
Profile of the speech-language pathology and audiologist professional in the State of Alagoas

Perfil profissional dos fonoaudiólogos do Estado de Alagoas

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Abstract

Objective – To outline the sociodemographic and professional profile of speech-language pathologists and audiologists in the state of Alagoas, a state Northeastern Brazil. Speech-language pathology and audiology is a profession that covers a wide field of knowledge, and has different profiles, globally. **Methods** – Speech-language pathologists and audiologists in Alagoas were recruited through an active search on social media (*Whatsapp, Instagram, Facebook, Telegram and Twitter*), then answered a structured questionnaire with questions about the sociodemographic and professional profile. **Results** – 91.6% of speech-language pathologists and audiologists in Alagoas are female, 43.4% aged between 31-40, and 60.1% are specialists. **Conclusion** – Speech-language pathology and audiology professionals in the state of Alagoas are mostly young and female, with the majority of specialist professionals working in the area of language, and working in the health services located in the capital Maceió.

Descriptors: Phonoaudiology; Professional training; Professional practice

Resumo

Objetivo – Traçar o perfil sociodemográfico e profissional dos fonoaudiólogos do estado de Alagoas, Nordeste do Brasil. A Fonoaudiologia é uma profissão que abrange um amplo campo do conhecimento, e possui diferentes perfis em nível mundial. **Métodos** – Fonoaudiólogos de Alagoas foram recrutados por meio de pesquisa ativa nas redes sociais (*Whatsapp, Instagram, Facebook, Telegram e Twitter*), a seguir responderam a questionário estruturado com perguntas sobre o perfil sociodemográfico e profissional. **Resultados** – 91,6% dos fonoaudiólogos de Alagoas são do sexo feminino, 43,4% na faixa etária de 31 a 40 anos e 60,1% são especialistas. **Conclusão** – Os profissionais da Fonoaudiologia do estado de Alagoas são em sua maioria jovens e do sexo feminino, sendo a maioria dos profissionais especializados atuando na área de linguagem e atuando em serviços de saúde localizados na capital Maceió.

Descritores: Fonoaudiologia; Capacitação profissional; Prática profissional

Introduction

Brazil is known for its great territorial extension, socioeconomic and cultural diversity, it has five major regions: North, Northeast, Southeast, South and Midwest. In addition, it is composed of 27 federative units (26 states and the Federal District). Alagoas is the third smallest Brazilian state, with a territorial extension of 27,830,656 Km², with 3,351,543 million inhabitants and located in the Northeastern¹ region, the region with the highest concentration of poverty in Brazil, comprising 44.8% of the Northeastern population².

In Latin American countries, Brazil included, speech-language pathology and audiology profession comprises a wide field of knowledge, with human communication and dysphagia as central pillars. It covers several specialties, with emphasis on audiologists, and speech, voice and language practice. Unlike other countries, such as the United States and Portugal, where audiology and speech-language pathology^{4,5} are studied in separated courses.

In 1915, at the University of Wisconsin, the first university in the world for speech therapists was founded, and only in 1947, at Northwestern University, the first major in audiology⁶. In 1958, the first

bachelor's degree in speech-language pathology and audiology was instituted in Brazil, and until 1970, there were only 3 courses restricted to the state of São Paulo³. In 1981, the profession was regulated in the country⁷. The current panorama comprehends 80 courses distributed in the different regions of the country⁸. The only bachelor's degree in speech-language pathology and audiology in the state of Alagoas is offered by the Alagoas State University of Health Sciences (UNCISAL), and was created in 1995⁹. However, the first entrance exam for students was only in 1997. Initially, only 20 students were admitted annually, and currently, 30 places are available⁹.

The number of speech-language pathologists and audiologists is increasing worldwide. In Brazil it is no different. In 2000, there were 30 thousand speech-language pathologists and audiologists³ and, currently, there are approximately 46 thousand professionals across the country⁸. In the Northeastern region, the state of Alagoas has the lowest number of professionals (379), the 5th state in Brazil with the lowest number of speech-language pathologists and audiologists⁸. Although the Brazilian states of Piauí, Mato Grosso do Sul, Sergipe and the Federal District have a smaller

number of inhabitants than the state of Alagoas, the number of speech-language pathologists and audiologists in Alagoas is lower. In this scenario, the objective of this study was to outline the sociodemographic and professional profile of speech-language pathologists and audiologists in the state of Alagoas.

Methods

This is a cross-sectional study, in which the sample size calculation was performed using the Comento calculator, with the sample determined in 192 speech-language pathologists and audiologists. The following parameters were adopted: population 379, sample error 5, 95% confidence level and 50/50 heterogeneity. After approval by the Research Ethics Committee of the Federal University of São Paulo - UNIFESP, under protocol 4,599,215, speech-language pathologists and audiologists in the state of Alagoas were recruited through an active search on social media: *Whatsapp*, *Instagram*, *Facebook*, *Telegram* and *Twitter*. Then, the individuals who agreed to the Free and Informed Consent Form, sent remotely, answered a structured questionnaire through *Google Forms* with questions about sociodemographic and professional profile. For statistical analysis, the collected data were tabulated on

the Microsoft Excel® spreadsheet. In the descriptive statistics, qualitative variables were presented in the form of a frequency table.

Results

In Alagoas, there are 379 active speech-language pathologists and audiologists, according to the Federal Speech-Language Pathology and Audiology Council in Brazil. Of this total population, 203 speech-language pathologists and audiologists answered the questionnaire, which represented a level of confidence over 95% in the found data.

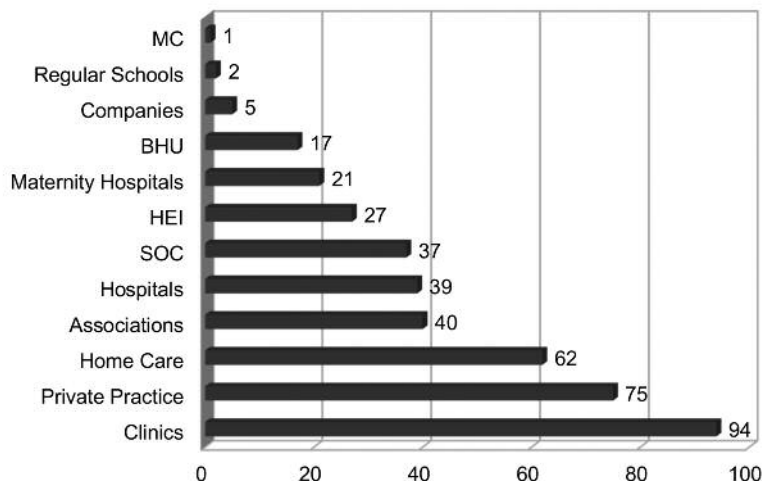
Through the analysis of the sociodemographic profile of speech-language pathologists and audiologists in Alagoas, the characterization found that the professionals are mostly female and young adults, the graduate level of specialization is the most frequent professional training, and professionals are mainly located in Maceió, the capital of the state (Table 1).

The main places where speech-language pathologists and audiologists practice in the state of Alagoas are in clinics, followed by private practices and home care, respectively (Graph 1).

Speech-language pathologists and audiologists in the state of Alagoas work mainly in the area of language, followed by dysphagia and orofacial motricity (Graph 2).

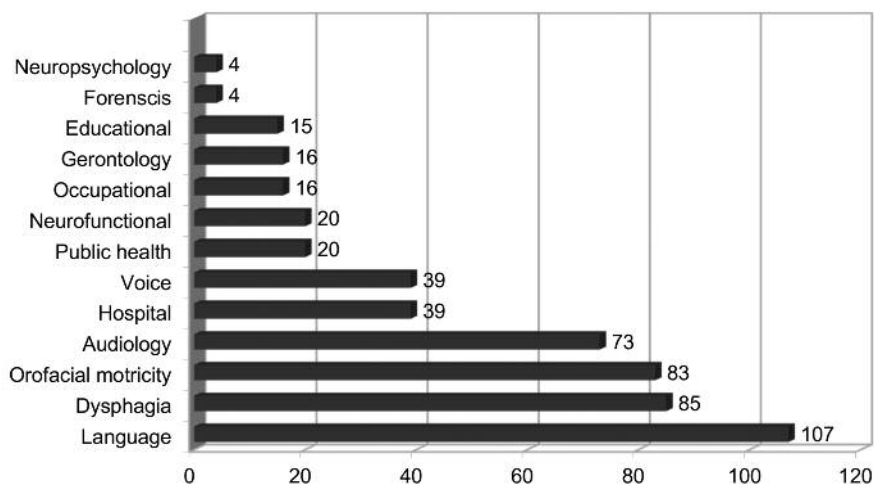
Table 1. Sociodemographic data and professional profile of speech-language pathologists and audiologists in the state of Alagoas

Gender				
Male		Female		
17 (8.4%)		185 (91.6%)		
Age				
20-30	31-40	41-50	51-60	>60
63 (31.03%)	88 (43.4%)	45 (22.2%)	05(2.5%)	01(0.5%)
Professional Training				
Undergraduation	Specialization	Residence	Master's level	Doctoral level
36 (17.7%)	122 (60.1%)	06 (3%)	19 (9.4%)	17 (8.4%)
Regions of practice (Multiple choice with the possibility of multiple responses)				
Capital	Other towns	Capital and other towns		
142	41	19		



Note: MC = Means of Communication, BHU = Basic Health Unit, HEI = Higher Education Institution, SOC = Specialty Outpatient Clinics.

Graph 1. Locations where speech-language pathologists and audiologists work in the state of Alagoas (Multiple choice with the possibility of multiple responses)



Graph 2. Speech-language pathologists and audiologists in the state of Alagoas work mainly in the area of language, followed by dysphagia and orofacial motricity

Discussion

This is the first study to characterize the sociodemographic and professional profile of speech-language pathologists and audiologists in the state of Alagoas. Although Alagoas is a small Brazilian state, it is approximately the size of the country Haiti, thus, the interiorization of the various professions in order to meet the needs of the population is necessary. Therefore, of the 203 speech-language pathologists and audiologists in Alagoas who answered the questionnaire, 142 are allocated in the capital, 41 in other towns across the state, and 19 work both in the capital and in other towns.

Our data show that the majority of speech-language pathologists and audiologists in Alagoas are young. The

speech-language pathology and audiology course in the state is only 21 years⁹, although speech therapy and audiology in the country had its first university approximately 60 years ago³, this would justify the fact that the professionals in Alagoas are mostly young adults aged between 31- 40 years (43.4%). However, this scenario of young speech-language pathologists and audiologists seems to extend worldwide and, reinforcing our finding, a research with internship supervisor professors in the state of Alagoas confirms that they are young adults (66.7%)¹⁰. When characterizing the 62 professors who teach classes in four speech-language pathology and audiology courses in the state of Bahia in Brazil, the researchers found that the average age was 37.3 years¹¹ and, by outlining the

trajectory of speech-language pathologists and audiologists in the state of Minas Gerais (Brazil), the researchers found an even younger age, with an average of 25.7 years¹². Interestingly, a study conducted in Saudi Arabia, points out that most professionals are between 21-30 years old, representing 60.87% of audiologists and 51.35% of speech therapists⁶, while in Japan, 70% of speech-language pathologists and audiologists are younger than 39 years¹³.

The present research estimates that speech-language pathologists and audiologists in the state of Alagoas are mostly women, which is in line with several studies carried out in Brazil and internationally. A study that analyzed the profile of doctoral speech-language pathologists and audiologists in Brazil between the years 1976 and 2008 points out that 97.2% were women¹⁴, and between 2009 and 2013, women corresponded to 98.2% of speech-language pathologists and audiologists with doctoral level in Brazil¹⁵. Another study, conducted in the state of Bahia, when mapping the professors of speech-language pathology and audiology courses found that 96.9% are female¹¹. And, 94% of speech-language pathologists and audiologists who graduated from the Federal University of Minas Gerais are women¹². When analyzing the internship supervisor professors in Alagoas, the research found that 95.4% of them were women¹⁰; all these data are consistent with the data found in this research, in which 91.6% of the speech-language pathologists and audiologists are female in the state of Alagoas at different levels of professional training.

This characterization is typical worldwide. In Europe, 95% of women predominate in the field of speech-language pathology and audiology¹⁴, and in Saudi Arabia, 81.08% of speech therapists are female, and 73.91% of audiologists⁶. In addition, in 2010, in a study with the students admitted to audiology and speech disorders courses at King Saud University in Saudi Arabia, only 30% of the students were male⁶. Among Americans, the data are no different, ASHA (American Speech-Language-Hearing Association) states that only 3% of speech therapists⁵ and 10% of audiologists are men⁴. In Japan, 18% of speech-language pathologists and audiologists are male¹³ and in South Africa only 2% of speech-language pathologists and audiologists are men¹⁶. Thus, speech-language pathology and audiology is an essentially female profession, probably due to the act of caring and educating be culturally associated with women.

As for the professional training profile, it is observed that 60.1% of speech-language pathologists and audiologists in the state of Alagoas have specialization level. In the state of Minas Gerais, only 29.9% of speech-language pathologists and audiologists are specialists¹². Among the internship supervisor professors in Alagoas, 85.72% have a master's degree¹⁰, while our findings demonstrate that only 9.4% of the state's speech-language pathologists and audiologists are masters, corroborating with a study carried out in

Minas Gerais in which 12% of speech-language pathologists and audiologists have a master's degree¹². Probably, speech-language pathologists and audiologists with clinical practice look for training applied to practice (specialization level) while professionals who participate in teaching activities are required to hold a *stricto sensu* training.

In Saudi Arabia, 69.57% of audiologists and 70.27% of speech therapists have a bachelor's degree⁶. In Turkey, 07 speech therapists have advanced training (master's or doctorate)¹⁷. Although only 8.4% of speech-language pathologists and audiologists have a doctorate in the state of Alagoas, and in Minas Gerais the speech-language pathologists and audiologists correspond to 0.9% of professionals¹², an increasing number of speech-language pathologists and audiologists in Brazil is observed, with a total of 203 new doctors between the years 1976 and 2003, 504 between 1976 and 2008 and until 2013, the number was 775 dissertations defended by Brazilian speech-language pathologists and audiologists¹⁵.

Interestingly, in the USA, audiologists can only practice once they have the doctoral level. The search for professional development must be continuous, as this reflects on the quality of the service provided to society and the educational level in the country. As a result, public policies to encourage professional development must be continuous in countries that wish to achieve social levels of excellence.

Most speech-language pathologists and audiologists in Alagoas work in health services, however, speech-language pathology and audiology practice in Brazil was initiated strongly in the school setting with the so-called "logopedas" or "orthophonists"; these professionals had the main function of regulating linguistic variations and accents in order to standardize the language in the country⁷. There has been a change in the professional practice of the speech-language pathologists and audiologists in Brazil, and the health services have gained notorious space. Most professionals, according to the data obtained in the present research (graph 1), and with a study carried out with former speech-language pathologists and audiologists in the state of Minas Gerais, which found that the performance in health services such as clinics (34.33%), private practices (31, 34%) and home care (28.36%) have gained space when compared to the school settings (16, 42%)¹². Of the 203 speech-language pathologists and audiologists in Alagoas who answered the questionnaire, only 02 (0.98%) work in schools; as well as in Saudi Arabia, where only 10.81% of speech therapists work in the school setting⁶. In Japan, speech-language pathologists and audiologists are also focused on health services, and 40% of speech-language pathologists and audiologists work in clinics, 27% in rehabilitation centers for disabled people, and only 13% in schools¹³.

Our data differ from the North American data, where, according to ASHA, 53% of American speech therapists are in schools⁵. Speech-language pathology and

audiology in the school setting is essential for screening communication disorders or dysphagia in students, for aiding the school pedagogical planning in conjunction with teachers, in addition to acting in the teacher's health with vocal hygiene programs, reducing absences by vocal changes that result in socioeconomic burdens. However, it is noteworthy that the speech therapist practice in the United States allows professionals to provide care to students within the school, while the Brazilian laws do not allow these actions and, when necessary, speech therapy must be external to the school setting. This fact may justify the divergence of data found between countries. These data also reflect that the places where speech-language pathologists and audiologists' practice in the world have different profiles.

In our study, 19.2% of speech-language pathologists and audiologists in Alagoas indicated working in hospitals, and 10.3% in maternity hospitals, totaling 29.5% of professionals, which is consistent with the findings of American audiologists, where 25.1% work in hospitals. Diverging from these data, a small number of American speech therapists (13%) are in the hospital settings⁵. In Japan, only 13% of speech-language pathologists and audiologists work in hospitals¹³, corroborating data from American speech therapists. However, in contrast to Saudi Arabia, where the vast majority of professionals in human communication disorders and dysphagia work in hospitals, representing 73.91% of audiologists and 54.05% of speech therapists⁶, and with the United Kingdom, where the majority of speech therapists who work with Parkinson's Disease treated patients in hospital outpatient departments over 50% of the times¹⁸. This wide variety of practices in different parts of the world sets up a scenario in which, in some countries, such as Saudi Arabia and the United Kingdom, patient care is more restricted to the hospital setting, while in other countries there is a decentralization of speech-language pathology and audiology care.

While in the United States 3% of speech therapists⁵ and 7.2% of audiologists⁴ develop their professional activities in higher education institutions, totaling 10.2% of professionals, in Saudi Arabia this percentage is 10%, with 4% of audiologists and 6% of speech therapists allocated in higher education institutions⁶. In Alagoas, the data are not very divergent, with 13.3% of speech-language pathologists and audiologists working in higher education institutions.

In 1995, Brazilian speech-language pathology and audiology was made up of only four specialties: audiology, language, voice and orofacial motricity⁷, however, speech-language pathology and audiology grew and, approximately 25 years later, a total of 14 specialties are in force in the country⁸, language is area of practice with the greatest demand, so it is justifiable that 107 speech-language pathologists and audiologists in Alagoas claimed to work with language. The Japanese data are consistent with that of the present research, as 66% of speech therapists work in language disorders and cognition in adults¹³. On the other hand,

dysphagia, the second area of greatest practice in Alagoas, impairs life more closely, with a real demand in the labor market due to the severity of the disorder and the fatal outcome the lack of treatment can trigger. In Japan, the data are similar and, the area of food and swallowing (dysphagia) among Japanese occupy 61% of speech therapists¹³. A fact to be considered is that a large part of the new speech-language pathology and audiology specialties are still consolidating their space among professionals and, probably due to this reason, few professionals work in the areas of neuropsychology and technical examination, for example.

As limitations to this study, it was carried out among speech-language pathologists and audiologists from Alagoas, a small state in Brazil. A larger research, replicated with speech-language pathologists and audiologists across the national territory in order to trace the sociodemographic and professional profile of speech-language pathologists and audiologists in Brazil, aiming to outline strategies for improving the profession in a national context, observing possible gaps such as the absence of speech-language pathologists and audiologists identified in schools in Alagoas. In addition, a broader investigation would allow to correlate the data obtained in Brazil with findings about the speech-language pathology and audiology profession worldwide, thus strengthening the profession and planning global conducts to improve care for communication disorders and dysphagia in humans. On the other hand, adding questions such as working hours, number of years of professional experience, and the age group of patients who receive care would strengthen the questionnaire as to allow to obtain a more complete panorama of the profession.

Conclusions

Speech-language pathology and audiology in the state of Alagoas is characterized by young and female professionals, with the majority of specialist professionals working especially in the language area and in the health services located in the capital Maceió.

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Received July 31, 2021
 Accepted October 5, 2021