

Profile of speech therapists trained in orofacial myology in Brazil

Perfil dos fonoaudiólogos com formação em motricidade orofacial no Brasil

Herick Santos Assis¹ , Maria Vanessa Martins Alves¹ , Íkaro Daniel de Carvalho Barreto² ,
Geise do Espírito Santo Rezende³ , Andréa Monteiro Correia Medeiros^{1,3} 

ABSTRACT

Purpose: To characterize the profile of Brazilian speech therapists with specialized training in orofacial myology (OM). **Methods:** Descriptive and exploratory, cross-sectional study, with a quantitative approach, carried out between September 2022 and February 2023, in partnership with CFFa. Eighty-seven speech therapists with specialized training in OM participated. **Results:** showed female predominance, age between 41 and 50 years, and time of specialized training in OM between 16-20 years; most with specialist titles in the Southeast of Brazil. Most work in offices/outpatient clinics and/or clinics with interdisciplinary actions with Medicine and Dentistry; seeing adults and children, mainly in a private sector. As to OM domains there was a predominance of rehabilitation of soft structures and oral habits, and most use technologies: light - reception and assistance, light-hard - evaluation and therapy, and hard - photobiomodulation (40.2%). **Conclusion:** The Brazilian speech therapists with specialized training in OM participating in the study are mostly women over 41 years old, who hold the title of specialists, and carry out practices in various domains and levels of technology in the area, with a predominance of diagnosis and rehabilitation of oromyofunctional disorders.

Keywords: Professional practice location; Specialization; Speech therapy; Stomatognathic system; Job description

RESUMO

Objetivo: Caracterizar o perfil do fonoaudiólogo brasileiro com formação especializada em motricidade orofacial (MO). **Métodos:** Estudo descritivo e exploratório, transversal, de abordagem quantitativa, realizado entre setembro 2022 e fevereiro 2023, com parceria do Conselho Federal de Fonoaudiologia. Participaram 87 fonoaudiólogos com formação em MO. **Resultados:** Evidenciou-se predominância feminina, faixa etária entre 41 e 50 anos e tempo de formação especializada em MO entre 16 e 20 anos; maioria com título de especialista e da Região Sudeste do Brasil, atuando em consultórios/ambulatórios e/ou clínicas, com ações interdisciplinares com Medicina e Odontologia, abrangendo adultos e crianças, principalmente na rede privada. Prevaleram os domínios da MO quanto à reabilitação de estruturas moles e hábito oral e maior uso de tecnologias: leve – acolhimento e assistência; leve-dura - avaliação e terapia e dura – fotobiomodulação. **Conclusão:** Os fonoaudiólogos brasileiros com formação especializada em MO, participantes do estudo, são, em sua maioria, mulheres com mais de 41 anos de idade, que detêm titulação de especialista, com práticas nos vários domínios e níveis de tecnologia da área, principalmente em diagnóstico e reabilitação dos distúrbios miofuncionais orofaciais.

Palavras-chave: Área de atuação profissional; Especialista; Fonoaudiologia; Sistema estomatognático; Perfil profissional

Study carried out at Curso de Fonoaudiologia, Universidade Federal de Sergipe – UFS – São Cristóvão (SE), Brasil.

¹Departamento de Fonoaudiologia, Universidade Federal de Sergipe – UFS – São Cristóvão (SE), Brasil.

²Departamento de Informática e Estatística, Universidade Federal Rural de Pernambuco – UFRPE, Recife (PE), Brasil.

³Programa de Pós-graduação em Ciências da Saúde – PPGCS, Universidade Federal de Sergipe – UFS – São Cristóvão (SE), Brasil.

Conflict of interests: No.

Authors' contribution: HSA and MVMA were responsible for collecting, analyzing and interpreting study data and writing the article; IDCB was responsible for the interpretation of the data study, statistical treatment and the English language version of the article; GESR was responsible for reviewing the article and final approval of the version to be submitted for publication; AMCM was responsible for the conception, design, coordination of the study project, guidance, review of the article and final approval of the version to be submitted for publication.

Funding: None.

Corresponding author: Andréa Monteiro Correia Medeiros. E-mail: andreamedeiros@academico.ufs.br

Received: April 20, 2023; **Accepted:** July 09, 2023

INTRODUCTION

The area of orofacial motricity (OM) encompasses actions at different levels of health care and is focused on study, research, improvement, diagnosis, and rehabilitation of congenital or acquired disorders of the orofacial myofunctional system (OMS) and cervical, from pregnancy to birth, aging⁽¹⁾.

Traditionally, the clinical evaluation in OM helps the speech therapist in the diagnosis and treatment of dysfunctions related to the stomatognathic system (SS)⁽²⁾, which encompasses the set of united and articulated structures under the control of the central nervous system, which perform orofacial functions, such as sucking, breathing, swallowing, chewing and speaking⁽³⁾.

To guide the speech therapist's actions, the Department of Oral Motricity of the Sociedade Brasileira de Fonoaudiologia (SBFa) proposed a document with the domains of professional practice and the transdisciplinary relations⁽⁴⁾, describing actions in health promotion and prevention, diagnosis and intervention with regard to OMS, in different life cycles, of congenital or acquired causes⁽⁵⁾.

Throughout history, several strategies were built that contributed to consolidate the OM area, such as the elaboration of scientific technical vocabulary⁽⁵⁾, expansion of scientific publications, determination of domains and their transdisciplinarity⁽⁴⁾ and the creation of the title of OM specialist by the Federal Council of Speech Therapy (CFFa)⁽⁶⁾.

The institutions that brought together speech therapists and related professionals interested in the study of OM stand out, with the founding, in 1983, of the Center of Specialization in Clinical Speech Therapy (CEFAC) and, in 1998, the creation of the Department of Orofacial Motricity⁽¹⁾ of the SBFa. In 2015, the Brazilian Association of Orofacial Motricity (ABRAMO) was legalized, assuming in its statute the training of specialists in the area⁽⁷⁾.

The current panorama of Brazilian Speech Therapy shows actions inherent to the specialties, based on a critical and reflective awareness of the different forms of action⁽¹⁾. Organizations experience demands for efficient professional actions and connected with society, requiring a professional profile that follows technological innovations, with potential for problem solving, negotiation skills and proactivity⁽³⁾.

Currently, the OM specialization title is obtained/renewed by the CFFa. The professional must have training in the area and submit statements for the purpose of obtaining the title, in addition to filling out the application and the score sheet, following the rules of CFFa Resolution n° 630/202⁽⁸⁾. Despite the wide recognition of the area, so far there is no characterization of the performance profile of professionals trained in OM.

The objective of the present study was to characterize the profile of Brazilian speech therapists with specialized training in the OM area, based on self-declaration on sociodemographic characterization and professional activities.

METHODS

The study complied with the General Data Protection Law (LGPD), n° 13.709/2018, which provides for the processing of personal data, including in digital media. Ethical aspects were respected, upon approval by the Research Ethics Committee (CEP) of the Federal University of Sergipe – UFS, under

number CAAE 56973222.0.0000.5546 and opinion number 5.449.736. Participants signed the Free and Informed Consent Form (FICF), made available online, and confidentiality was guaranteed, with data used without identification.

This is a descriptive and exploratory, cross-sectional study, with a quantitative approach, with the participation of Speech-Language Pathology professionals with valid registration in the national territory, who had training in the OM area (specialization and/or postgraduate) and/or title of OM specialists, invited to participate through the virtual environment (social media). The study had the partnership of CFFa.

Inclusion criteria were to be a Speech-Language Pathology professional with specific training in OM and to have agreed to participate in the research, by signing the FICF, responding to the electronic form available. As exclusion criteria, we considered the lack of access to the internet and/or technologies and whether the speech therapist practiced the profession exclusively outside Brazil.

The research was carried out from September 2022 to February 2023. Initially, the researchers, through the project coordinator, contacted the CFFa to present the proposal and verify its feasibility. After the CFFa plenary approval, contacts with the regulatory entities of Speech Therapy (Regional Councils throughout Brazil), scientific entities (ABRAMO and SBFa) and postgraduate education institutions in OM were expanded, requesting dissemination of the research in your social networks. Information collection strategies were also carried out with speech therapists through the virtual environment and instant messaging applications.

Data collection with the research participants, speech therapists who agreed to participate, took place through a semi-structured electronic form, containing 17 items that addressed individual characteristics (age group and gender), training (title and time), place of work (geographical distribution and public/private sector), types of action (domains in OM and age group of the public served), interdisciplinary conducts and resources and technologies used in OM.

It is noteworthy that the electronic form contained questions with the possibility for the speech therapist to mark multiple alternatives, including the option "others", with spaces to complement their answer. Thus, it was possible to identify several possibilities for qualifications, place of practice, age group of the public served, interdisciplinary action, use of light, light-hard and/or hard technologies and areas of activity in OM (Appendix 1).

Statistical analysis

The data collected via Google Form were tabulated in Microsoft Excel 2016® spreadsheets, for the respective statistical treatment. Descriptive data analysis was performed.

Considering the registration of 2,037 professionals specializing in OM in the CFFa (February 2023), distributed across the five Brazilian regions, assuming a finite population, with a significance of 5%, a margin of error of 10.3% and a prevalence of 50%, it was obtained the sample size of 87 participants of the present research, through the formula⁽⁹⁾

$$n = \frac{NZ_{\alpha}^2 p(1-p)}{e^2 (N-1) + Z_{\alpha}^2 p(1-p)} \quad (1)$$

where n is the sample size, N is the population size, p is the expected proportion, e is the margin of error, and $Z^2_{\frac{\alpha}{2}}$ is the square of the normal distribution score associated with the significance level α .

$$n = \frac{2037 \times (1.965)^2 \times 0.5 \times (1-0.5)}{(0.103)^2 (2037-1) + (1.965)^2 \times 0.5 \times (1-0.5)} \approx 87 \quad (2)$$

RESULTS

Figure 1 shows the distribution of professionals across the five Brazilian regions. According to the data initially extracted from the CFFa platform, from open access to the public, the registration of 2,037 professionals specializing in OM was verified (Figure 1A), with 87 professionals participating in the study (Figure 1B).

Of the 87 speech therapists with specialized training in OM who participated in the survey, most were female. The most prevalent age group was between 41 and 50 years. There was a predominance of participants with a specialist title; some of the professionals did not have a degree, but had training (specialization, master's and/or doctorate) in the OM area, with varied distribution in terms of time they had been trained (Table 1).

Regarding the place of work, most of the participants worked in the Southeast Region of Brazil, in the spheres of the private sector, the public sector and both sectors.

Most participants worked in offices/outpatient clinics and/or clinics. As for the public served, the majority worked with the adult population, followed by the child population. The characterization of the participants is detailed in Table 1.

Regarding the technologies, the form of collection allowed the survey of the different types used by each professional. The light technology most mentioned by the participants was OM reception and assistance, followed by educational activities. In light-hard technology, there was a higher prevalence of assessment and therapy, and approximately half of speech therapists reported working with scientific evidence in OM treatment. For hard technology, photobiomodulation was the most mentioned, followed by electromyography (Table 2).

When questioned about the use of OM assessment protocols in the clinical routine, affirmative answers were obtained, with the majority using already published protocols. Speech therapists also reported interdisciplinary work with Medicine and/or Dentistry (Table 2).

About the performance in the 10 areas of domains in the OM listed in the electronic form of the research (Appendix 1), with the possibility of indicating multiple alternatives, the performance in the alterations of the soft tissue structures that make up the SS (such as tongue, lingual frenulum, among others) was the most prevalent, followed by learned myofunctional behavior – habit (Table 2).

Approximately half of the participants mentioned acting in already traditional domains of OM, such as respiratory diseases, diseases of the central or peripheral nervous system and craniofacial anomalies. The reference to the treatment of post-COVID-19 sequelae stood out as unprecedented, as shown in Table 2.

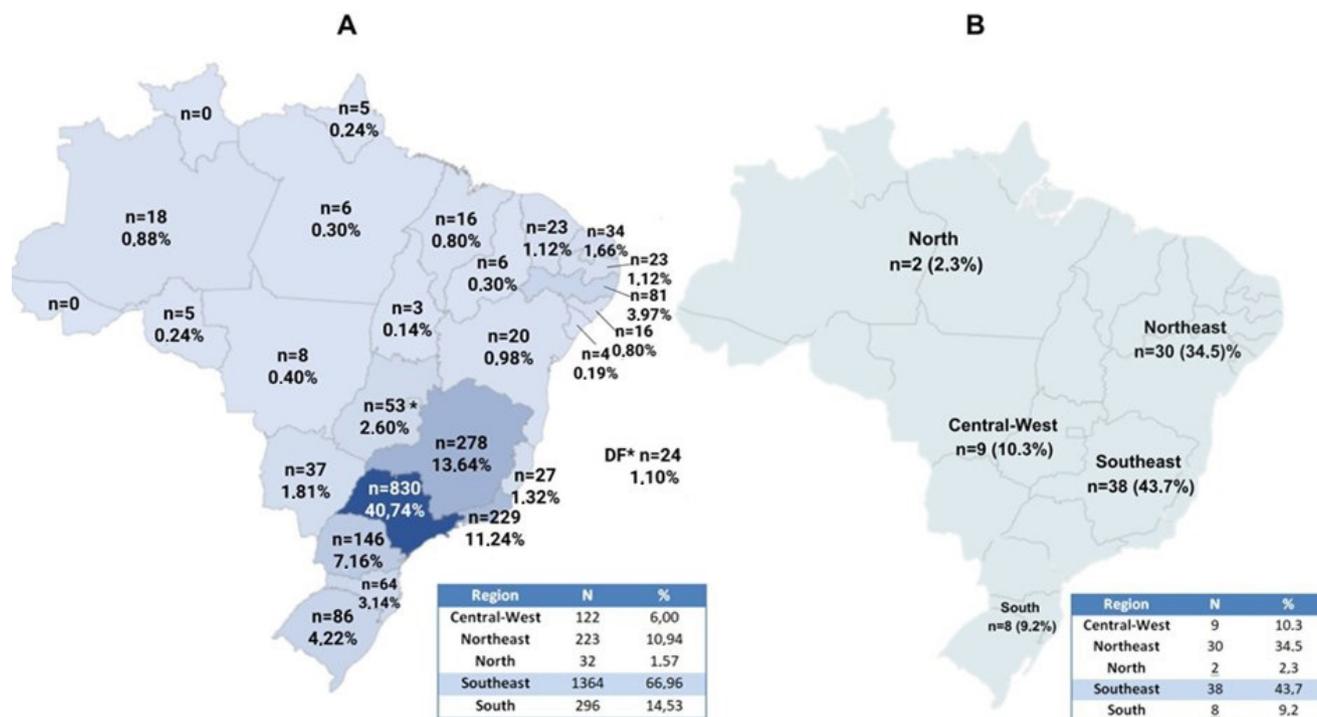


Figure 1. Geographical distribution of professionals specializing in orofacial myology in Brazil, organized on a map, by the researchers, from the data obtained: (A) Website of the Federal Council of Speech Therapy in February 2023; and (B) Current research between September 2022 and February 2023

Subtitle: N = Number of participants; % = Percentage of participants

Table 1. Sociodemographic characterization (N=87) of professionals with specialized training in orofacial motricity

Characteristics (N=87)		N	%
Gender	Female	78	89.7
	Male	9	10.3
Age group	20-30 years	10	11.5
	31-40 years	23	26.4
	41-50 years	30	34.5
	More than 50 years	24	27.6
Acting region in the country	North	2	2.3
	Northeast	30	34.5
	Center-west	9	10.3
	Southeast	38	43.7
	South	8	9.2
Specialized training	with specialist title	62	71
	without specialist title	25	29
Highest degree obtained	Graduate	28	32.2
	Specialist	52	59.7
	Teacher	30	34.4
	Doctor	17	19.5
	Post doctoral	8	9.1
	Did not answer	1	1.1
	Time of specialized OM training (in years)	less than 5	17
	Between 5-10	13	14.9
	Between 11-15	14	16.1
	Between 16-20	21	24.1
	Between 21-25	14	16.1
	Between 26-30	-	-
	more than 30	8	9.2
Sector of activity	Private	33	38
	Public	22	25.3
	Mixed	29	33.3
	Did not answer	3	3.4

Subtitle: N = Number of participants; % = Percentage of participants; OM = Orofacial Motricity

Table 2. Performance profile of participating speech therapists (N=87) with specialized training in orofacial motricity

Professional performance (N=87)		N	%
		70	80.4
Place of Practice	Office/ambulatory/clinic	10	11.4
	Management (boards. committees. others)	38	43.6
	Hospital	34	39
	Educational institution	17	19.5
	Maternity	2	2.2
	Did not answer		
Age group served	Newborn	35	40.2
	Infant	42	48.2
	Preschool	50	57.4
	Child	54	62
	Adolescent	37	42.5
	Adult	60	68.9
	Elderly	48	55.1
Use of light technology	Reception and assistance in OM	80	91.9
	Educational actions in OM	37	42.5
	Service management	19	21.8
	Organization of health care networks	10	11.4
	Others		
	Disclosure on social media	1	1.1
	Organização Nacional de Acreditação (ONA)	1	1.1
Did not answer	2	2.2	

Subtitle: N = Number of participants; % = Percentage of participants; OM = Orofacial motricity; 3D = three-dimensional

Table 2. Continued...

Professional performance (N=87)		N	%	
Use of light-hard technology	OM assessment and therapy	85	97.7	
	Scientific evidence of treatment in OM	44	50.5	
	Validation processes of evaluation protocols in OM	22	25.2	
Use of hard technology	Did not answer	1	1.1	
	Electromyographic Biofeedback	11	12.6	
	thermography	11	12.6	
	ultrasound	11	12.6	
	Photobio OM dulation	35	40.2	
	Others			
	Electro-stimulation	9	10.3	
	Electromyography	12	13.7	
	Bandage	2	2.2	
	Acupuncture	1	1.1	
	3D optoelectronic motion analysis	1	1.1	
	Gloves. cotton swabs and spatula	1	1.1	
	Shiatsu	1	1.1	
	does not use	3	3.4	
	Did not answer	27	31	
Areas of action domains	Learned myofunctional behavior	60	69	
	craniofacial anomalies	46	46	
	Dento-occlusal changes	55	63.2	
	Changes in the soft tissue structures that make up the stomatognathic system	77	88.5	
	Respiratory diseases	47	54	
	Sequelae involving orofacial injuries resulting from trauma. burns. perforations	32	36.8	
	Oral cavity cancer treatment	3	3.4	
	Infectious diseases with mucosal changes in the airways and upper digestive tract	7	8	
	Diseases of the central or peripheral nervous system	50	57.5	
	Treatment of post-COVID-19 sequelae	34	39.1	
	Aesthetics	10	11.5	
	Interdisciplinary Action	Physiotherapy	61	70.1
Medicine		76	87.3	
Nutrition		55	63.2	
Dentistry		74	85	
Psychology		57	65.5	
Occupational therapy		49	56.3	
Others				
social worker		3	3.4	
Physical education		2	2.3	
Nursing		6	6.9	
singing teacher	1	1.1		
Psychomotor	2	2.3		
Psychopedagogue	4	4.6		
nursing technician	1	1.1		

Subtitle: N = Number of participants; % = Percentage of participants; OM = Orofacial motricity; 3D = three-dimensional

DISCUSSION

The investigation of the profile of the professional with specialized training in OM, in the present study, showed that not all professionals obtained the title of specialist in the area, even when they had training in specialization courses, master's and doctorate related to OM.

The CFFa regulated the specialty as being the field of Speech Therapy focused on the structural and functional aspects of the orofacial and cervical regions⁽⁶⁾. Even though

it is not mandatory to obtain the title of specialist in OM to work, it is considered that its acquisition could increase the recognition of the training and differentiated qualification of the speech therapist, with important and positive professional repercussions.

Of all study participants, there was a prevalence of females, which is generally found in Speech Therapy, for all areas of activity⁽¹⁰⁾. The female profile has made up the majority in courses in the health area, and its relationship with professions that cover the care and comprehensive care of another human being is being discussed⁽¹¹⁾.

The sample revealed the prevalence of professionals with specialized training, with specialization being the highest degree obtained. Such data can be justified by a study that shows a national tendency of professionals to expand their knowledge after graduation, investing in areas of interest, such as improvement and specialization courses⁽¹²⁾, generating an increase in trained professionals to teach classes and share their knowledge⁽¹²⁾.

The speech therapists interviewed had, for the most part, between 16 and 20 years of experience in specialized practice. This data coincides with the close period cited in Resolution 219/98, in which the CFFa officialized the granting of the title of specialist in Speech Therapy, promoting specificities and expansion of the OM area⁽⁶⁾.

As for the mapping of the place where they practiced their profession, historically the largest number of speech therapists has been concentrated in the Southeast Region of Brazil⁽¹³⁾. The present study also demonstrated the predominance of professionals in this region. On the other hand, there was a large number of professionals in the Northeast region of the country, in line with the study that found an increase in the number of speech therapists in this region⁽¹⁴⁾.

There was a balanced distribution between speech therapists who worked exclusively in private networks and those who carried out activities in the private and public sectors at the same time. The prevalence of working in private practice, as discussed in another study⁽¹⁵⁾, considers the training of speech therapists to be predominantly rehabilitative, in which clinical scenarios have been privileged⁽¹⁵⁾. Another study⁽¹³⁾ considered that the mixed performance evidences panoramas and difficulties that can be encountered regardless of the type of care network (private or public), which leads the speech therapist to establish both employment relationships, without neglecting either of the two sectors⁽¹³⁾.

The smaller number of responses from the public network has also been discussed in a study that points out that speech-language pathology training and science need to align with the principles proposed by the Sistema Único de Saúde (SUS), allowing for a differentiated professional performance, overcoming the predominant model outpatient and hospital⁽¹⁵⁾.

The results of the research showed the prevalence of consultations in adults (population between 20 and 59 years old), as the study that refers that, with the passage of age and worsening of diseases, the demand for speech therapy services grows⁽¹⁶⁾, it is important that Speech Therapy takes a close look at these age groups. On the other hand, the work with the child population was evident in the participants of the present study, which may be important to avoid further changes and worsening of orofacial myofunctional disorders (OMD) at later ages⁽¹⁷⁾.

For the various age groups, a wide range of speech therapy actions have been referred to, including promotion, prevention, diagnosis, rehabilitation and OM improvement practices⁽¹⁾. In addition, the 21st century has seen major transformations in the Brazilian population structure, through social achievements and the introduction of new health care technologies⁽¹⁸⁾.

In general, clinical and hospital actions have increasingly benefited from technological instruments and the recruitment of professionals with specialized training to work in the care of different complexities. Several demands encompass professional know-how that, in addition to generalist training, reach the

domain of light technologies (reception, accountability), light-hard (norms, protocols) and hard (equipment, machines and material resources)⁽¹⁹⁾.

It should be noted that in the electronic form for participation in the research (items 11, 12 and 13) examples of possible resources used in the clinical routine of the speech therapist working in orofacial motricity were cited, respectively for light, light-hard and hard technologies (Appendix 1).

Among the technological innovations in the area of OM, the literature addresses the increase in research on the benefits of photobiomodulation with low-level laser (LBP), especially regarding the treatment of temporomandibular disorders (TMD)⁽²⁰⁾. In the present study, the LBP was pointed out as the hard technology most used by the participants, differing from the data obtained in another study (2020) that reported not using the LBP in the speech therapy clinical practice. The current moment seems to show a possible technological advance in the area regarding the appropriation of this technology⁽²¹⁾.

Most participants mentioned that they used standardized protocols, which is considered important, as the use of validated instruments has been advocated as a way of providing scientific evidence that is less prone to errors⁽²²⁾. On the other hand, the use of these instruments may be related to the profile of the participants, which mainly consists of clinical care, with diagnosis and rehabilitation of OMD.

It is considered that the structured assessments for the diagnosis and rehabilitation of OMD have specific protocols, consisting of questions and/or tests applied to the patient and/or their companion. Thus, anamnesis and clinical evaluation are made through questions that contribute to the clinical diagnosis and, later, base the therapeutic planning⁽²³⁾.

In the present study, there was a varied distribution regarding the speech therapy practice in the OM domains, with a higher prevalence of performance in the diagnosis and rehabilitation of the orofacial myofunctional structures of the soft tissues. The results are in line with the literature, which points to a great speech therapy performance regarding interventions involving the tongue and structures around the upper airways^(24,25).

It is noteworthy, in this research, the record of performances in OM domain areas already considered traditional, such as mouth breathing, central or peripheral nervous system diseases and craniofacial anomalies, using interventions that usually deal with aspects related to changes in functions orofacial⁽²⁶⁾ and return morphofunctional stability with muscle stimulation and postural corrections of altered structures⁽²⁷⁾.

The study also showed the role of speech therapy in the treatment of post-COVID-19 sequelae, a practice that was expanded with the SARS-CoV-2 pandemic⁽²⁸⁾. OM has gained a prominent role in this scenario, contributing with actions for the evaluation, diagnosis and recovery of muscle, phonoarticulatory organs and orofacial functions, in addition to the rehabilitation of smell and taste, based on integral multisensory stimulation, in cases of anosmia and dysgeusia, as described in the most current literature⁽²⁸⁾.

As for interdisciplinarity, the prevalence of joint actions between the area of OM and Medicine was evidenced, such as a study in which all participants stated that the two sciences are related in a complementary way, based on assistance in prevention, diagnosis, treatment and rehabilitation in the care and well-being of patients⁽²⁹⁾.

A large number of participating speech therapists reported working together with dentistry, which can be explained by the history of the emergence of the specialty itself⁽⁶⁾ and for the various possibilities of consolidated action, such as in cases of rehabilitation in TMD, pre and post-orthognathic surgery follow-up, assistance in cases of neoplasms and sleep-disordered breathing, in addition to participation in teams in cases of cleft lip and palate and oral rehabilitation prosthetics^(25,30).

Recognizing the profile of professionals with specialized training in OM allows highlighting the multiple possibilities of action in this area, including technological innovations that promote the development and improvement of the area. The current study intended to contribute to this recognition, glimpsing the future, from the characterization of the present and the survey of the trajectory already covered.

Study limitations included the limited number of participants. The LGPD did not allow the use of direct search strategies for professionals (sending an electronic email via CFFa), representing a factor that hindered the collection. Adherence on the part of speech therapists was low, making it impossible to obtain more global data. Possibly, this can be explained by exhaustion and resistance to research involving calls through the virtual environment, such as filling out electronic forms.

CONCLUSION

The profile of the Brazilian speech therapist trained in OM is predominantly female, aged over 41 years and specialized training time between 16 and 20 years. The professionals are concentrated in the Southeast Region of the country, most of them hold specialist titles, working in different age groups, especially in the diagnosis and rehabilitation of OMD.

Greater performance was evidenced in the rehabilitation of soft structures that make up the SE and in learned myofunctional behavior (oral habit), but also in actions in traditional domains of OM, such as mouth breathing, central or peripheral nervous system diseases and craniofacial anomalies. Expansion of actions in post-COVID-19 treatment was revealed.

The action is greater with adults and children, has the private network as the main sector of activity, with interdisciplinary conducts, especially with Medicine and Dentistry, and with the use of various levels of technologies in the clinical routine of OM, emphasizing welcoming and assistance (light), assessment and therapy (light-hard) and use of photobiomodulation (hard).

ACKNOWLEDGMENTS

To the National Council for Scientific and Technological Development (CNPq)- Brazil.

REFERENCES

- Susanibar F, Marchesan I, Santos R. Dia Mundial da Motricidade Orofacial. *Rev CEFAC*. 2015;17(5):1389-93. <http://dx.doi.org/10.1590/1982-021620151752>.
- Pereira TS, Oliveira F, Cardoso MCAF. Associação entre hábitos orais deletérios e as estruturas e funções do sistema estomatognático: percepção dos responsáveis. *CoDAS*. 2017;29(3):e20150301. <http://dx.doi.org/10.1590/2317-1782/20172015301>. PMID:28538822.
- Martins C, Kobayashi RM, Ayoub AC, Leite MMJ. Perfil do enfermeiro e necessidades de desenvolvimento de competência profissional. *Texto Contexto Enferm*. 2006;15(3):472-8. <https://doi.org/10.1590/S0104-07072006000300012>.
- SBFa: Sociedade Brasileira de Fonoaudiologia. Departamento de Motricidade Orofacial. Áreas de domínio em motricidade orofacial [Internet]. São Paulo; 2013 [citado em 2023 Abril 20]. Disponível em: http://www.sbf.org.br/portal/pdf/areas_dominio_mo_es.pdf
- SBFa: Sociedade Brasileira de Fonoaudiologia. Vocabulário técnico-científico em Motricidade Orofacial [Internet]. São Paulo: Comitê de MO; 2007 [citado em 2023 Abril 20]. Disponível em: https://www.sbf.org.br/portal2017/themes/2017/departamentos/artigos/resolucoes_63
- SBFa: Sociedade Brasileira de Fonoaudiologia. Breve histórico da motricidade orofacial e do Departamento de MO da SBFa [Internet]. São Paulo; 2017 [citado em 2023 Abril 20]. Disponível em: https://www.sbf.org.br/portal2017/departamentos/6_motricidade-orofacial
- ABRAMO: Associação Brasileira de Motricidade Orofacial. Consolidação das alterações do estatuto social Aprovadas conforme ata da assembleia geral extraordinária: da denominação, fins, sede e duração [Internet]. 2016 [citado em 2023 Abril 20]. Disponível em: <https://www.abramofono.com.br/wp-content/uploads/2018/03/ESTATUTO-ABRAMO-2016-OFICIAL-1.pdf>
- Brasil. Conselho Federal de Fonoaudiologia. Resolução CFFa no 630. Dispõe sobre o título de especialista, critérios para concessão e renovação no âmbito da Fonoaudiologia, e dá outras providências. *Diário Oficial da União* [Internet]; Brasília; 2021 [citado em 2023 Abril 20]. Disponível em: http://fonoaudiologia.org.br/resolucoes/resolucoes_html/CFFa_N_630_21.htm
- Machin D, Campbell MJ, Tan SB, Tan SH. *Sample sizes for clinical, laboratory and epidemiology studies*. Oxford: John Wiley & Sons. 2018. <http://dx.doi.org/10.1002/9781118874905>.
- Oliveira IC, Vaz DC, Carvalho AFLC. Fragilidades e potencialidades do trabalho fonoaudiológico em ambiente virtual em tempo de pandemia de Covid-19 (SARS-CoV-2). *Rev Ciênc Méd Biol*. 2020;19(4):553. <http://dx.doi.org/10.9771/cmbio.v19i4.42705>.
- Sousa JCT, Ávila LK, Cardoso LGS. Perfil sociodemográfico de discentes em instituição de ensino superior privada na área da saúde. *Arq Med Hosp Fac Cienc Med St Casa São Paulo*. 2020;65(1):1-10. <http://dx.doi.org/10.26432/1809-3019.2020.65.002>.
- Seno MP, Capellini SA. Congresso Brasileiro de Fonoaudiologia: história, organização e produção científica. *Rev CEFAC*. 2019;21(1):e1318. <http://dx.doi.org/10.1590/1982-0216/20192111318>.
- Cardoso TT, Luchesi KF. As dificuldades no atendimento aos indivíduos com doenças neurodegenerativas: o fonoaudiólogo e a equipe multiprofissional. *Audiol Commun Res*. 2019;24:e2063. <http://dx.doi.org/10.1590/2317-6431-2018-2063>.
- Silva RPM, Nascimento CMB, Miranda GMD, Silva VL, Lima MLLT, Vilela MBR. Evolução da oferta de fonoaudiólogos no SUS: um estudo sobre a correlação com os indicadores sociais no Brasil na última década. *CoDAS*. 2021;33(2):e20190243. <http://dx.doi.org/10.1590/2317-1782/20202019243>.
- Oliveira LF, Lima ILB, Trigueiro JS, Lucena BTL, Silva EB, Nóbrega AQC, et al. Formação do fonoaudiólogo para atuação educacional: o que referem os estudantes de Fonoaudiologia. *Rev CEFAC*. 2021;23(1):1-10.

16. Peres C, Pereira KFPO, Lüders D, Barusso ACG, Massi GAA. Qualidade de vida de idosos em atendimento clínico fonoaudiológico : uma análise quantitativa. *Res Soc Dev.* 2022;11(3):e59311326724. <http://dx.doi.org/10.33448/rsd-v11i3.26724>.
17. Martins R, Freitas P, Carvalho OD, Pascoinho J. Intervenção precoce: práticas e representações. *Revi Educ Esp.* 2018;31(62):495-512. <http://dx.doi.org/10.5902/1984686X28819>.
18. Chaimowicz F, Chaimowicz G F. O envelhecimento populacional brasileiro. *Rev Bras Geriatr Gerontol [Internet].* 2016 [citado em 2023 Abril 20];19(3):507-19. Disponível em: <http://periodicos.pucminas.br/index.php/pista/article/view/29830>
19. Souza RA, Alencar ELA, Majima AA, Rosado LG, Fernandes ACA, Rocha PA. Uso de tecnologias para telemonitoramento na atenção primária à saúde na pandemia do Covid-19: relato de experiência. *Res Soc Dev.* 2021 Out 13;10(13):e302101321153. <http://dx.doi.org/10.33448/rsd-v10i13.21153>.
20. Borba HBS, da Silva NE, Rocha SMW, Nogueira RVB. Efeito do laser de baixa intensidade no tratamento da disfunção temporomandibular: relato de caso. *Res Soc Dev.* 2021;10(6):e7810615390. <http://dx.doi.org/10.33448/rsd-v10i6.15390>.
21. Correia PRB, Coêlho JF, Freire MLJ, Almeida LNA, Pernambuco LA, Alves GÁS. Fotobiomodulação em Fonoaudiologia: o perfil da prática profissional e o nível de informação dos fonoaudiólogos brasileiros. *Rev CEFAC.* 2021;23(3):1-14. .
22. Tomaz-Morais J, Lima JAS, Luckwu-Lucena BT, Limeira RRT, Silva SM, Alves GÁS, et al. Estudos clínicos de intervenção em motricidade orofacial: análise metodológica de investigações brasileiras. *Rev CEFAC.* 2018;20(3):388-99. <http://dx.doi.org/10.1590/1982-021620182032318>.
23. Goulart BNG, Chiari BM. Avaliação clínica fonoaudiológica, integralidade e humanização: perspectivas gerais e contribuições para reflexão. *Rev Soc Bras Fonoaudiol.* 2007;12(4):335-40. <http://dx.doi.org/10.1590/S1516-80342007000400014>.
24. Cabral MYS, Cabral C, Lopes MGPBS, Villarroel SYP, Busato MCA, Érnica NM, et al. Tratamento multidisciplinar de um caso de anquilose da articulação temporomandibular. *Res Soc Dev.* 2022;11(5):e41711528248. <http://dx.doi.org/10.33448/rsd-v11i5.28248>.
25. Alves LM, Brand CC, Maggessi JDB, Valesan LF, Stefani FM, de Souza BDM. Atuação conjunta Fonoaudiologia e Odontologia: o papel da interdisciplinaridade. *Rev Eletrônica Extensão.* 2022;19(41):46-61. <http://dx.doi.org/10.5007/1807-0221.2022.e80326>.
26. Santos RC, Santos MR, Castanha D M, Andrade TI, Campello CP, Oliveira JB. A importância da Fonoaudiologia e Ortodontia no tratamento de pacientes com fissura labiopalatina: uma revisão de literatura. In: Gaspar G, editor. *Odontologia clínico-científica.* 20ª ed. Recife: Conselho Regional de Odontologia de Pernambuco; 2019. p. 93-5.
27. Couto CX, Burzlaff JB. A respiração bucal e o desenvolvimento facial. In: Burzlaff J, editor. *Odontologia miofuncional: o caminho da integralidade.* 1ª ed. Porto Alegre: Conto Editora; 2021. p. 221-50.
28. Santos LIS, Silva LR, Souza PSS, Consonni FMC, Castro MP. Atuação fonoaudiológica em indivíduos pós-covid-19 com alterações nos órgãos fonoarticulatórios, anosmia, disgeusia e disfagia. *Saber Cient [Internet].* 2022 [citado em 2023 Abril 20]; 11(1):1-15. Disponível em: <http://periodicos.saolucas.edu.br/index.php/resc/article/view/1825>
29. Marcuzzo SW, Souza CR. Percepção dos acadêmicos de Medicina sobre a Fonoaudiologia [monografia]. Florianópolis: Universidade Federal de Santa Catarina; 2019 [citado em 2023 Abril 20]. Disponível em: <https://repositorio.ufsc.br/handle/123456789/202286>
30. Arouche JDS, Arouche JS. Estrutura e função: inter-relação fonoaudiológica e odontológica na reabilitação do sistema estomatognático. *Rev Pub Saúde.* 2020;3:1-5. <http://dx.doi.org/10.31533/pubsau3.a031>.

Appendix 1. Form on the profile of specialists in orofacial motricity in Brazil

Identification (email):

Identification (CRFa):

Identification (full name):

The research questionnaire aims to investigate the profile of the Brazilian speech therapist specialist in Orofacial Motricity (OM), in order to recognize the varied professional activities in the area.

1 – Do you have specialization in Orofacial Motricity (OM)? (mark only one option).
<input type="radio"/> Yes, and I also hold a MO specialist title <input type="radio"/> Yes, but I don't have a MO specialist title <input type="radio"/> No, but I have a specialist title granted by the CFFa (Master and/or Doctorate in MO) <input type="radio"/> No, and not even a specialist title in OM, but I have completed a Master's and Doctorate in the area of OM <input type="radio"/> No
2 – What's your gender? (mark only one option).
<input type="radio"/> Male <input type="radio"/> Female <input type="radio"/> Non-binary <input type="radio"/> I prefer not to declare Others:
3 – Professional age group. (mark only one option).
<input type="radio"/> 20-30 years <input type="radio"/> 31-40 years <input type="radio"/> 41-50 years <input type="radio"/> More than 50 years
4 – How long (in years) have you been an OM specialist? (mark only one option).
<input type="radio"/> Less than 5 <input type="radio"/> Between 5-10 <input type="radio"/> Between 11-15 <input type="radio"/> Between 16-20 <input type="radio"/> Between 21-25 <input type="radio"/> Between 26-30 <input type="radio"/> More than 30
5 – What is your title? Tick all headings that apply to your profile.
<input type="checkbox"/> Graduate <input type="checkbox"/> Specialist <input type="checkbox"/> Teacher <input type="checkbox"/> Doctor <input type="checkbox"/> Post doctoral
6 – In which region of Brazil do you work? (mark only one option).
<input type="radio"/> North <input type="radio"/> Northeast <input type="radio"/> Center-west <input type="radio"/> Southeast <input type="radio"/> South
7 – Have you worked in the profession in the last 3 years? (mark only one option).
<input type="radio"/> Yes <input type="radio"/> No
7.1 – Where did you work in the last 3 years? tick all possible.
<input type="checkbox"/> Clinic <input type="checkbox"/> Specialist clinic/outpatient clinic <input type="checkbox"/> General clinic <input type="checkbox"/> Management (Boards, Committees, among others) <input type="checkbox"/> Hospital <input type="checkbox"/> Educational institution <input type="checkbox"/> Maternity
7.2 – In which institution do you receive your services (in the last 3 years)? (mark only one option).
<input type="radio"/> Private <input type="radio"/> Public <input type="radio"/> Mixed

8 – Taking into account your consultations (in the last 3 years), which age group do you work with? (check all that apply).

- Newborn (0 to 28 days of life)
- Infant (1 to 24 months of life)
- Preschool (2 years to 5 years and 11 months)
- Child (6 to 14 years old) Adolescent (15 to 19 years old)
- Adolescent (15 to 19 years old)
- Adults (20 to 59 years)
- Elderly (from 60 years old)

9 – Do you use any OM evaluation protocol in your clinical routine? (mark only one option).

- Yes
- No

9.1 - Is the protocol you use published in any scientific journal? (mark only one option).

- Yes
- No

10 – Do you work in a multi/interdisciplinary way? Indicate with which professions. (check all that apply).

- Aesthetics
- Physiotherapy
- Medicine
- Nutrition
- Dentistry
- Psychology
- Occupational therapy
- Others:

11 – What types of lightweight technology do you use? Consider the last 3 years (check all that apply).

- Reception and assistance in MO
- Educational actions in MO
- Service management
- Organization of the Health Care Network
- Others:

12 - What types of light-hard technology do you use? Consider the last 3 years. (check all that apply).

- Assessment and therapy
- Scientific evidence in the treatment of MO
- Validation processes of evaluation protocols in OM
- Others:

13 - What types of hard technology do you use? Consider the last 3 years. (check all that apply).

- Electromyographic biofeedback
- Photobiomodulation
- Thermography
- Ultrasound
- Others:

14 - Which areas of domains in MO do you work with? Consider the last 3 years. (check all that apply).

- Learned myofunctional behavior – habit.
- Craniofacial anomalies (syndromes, cleft lip and palate, and other malformations).
- Dento-occlusal alterations (maxillomandibular disproportion, temporomandibular joint dysfunction and other alterations).
- Changes in the soft tissue structures that make up the stomatognathic system (such as the tongue, lingual frenulum, among others).
- Respiratory diseases (such as allergic rhinitis, obstructive sleep apnea, among others).
- Sequelae involving orofacial injuries resulting from trauma, burns, perforations.
- Treatment of cancer of the oral cavity.
- Infectious diseases with changes in the mucosa of the upper airways and digestive tract (tuberculosis, leishmaniasis, AIDS, among others)
- Diseases of the central or peripheral nervous system (such as muscular dystrophies, facial palsy, neuromotor disorders, among others)
- Treatment of post-COVID-19 sequelae

Source: Authors