

# Brazilian Sign Language teaching in Dentistry undergraduate courses at Southeastern Brazil: a cross-sectional study

Yuri de Lima Medeiros\*; Danielle Fernandes Lopes\*; Luan Viana Faria\*, Mônica Regina Pereira Senra Soares\*\*; Carla Couto de Paula Silvério\*\*\*

- \* Undergraduate student, School of Dentistry, Federal University of Juiz de Fora
- \*\* Doctor, Adjunct Professor, Department of Dentistry, Federal University of Juiz de Fora – Advanced campus of Governador Valadares
- \*\*\* PhD student, Postgraduate Program in Linguistics, Vice-Coordinator of Literature/BSL Course, Federal University of Juiz de Fora

Received August 23, 2019. Approved April 30, 2020.

## ABSTRACT

Dental care for deaf patients is considered a challenge. The lack of students' contact with the Brazilian Sign Language (BSL) during graduation can be an aggravating factor of the oral health condition of this population. Thus, the objective of the study was to offer an overview of the inclusion of the BSL subject in the pedagogical projects of undergraduate courses of Dentistry in the southeastern region of Brazil. It consists of an exploratory, quantitative and cross-sectional study. The curricular matrices of the courses were analyzed, searching for information regarding the following variables: administrative category of the Higher Education Institution (HEI), offer and nature of the curricular component, and workload. The study population consisted of 176 HEIs, of which 32 did not provide their respective curricular matrices. It was observed that 125 courses (86.8%) were from private HEIs and 19 (13.19%) from public ones, with 83 (57.63%) offering the BSL curriculum component in its matrix, with 71 (91, 02%) of the 78 HEIs that provided the information offer the content as optional or elective. The workload varied from 30 to 80 hours, with an average of 49.7 hours. It is concluded that the implementation of BSL is still discreet in public universities and more concentrated in private HEIs, being, and in its majority, non-mandatory.

**Descriptors:** Education, Dental. Sign Language. Curriculum.

## 1 INTRODUCTION

According to the last census conducted by the Brazilian Institute of Geography and Statistics (IBGE), in 2010, 9.8 million Brazilians have some type of deafness, representing 5.2% of the Brazilian population. Of this total, 2.6 million are deaf, and 7.2 million have great difficulty in hearing<sup>1</sup>. It is worth saying that people with deafness can be divided into two large groups: (i) those with hearing impairment, who have some hearing loss at different levels, but are not comfortable using their country's sign language, therefore using the oral language; and (ii) that of deaf people who use their country's sign language as the main means of communication<sup>2</sup>.

For the care of deaf patients, in 2005, Decree n° 5.626/05<sup>3</sup> regulated Law n° 10.436/02<sup>4</sup> proposed a curricular adaptation based on the new inclusive policies in universities. This decree recognizes the Brazilian Sign Language (BSL) as the official language of the deaf community and places it as a mandatory subject in general degrees and in Speech Therapy courses. This legislation was undoubtedly a major political achievement for the deaf community.

In parallel, the National Curricular Guidelines (NCG) for the Dentistry course, reformulated and approved by the National Education Council in 2018<sup>5</sup>, adopted as reference, among others, Health Education and New Information and Communication Technologies in Dentistry, including the official languages of the Brazilian territory (Portuguese and BSL) as curricular components. However, the document does not specify aspects related to the workload and program of the BSL subject. However, it emphasizes that the graduate of Dentistry must be aware of the dignity of the human person and their individual needs. Among the skills, the professional should be able to mobilize resources to successfully solve the problems of professional practice in different

contexts; being the subject of his own learning with a view to his integral and adequate training, articulating the act of teaching, research and extension in favor of the preservation of national and regional cultures and practices, respecting the pluralism of conceptions and ethnic-cultural diversity.

It is known that the BSL discipline in the training of dentistry students can benefit communication with deaf patients who use sign language in a different way<sup>6</sup>. There is a demand for dental care for deaf patients, and the communication barrier is a major challenge. Associated with this, is the lack of qualified professionals, the difficulty of accessing health services and the negative conception of dental care<sup>7</sup>. Consequently, the oral health condition of these patients is aggravated, presenting, for example, a higher prevalence of dental cavities and poor oral hygiene, when compared to hearing patients<sup>7-9</sup>.

In view of what was shown before, this study aims to provide an overview of the inclusion of the BSL discipline in the pedagogical projects of undergraduate courses of Dentistry in the Southeastern Region of the country, which presents the highest concentration of Dentistry courses in Brazil<sup>10</sup>.

## 2 METHODOLOGY

This research consists of an exploratory, quantitative, and cross-sectional study. The courses were identified in the official database of information related to Higher Education Institutions (HEI), the National Register of Courses and Higher Education Institutions (e-MEC Register)<sup>11</sup>, regulated by Normative Ordinance n° 21 of December 21, 2017<sup>12</sup>, which can be accessed at the electronic address of the National Institute of Educational Studies and Research Anísio Teixeira (INEP).

The study population consisted of all

Dentistry courses in operation in the Southeast Region (n=176) in 2019, distributed as follows: Espírito Santo (ES, n=12), Minas Gerais (MG, n=61), Rio de Janeiro (RJ, n=28) and São Paulo (SP, n=75). Those who did not have an official website and did not provide virtual media were excluded. The research included all those which made their curriculum completely available.

To confirm the existence of the BSL discipline, a research was performed on all institutional websites, complemented, when necessary, by contact with the coordinators. A period of two months was made available for e-mails to be answered. The data collection period was from February to June 2019.

The following information about the BSL discipline was collected: (i) IES administrative category (public or private), (ii) insertion and offer of the discipline, (iii) nature of the curricular component (mandatory or non-mandatory) and (iv) total workload.

The data were organized and tabulated using the *GraphPad Prism 8.1.2 - Realese notes program* (La Jolla, CA, USA) being analyzed by the use of descriptive statistics.

### 3 RESULTS

Of the 176 courses, considering the hubs of the same institution, 32 did not provide the curriculum matrix, so that the final sample was composed of 144 courses (81.8%), 10 (6.94%) from the state of ES, 51 (35.41%) in MG, 21 (14.58%) in RJ and 62 (43.05%) in SP.

It was observed that, regarding the administrative category, 125 courses (86.8%) were from private HEIs and 19 courses (13.19%) were from public HEIs. Among all the HEIs that offer the BSL courses, 76 (91.56%) are private and 7 (8.43%) are public. Of the total of 144 HEIs, 83 (57.63%) offer the BSL discipline in their curriculum (table 1).

Regarding the nature of the curricular component, 5 (6.02%) HEIs did not provide the information. Among the 78 HEIs that did it, 71 (91.02%) offer the content in an optional or elective way, while only 7 (8.97%) present it as mandatory (graph 1). The workload was made available by 61 (73.49%) HEIs, ranging from 30 to 80 hours, presenting an average of 49.54 hours. Among the states, ES had the highest average, while MG had the lowest (graph 2).

Table 1. BSL discipline offer in public and private HEI Dentistry courses in the states of Southeast Brazil (n=144)

BSL in curriculum component	States			
	ES	MG	RJ	SP
Public institutions (n=19/13.2%)				
Yes (n=7/36.8%)	1	4	2	0
No (n=12/63.1%)	0	3	2	7
Private institutions (n=125/86.8%)				
Yes (n=76/60.8%)	7	26	10	33
No (n=49/39.2%)	2	18	7	22

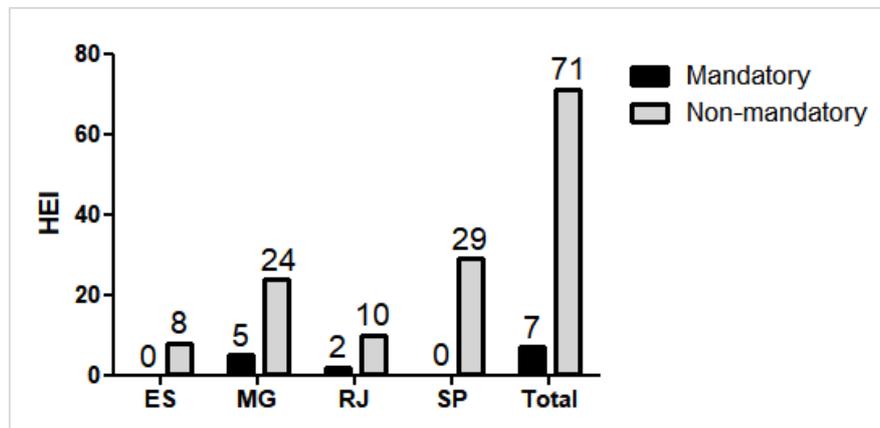
### 4 DISCUSSION

According to the results obtained, there was a greater number of private HEIs

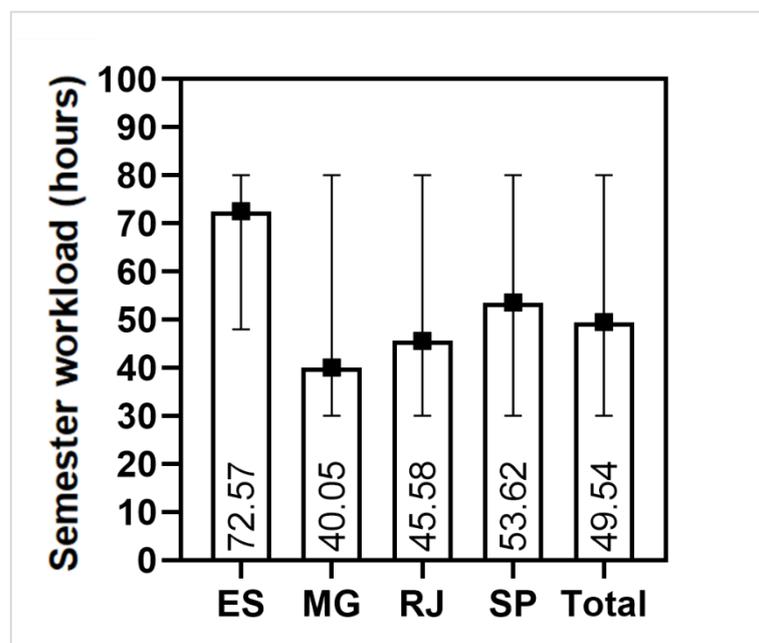
compared to public ones in the Southeast region of Brazil. Of the public institutions (n=19), only 36.84% present the BSL

discipline in their curriculum program, whereas in SP, the largest state in terms of

population in Brazil<sup>13</sup>, none offer it. There is an inversion of this data in private courses



Graph 1. Nature of the curricular component of BSL in Dentistry courses in the states of Southeast Brazil



Graph 2. Average workload of the BSL discipline in the curriculum of Dentistry courses in the states of Southeast Brazil

(60.8%), which is in accordance with the findings of Oliveira et al.<sup>14</sup>, which bring information that private institutions have sought to comply with the legal determination and the recommendations of the Ministry of Education. The NCG<sup>5</sup> for the

Dentistry course bring this content as a mandatory curricular component, regardless of the character it may assume, with a term of up to two years, from the date of publication of the Resolution, to apply this determination to the

new open classes. For Martins<sup>6</sup>, care must be taken not to make BSL teaching superficial, as it presents itself as the only semiannual subject. It is emphasized that a bilingual education goes beyond the limits of the classrooms, requiring greater contact with the culture in question.

The offer of this discipline in Dentistry courses is already translated into a great step towards the humanization and integrality of assistance, aiming to guarantee the student the knowledge of the communication process of individuals with deafness, in addition to promoting the opportunity for undergraduate students to improve, through appropriate techniques, this interpersonal communication in order to meet their health demands.

Regarding the nature of the curricular component, more than 90% of HEIs offer BSL as an elective/optional subject and only a small part offer it as a mandatory subject. According to decree 5.626/05<sup>3</sup>, only courses in teaching and Speech Therapy should offer BSL as a mandatory component of the curriculum, while other courses, such as Dentistry, may offer it as elective or optional. This shows consistency in the organization of curricula. However, it is understood that the need for knowledge of BSL and the deaf culture is important to offer an accessible and humanized service to the deaf public<sup>14,15</sup>.

The main reason that distances or puts deaf people in negative experiences in health care is the communicative barrier, justified by the lack of training and awareness by professionals<sup>15-17</sup>. Regarding the dental environment, this problem becomes even more visible, generating fear and anxiety behaviors prior to the procedures<sup>18</sup>. Thus, overcoming this barrier, with the offering of the discipline of BSL in a mandatory form in the undergraduate curriculum, favors an approach to the theme, sensitizing the student to review the care practices in comprehensive and humanized

care for the patient with deafness.

Pereira et al.<sup>19</sup> conducted a survey using a structured questionnaire for deaf patients and 70% considered that dental surgeons are not prepared to assist them, with 56.6% of the sample being dissatisfied with their previous dental experiences. The found data corroborate other researches<sup>20-22</sup>, which demonstrated the dissatisfaction of deaf patients regarding the services provided, especially with concern to communication difficulties.

In the study by Alshehri et al.<sup>20</sup> it was found that the communication method most used by the deaf is sign language, followed by its combination with lip reading. However, the majority of the sample (72.1%) reported that they were never asked by the dental team about what form of communication they used. Although sign language is the most used form of communication by these patients, most dentists report communicating mainly through gestures and lip reading, since they are not able to communicate in BSL<sup>19,23</sup>, besides generally requesting the presence of an interpreter or family member<sup>21,23</sup>.

Studies indicate that dentistry students and dental surgeons consider this communication important and have an interest in studying BSL, but they believe that they are unprepared as they have not taken preparatory courses for the care of these patients<sup>23,24</sup>. When asked about how to improve this situation, they believe that the offer of BSL courses is capable of adding quality to the service of this public<sup>23-25</sup>. This initial qualification can be achieved in academic training both by offering the BSL discipline as a curricular component for all health courses, and through extension projects, scientific initiation, among other projects that address the issue of accessibility in the care of the deaf. Besides that, this qualification can also be achieved after graduation, through continuing education

courses in the area<sup>19,26</sup>.

The inclusion of the BSL discipline in HEIs, combined with extracurricular projects, also contributes to the creation and development of new specific dental terms in BSL and, consequently, to a greater didactic-scientific improvement in this area, with the purpose of enhancing the teaching and training of dentists. Based on this, it will be possible to foment and expand the accessibility process of serving the deaf<sup>26,27</sup>.

The need to include this discipline in curricular matrices was also discussed in other areas of health. Guarinello et al.<sup>28</sup> verified the inclusion of the BSL discipline in 7 undergraduate courses in Speech Therapy, which were mandatory in all HEIs. This divergence can be explained by Decree nº 5.626/05<sup>3</sup>, which determined the mandatory offer of the discipline, with a deadline of until 2015 for its regularization. The analyzed workload had an average of 60.8 hours and, although it is an average of 11 hours greater than that observed in the present study, 158 (65.8%) students considered it insufficient.

Even though the data are expressive, it is suggested that they should be investigated also by using alternative forms of data collection, such as the use of questionnaires sent directly to the coordinators of undergraduate Dentistry courses in Brazilian HEIs, improving the understanding of this teaching framework and checking other variables, such as the period in which it is taught, contents covered and the training of the responsible professor. Moreover, it is important to highlight as a limitation of this study, as well as others of similar methodologies<sup>29</sup>, that in some institutions this curricular component can be taught in other disciplines, such as Dentistry for Patients with Special Needs.

## 5 CONCLUSION

The present study made it possible to draw a panorama of the insertion of the BSL discipline in the curricular matrices of Dentistry courses in the Southeast region of Brazil, showing that its implementation is still discreet in public HEIs and more present in private ones. In both cases, the offer is mostly non-mandatory.

## RESUMO

### **Ensino da Língua Brasileira de Sinais nos cursos de graduação em Odontologia do Sudeste brasileiro: um estudo transversal**

O atendimento odontológico de pacientes surdos é considerado um desafio. A falta de contato dos estudantes com a Língua Brasileira de Sinais (Libras) durante a graduação pode ser um fator agravante da condição de saúde bucal desta população. Assim, o objetivo do estudo foi oferecer um panorama sobre a inclusão da disciplina de Libras nos projetos pedagógicos dos cursos de graduação em Odontologia da Região Sudeste do Brasil. Consiste em um estudo exploratório, quantitativo e transversal. As matrizes curriculares dos cursos foram analisadas, buscando-se as informações referentes às variáveis: categoria administrativa da Instituição de Ensino Superior (IES), oferta e natureza do componente curricular e carga horária. A população do estudo foi constituída por 176 IES, das quais 32 não disponibilizaram suas respectivas matrizes curriculares. Observou-se que 125 cursos (86,8%) eram de IES particulares e 19 (13,19%) de públicas, com 83 (57,63%) oferecendo o componente curricular Libras em sua matriz, sendo que 71 (91,02%) das 78 IES que disponibilizaram a informação ofertam o conteúdo como opcional ou eletivo. A carga horária variou de 30 a 80 horas, com média de 49,7h. Conclui-se que a implementação da Libras ainda é discreta nas universidades públicas e mais concentrada nas IES privadas, sendo, em sua maioria, não-obrigatória.

**Descritores:** Educação em Odontologia. Línguas de Sinais. Currículo.

## REFERENCES

1. IBGE. Censo Demográfico 2010: características gerais da população, religião e pessoas com deficiência. Rio de Janeiro, 2010.
2. Skliar C. Uma Perspectiva Sócio-Histórica sobre a Psicologia e a Educação dos Surdos. In: Skliar C. Educação e Exclusão. Porto Alegre: Mediação, 1997. p. 105-153
3. Brasil. Decreto nº 5.626, de 22 de dezembro de 2005. Brasília: DF; 2005 [Cited: July 7, 2019]. Available at: [http://www.planalto.gov.br/ccivil\\_03/Ato2004-2006/2005/Decreto/D5626.htm](http://www.planalto.gov.br/ccivil_03/Ato2004-2006/2005/Decreto/D5626.htm).
4. Brasil. Lei no 10.436, de 24 de abril de 2002. Brasília: DF; 2002 [Cited: July 28, 2019]. Available at: [http://www.planalto.gov.br/ccivil\\_03/leis/2002/110436.htm](http://www.planalto.gov.br/ccivil_03/leis/2002/110436.htm).
5. Brasil, Ministério da Educação. Conselho Nacional de Educação. Câmara de Educação Superior. Diretrizes Curriculares Nacionais do Curso de Graduação em Odontologia. Diário Oficial da União. Brasília: DF; 2018 [Cited: July 16, 2019]. Available at: <http://portal.mec.gov.br/docman/abril-2019-pdf/111231-pces803-18/file>.
6. Martins VRO. Análise das vantagens e desvantagens da Libras como disciplina curricular no ensino Superior. Rev Cad CEOM. 2008;21(28):191-206.
7. Al-Qahtani Z, Wyne AH. Caries experience and oral hygiene status of blind, deaf and mentally retarded female children in Riyadh, Saudi Arabia. Odontostomatol Trop. 2004;27(105):37-40.
8. Doichinova L, Peneva M. Prevalence of dental caries in hearing impaired children than 5 to 12 years old in Sofia. IJSC. 2015;4(1):1088-91.
9. Moller CC, Ibaldo LTS, Tovo MF. Avaliação das condições de saúde bucal de escolares deficientes auditivos no município de Porto Alegre, RS, Brasil. Pesqui Bras Odontopediatria Clín Integr. 2010;10(2):195-200.
10. Martin ASS, Chisini LA, Martelli S, Sartori LRM, Ramos EC, Demarco FF. Distribuição dos cursos de Odontologia e de cirurgiões-dentistas no Brasil: uma visão do mercado de trabalho. Rev ABENO. 2018;18(1):63-73.
11. Brasil. Ministério da Educação. Cadastro e-MEC de Instituições e Cursos de Educação Superior. Brasília: DF [Cited: July 8, 2019]. Available at: <http://emec.mec.gov.br/>.
12. Brasil. Ministério da Educação. Portaria Normativa nº 21, de 21 de dezembro de 2017. Diário Oficial da União. Brasília: DF [Cited: July 8, 2019]. Available at: [http://www.in.gov.br/materia/-/asset\\_publisher/Kujrw0TZC2Mb/content/id/1284644/do1-2017-12-22-portaria-n-21-de-21-de-dezembro-de-2017-1284640-1284640](http://www.in.gov.br/materia/-/asset_publisher/Kujrw0TZC2Mb/content/id/1284644/do1-2017-12-22-portaria-n-21-de-21-de-dezembro-de-2017-1284640-1284640).
13. IBGE. Diretoria de Pesquisas - DPE - Coordenação de População e Indicadores Sociais - COPIS. 2018.
14. Oliveira YCA, Costa GMC, Coura AS, Cartaxo RO, França ISX. A língua brasileira de sinais na formação dos profissionais de enfermagem, fisioterapia e odontologia no estado da Paraíba, Brasil. Interface. 2012;16(43):995-1008.
15. Alsmark SSB, García JN, Martínez MRM, López NEG. How to improve communication with deaf children in the dental clinic. Med Oral Patol Oral y Cir Bucal. 2007;12(8):576-81.
16. Novaes MSP. Atenção odontológica integral a deficientes auditivos: uma proposta. [Tese]. São Paulo: Faculdade de Odontologia da Universidade de São Paulo; 1997.
17. Chaveiro N, Porto CC, Barbosa MA. Relação do paciente surdo com o médico. Rev Bras Otorrinolaringol. 2009;

- 75(1):147-50.
18. Champion J, Holt R. Paediatric dentistry: Dental care for children and young people who have a hearing impairment. *Br Dent J*. 2000;189(3):155-9.
  19. Pereira RM, Monteiro LPA, Monteiro ACC, Costa ICC. Percepção das pessoas surdas sobre a comunicação no atendimento odontológico. *Rev Ciênc Plur*. 2017;3(2):53-72.
  20. Alshehri AA, Togoo RA, Ain TS. Dental treatment experiences of patients with hearing impairment in southern Saudi Arabia: a questionnaire based study. *J Clin Diagn Res*. 2018;12(3):ZC37-ZC41.
  21. Aragão JS, Magalhães IMO, Coura AS, Silva AFR, Cruz GKP, França ISX. Acesso e comunicação de adultos surdos: uma voz silenciada nos serviços de saúde. *Rev Pesqui Cuid Fundam*. 2014;6(1):1-7.
  22. Patcharaphol S. Dental cares for patients who have a hearing impairment. *Int J Clin Prev Dent*. 2014;10(4):215-8
  23. Silva MC, Rodrigues W. Acessibilidade no tratamento odontológico do paciente surdo. *Rev CROMG*. 2018;16(1):12-8.
  24. Ramos TS, Almeida MAPT. A Importância do ensino de Libras: Relevância para Profissionais de Saúde. *Id On Line*. 2017;10(33):116-26.
  25. 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 Saúde Pública*. 2009;25(4):889-97.
  26. Souza MT, Porrozzini R. Ensino de Libras para os profissionais de saúde: uma necessidade premente. *Rev Práxis*. 2009;1(2):43-6.
  27. Silva LS, Leal JGG, Junior GS, Silva MAD, Pereira AC. Sinais específicos em Libras para o ensino odontológico. *Rev ABENO*. 2018;18(2):135-43.
  28. Guarinello AC, Berberian AP, Eyng DB, Festa PSV, Marques JM, Bortolozzi KB. A disciplina de Libras no contexto de formação acadêmica em fonoaudiologia. *Rev CEFAC*. 2013;15(2):334-40.
  29. Faria LV, Oliveira GA, Grázia MEP, Medeiros YL, Lopes DF, Leite ICG. O ensino de implantodontia nas graduações brasileiras de Odontologia: um estudo transversal. *REAS*. 2020; 12(4):e2672.

**Correspondence to:**

Yuri de Lima Medeiros  
e-mail: [yuri11medeiros@gmail.com](mailto:yuri11medeiros@gmail.com)  
Rua Adolpho Kirchmaier, 42 - São Pedro  
36036-630 Juiz de Fora/MG, Brazil