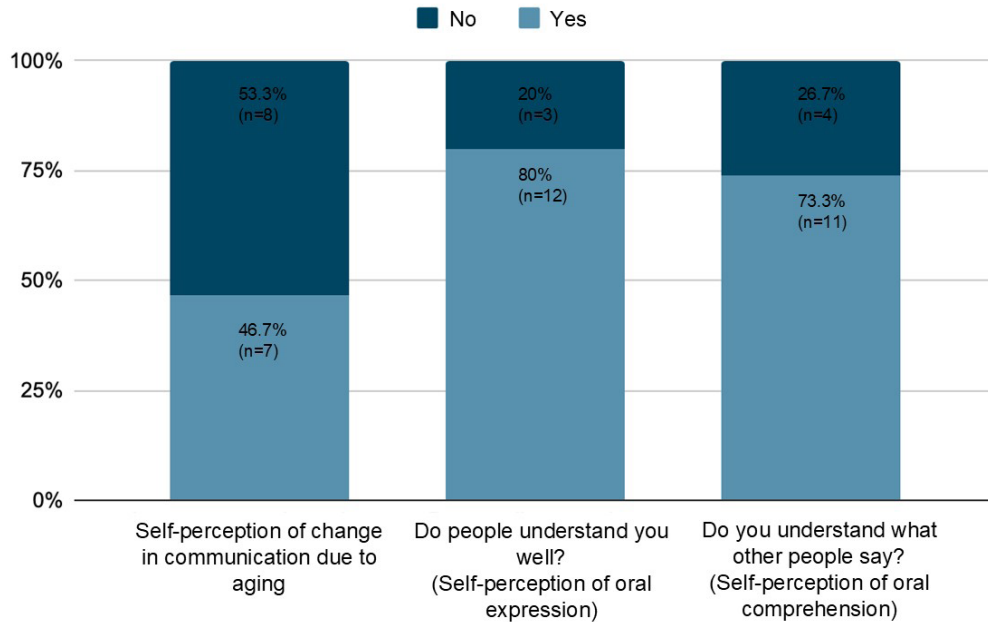


Figure 1. Visual description of the responses in the questionnaire on awareness of communication difficulties

Associations between the self-perception of reported difficulties and sample characteristics

Regarding the perception of changes in communication due to aging, no significant association was found with any of the variables analyzed (Table 2).

When analyzing the association between the question on self-perception of oral expression and the evaluated variables, a significant association

was found only with gender (Table 2). Seventy-five percent (75%) of male participants rated their oral expression negatively, while no female participants rated it in this way. On the other hand, no significant association was found with the other variables.

Finally, the associations between the variables and the responses to the question assessing participants' self-perception of oral comprehension were tested. No significant association was found with any of the variables (Table 2).

Table 2. Associations between the self-perception of reported difficulties and sample characteristics

Variable	Self-perception of changes with aging (p-value)	Self-perception of oral expression (p-value)	Self-perception of oral comprehension (p-value)
Ige	0.46 ^c	0.73 ^c	0.85 ^c
Gender	1 ^a	0.05 ^{a*}	0.52 ^a
Education	0.70 ^b	0.11 ^b	0.34 ^b
Race	1 ^a	1 ^a	1 ^a
Marital status	0.06 ^b	0.55 ^b	0.77 ^b
LTCF time	0.61 ^c	0.3 ^c	0.61 ^c
Daily number of medications	0.90 ^c	0.66 ^c	0.84 ^c
Medical diagnoses			
Psychiatric diseases	1 ^a	1 ^a	1 ^a
Neurological diseases	1 ^a	1 ^a	0.58 ^a
Hypertension	0.59 ^a	1 ^a	0.58 ^a
Diabetes	0.1 ^a	1 ^a	0.22 ^a
Others	0.56 ^a	0.5 ^a	1 ^a

^a= Fisher's Exact Test; ^b= Chi-Square Test; ^c= Mann-Whitney U Test; LTCF= Long Term Care Facility; * $p \leq 0,05$

Discussion

The main objective of this study was to investigate the self-perception of institutionalized elderly individuals regarding their own oral expression and comprehension abilities. Additionally, the study examined these individuals' contact with SLP professionals and the association between their self-perception of language skills and the clinical and sociodemographic aspects of the sample. The initial hypothesis predicted results that would highlight a negative perception among participants regarding the impact of the aging process on the various aspects addressed in the questionnaire, with these being reported as obstacles to effective communication. However, the findings showed a higher frequency of neutral and positive perceptions regarding expression and comprehension, a result not typically observed in other similar studies.

The study was conducted using a convenience sampling method, which included 15 elderly individuals, 11 women and 4 men. Despite the small sample size, the prevalence of women in our study aligns with findings from other research, possibly linked to their higher life expectancy and greater utilization of healthcare services¹².

From the statistical analysis of the collected data, a significant association was found only regarding the parameter of expression and self-perception of oral expression, as 75% of male participants reported perceiving difficulty in having

their speech understood. No previous studies with similar results were found regarding this evidence.

There is some disagreement in research related to the prevalence of negative self-perception of health¹³. This discrepancy may be related to evaluations conducted in different regions, socio-economic and demographic aspects, as well as varying healthcare systems¹⁴. However, a study aimed at investigating factors associated with high negative self-perception of health in elderly individuals assisted by the Reference Center for Social Assistance for the Elderly (*Centro de Referência de Assistência Social para Idosos - CRASI*) in Montes Claros, located in the northern part of the state of Minas Gerais, Brazil, found no association between gender and negative self-perception of health¹³.

There is a hypothesis to justify the report of one of the three male participants in the study regarding a negative perception of his oral expression ability. This participant had previously undergone SLP treatment. If we consider that speech therapy can contribute to the development of articulatory awareness and speech patterns, this individual may have developed a more acute perception of his communication skills. Additionally, this study observed a higher frequency of higher education levels among the men, which may have reflected in a more critical self-perception of their communication abilities¹⁵. Only one female participant reported having higher education, and she did not indicate perceiving changes in her oral expression, which may also be due to her age (66 years), being



younger than the other participants. The literature contains studies associating increasing age with a worse evaluation of health status, as health conditions tend to worsen with age, meaning younger individuals have fewer pathologies and complications, resulting in better health perceptions¹³. Furthermore, the literature also highlights education level as a differential factor in understanding health treatments and self-care, along with greater access to information, which enables more elaborate reflections¹⁶.

It is well known that the process of senescence causes physiological changes in speech-language competence, such as hearing, voice, orofacial motricity, and swallowing, which can influence an individual's perception of health^{3,17,18}. The reduction in auditory acuity, sometimes clinically undiagnosed, contributes to the loss of information during social interaction, impacting the comprehension of the message and language expression^{19,20}. A study conducted with 50 women, aged between 60 and 87 years, showed a relationship between vocal quality and quality of life. Another study demonstrated that most participants reported "speaking loudly or shouting" and "frequently becoming hoarse",²¹ habits that can lead to dysphonia, vocal changes that limit the transmission of verbal messages²². A study on the characterization of elderly health from a speech-language perspective, conducted with 75 Brazilian participants, showed that part of the sample reported difficulties in chewing and swallowing food²³. These difficulties may have been caused by a reduction in neuromuscular quality and dental loss, negatively impacting occlusion, chewing, food bolus control, and potentially causing swallowing disorders, which in turn may affect speech production^{23,24}. The factors mentioned above, either alone or in combination, can influence the social isolation of the elderly, leading them to reduce social interactions, directly impacting their communication skills and contributing to a worse perception of health².

During the data collection of this research, some patients with notable speech alterations as perceived by the evaluator did not report a negative perception of their own communication. This suggests that not all individuals with oral expression alterations are aware of their speech production. For this reason, SLP therapies emphasize that professionals should work on developing the patient's communicative self-awareness, so that they can

become conscious of how their speech is produced. In this way, the individual develops the ability to contrast deviations in their articulatory pattern with typical speech production²⁵. Given that the vast majority of participants had never undergone SLP intervention, it is possible to understand the limitation in their perception of their communicative abilities.

The high frequency of positive responses regarding self-perception of the evaluated parameters, even when there were noticeable speech alterations, may also be linked to the sense of belonging in the environment where the participants were located. It is possible that the participants felt a sense of comfort and well-being due to multidisciplinary treatments and interaction with other elderly residents of the LTCF. Living in an LTCF may provide the individual with greater social integration and, consequently, a good quality of life, enhancing their perception of their own health standards²⁵.

Another relevant point of this study is the low number of participants who had prior contact with a SLP professional. Within LTCFs, one of the roles of the SLP is to reorient social interaction through language, helping to maintain the individual's autonomy. The SLP is essential for evaluation, early diagnosis, the development of educational programs, guidance, and the rehabilitation of communicative skills, offering better living conditions for institutionalized elderly individuals²⁶. This lack of awareness may be related to the fact that the profession was officially regulated in 1982²⁵, making it relatively recent, and it is not always included in the minimum health team in LTCFs in Brazil²⁵.

The results of this study should be interpreted considering its limitations, such as the small sample size and the inclusion of participants from only one private LTCF, meaning that the results can only be generalized to similar populations and environments. Data collection was based on the participants' opinions. Although this is a valid procedure, it may have been influenced by the presence of uncontrolled pathologies in our study and by the side effects of medications, as a high frequency of polypharmacy was observed in the sample.

This was an exploratory study, and its main significance lies in indicating the direction for future research in the area. Thus, it is suggested that future investigations include larger samples from both private and public LTCF and analyze in



greater depth the gender differences in communicative self-perception.

Conclusion

This research analyzed the self-perception of oral expression and comprehension skills among elderly residents of a private LTCF, as well as their contact with the SLP profession. The study also investigated the association between self-perception of these skills and clinical and sociodemographic aspects of the sample.

A significant portion of the elderly participants reported perceiving changes in their communication due to aging. Despite this, most participants had a positive self-perception regarding their oral expression and comprehension. The study found a relationship between gender and self-perception of expression and comprehension, with a higher occurrence of negative evaluations among men. SLP appeared to be minimally present among the institutionalized elderly, and this finding should be further explored in future studies to understand whether it is due to the lack of perceived need among institutionalized elderly individuals or a lack of awareness of SLP services among institutional professionals.

It is suggested to expand initiatives that highlight the importance of SLP professionals within LTCFs, even in healthy aging processes. Along with the implementation of the profession in these environments as a means to support the maintenance of independence and integrity of the resident, it is necessary to further research self-perception of communication in the elderly population.

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