Original Article

https://doi.org/10.1590/2317-6431-2020-2361

Audiology Communication Research
ISSN 2317-6431

Fragility in the training of health professionals regarding the Brazilian Sign Language: a reflection on the health care of the deaf

Fragilidade na formação dos profissionais de saúde quanto à Língua Brasileira de Sinais: reflexo na atenção à saúde dos surdos

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ABSTRACT

Purpose: To identify how Brazilian Sign Language (Libras) training is being conducted in undergraduate health care courses at Higher Education Institutions. **Methods:** This is a descriptive and cross-sectional study, developed using secondary data taken from the Ministry of Education electronic database. The curriculum and pedagogical design of all undergraduate health care courses at Brazilian Higher Education Institutions (HEIs) were analyzed, aiming to identify and characterize the Libras discipline. **Results**: 5317 courses were found and, from these, 2293 (43.1%) offered Libras, 16.7% as mandatory and the majority (83.3%) as optional. Regarding the period offered, there was no pattern, ranging from the first to the tenth. Regarding the workload for the discipline, among the 2077 courses that provided this information, 11.1% offered the discipline with a workload of up to 20 hours, 49.4% with a workload between 21 and 40 hours, 29.9% between 41 and 60 hours, and 9.1% between 61 and 80 hours. Only 0.5% of the courses devoted more than 80 hours to teaching Libras. On average, undergraduate courses in public HEIs (N = 217) devoted 53.1 hours to teaching Libras, while private HEI courses (N = 1860) dedicated 45.8 hours. **Conclusion**: There is evidence of weakness in training programs for health professionals regarding teaching Libras, which directly reflects in comprehensive care for the deaf.

Keywords: deafness; health care; health education; sign language; health personnel

RESUMO

Objetivos: Identificar como é a formação de profissionais da saúde quanto à Língua Brasileira de Sinais (Libras). **Métodos:** Trata-se de estudo descritivo e transversal, desenvolvido com dados secundários, coletados no banco de dados eletrônico do Ministério da Educação. Foram analisados a grade curricular e o projeto pedagógico de todos os cursos de graduação na área da saúde em Instituições de Ensino Superior (IES) brasileiras, procurando-se identificar e caracterizar a disciplina de Libras. **Resultados**: Foram localizados 5317 cursos e, destes, 2293 (43,1%) ofereciam disciplina de Libras, sendo 16,7% como disciplina obrigatória e a maioria (83,3%) como optativa. Em relação ao período ofertado, não houve um padrão, variando desde o primeiro até o décimo. Quanto à carga horária destinada à disciplina, dentre os 2077 cursos que disponibilizavam essa informação, 11,1% ofertavam a disciplina com carga horária de até 20 horas, 49,4% com carga horária entre 21 e 40 horas, 29,9% entre 41 e 60 horas, 9,1% entre 61 e 80 horas. Apenas 0,5% dos cursos destinavam mais que 80 horas para o ensino de Libras. Em média, os cursos de graduação em IES públicas (N=217) dedicavam 53,1 horas ao ensino de Libras, enquanto os cursos de IES privadas (N=1860) dedicavam 45,8 horas. **Conclusão:** Há evidências de fragilidade na formação dos profissionais de saúde quanto ao ensino da Libras, o que reflete diretamente no atendimento integral dos surdos.

Palavras-chave: surdez; atenção à saúde; educação em saúde; línguas de sinais; pessoal de saúde

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Conflict of interests: No.
Authors' contribution: TMN participated in the conception, design, collection, analysis and interpretation of data, writing of the article and critical review; DGM participated in the conception, analysis and interpretation of data, writing of the article and critical review; DNE participated in the conception, collection, analysis and interpretation of data, writing of the article and critical review; TVS participated in the design, collection and data analysis; MGA participated in the conception, collection and data analysis; JC participated in the conception, preliminary and final writing of the article; ATRM participated in the preliminary writing and final review of the article; OA participated in the final writing of the manuscript and translation; ASS participated in the data analysis and interpretation and writing of the article; RPM participated in the data collection and writing of the article; MVVN participated in data collection, analysis and interpretation; LCS participated in the collection, analysis and data interpretation; AMFR participated in the collection, data analysis and interpretation; NC participated in the conception, preliminary and final writing of the article; CCP participated in the conception and final writing of the article.
Funding: None.
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Received: June 10, 2020; **Accepted:** September 25, 2020.

INTRODUCTION

Deafness is among the main issues of difference that affect the population. Deaf people are often treated as hearing impaired, however there are distinctions between them. In Brazil, deaf people are mostly those who speak the Brazilian Sign Language (Libras), while the hearing impaired are those who adopt the oral Portuguese language and make use of resources, such as hearing aids, cochlear implants or prostheses[1]. The 2010 Census showed that 5.1% of the Brazilian population is deaf and, globally, this population can exceed 360 million people[2].

Hearing loss may have different origins. Regarding prenatal deafness, the main cause is hereditary, emphasizing autosomal-recessive genetic deafness, followed by maternal rubella infection[3]. In addition, other prenatal infections by teratogenic agents, including toxoplasmosis, cytomegalovirus and herpes, can lead to deafness[4]. Among neonatal causes, measles and mumps are the most common, while among postnatal causes, meningitis occupies first place, considering the use of toxic substances and otitis[3].

Although deafness can be understood as a limitation, many deaf people understand it as a sociocultural and linguistic difference, not characterizing it as a disability but as a difference, considering their own history and culture. In this perspective, therefore, deafness is an identity mark, not a limitation or loss. Furthermore, it is important to note that terms such as "hearing impaired" and "deaf-mute" are considered stigmatizing and stir up a great deal of prejudice, which is why people with reduced hearing ability prefer to be recognized as deaf, because the word "handicapped" is understood as pejorative[2,5].

Barriers encountered by deaf people in health services

Deaf people often stop looking for health services due to the difficulty in communicating with health professionals, in addition to the perception of prejudice held by the health team and other users[6,7]. This distance between professionals and deaf people can directly affect these individuals´health status, impacting the prevention of injuries and health promotion[8].

Deaf Brazilians are users, in part, of the same sign language, which brings them together culturally. A document produced in 1993, by the National Federation for Education and Integration of the Deaf, highlights the struggle of the deaf movement to name the language used by the Brazilian deaf as the Brazilian Sign Language (Libras)[9]. During communication, when the interlocutor does not understand Libras, gestures are usually attempted[10]. Deaf people find a great barrier to establish dialogue with health professionals who, in most cases, are not Libras speakers and are not prepared to communicate with these patients[6,7]. In this context, since dialogue with the patient is the basis of comprehensive health care, the principle of integrality in the Unified Health System is compromised[11].

Practicing active listening, associated with the exercise of effective communication/information helps to improve the subjects' autonomy[12]. By listening, the health professional is qualified to better understand the individual's health needs[13]. It is through communication that health professionals can create bonds, identify health needs and make an individualized therapeutic plan. Strategies adopted by health professionals to communicate with deaf patients include miming, lip reading, gestures and writing. Despite using these tactics, communication with a deaf patient is often compromised[14].

Effective communication implies developing solid bonds, which is characterized as one of the elements of accessibility. In addition, promoting accessibility, in the context of health practices, should function as a multiplying factor of this awareness, which will expand the possibilities of building inclusive societies[15].

When looking for a health service, a deaf individual often takes a companion, usually a family member or friend, who acts as an interpreter during the appointment and can assume the role of the protagonist in the situation and decide on certain health behaviors instead of the deaf person him/herself. In addition, there are intimate matters in which deaf people do not feel comfortable dealing with when a companion is present and that could be directly reported to health professionals if the communication were effective. Another important aspect is that the lack of understanding in communication can make it difficult to perform physical examination procedures, causing additional embarrassment to the patient, as well as making it difficult to adhere to the prescribed therapy, due to the lack of understanding of explanations and guidelines[6,7,11].

Libras and higher education in Brazil

Libras is misunderstood as a non-graphical language, which uses mime or spelling. However, it is important to note that sign language has autonomy, a writing system, its own vocabulary and allows the expression of any word, as any other human language[16]. Libras was recognized as a language in Brazil through Law No. 10,436, of April 24, 2002[17], which, together with Decree No. 5,626, of December 22, 2005[18], legitimized this form of communication and held the public power responsible for ensuring communication with deaf citizens through Libras, in addition to supporting and spreading its use[19].

In higher education, in December 2005, when Decree No. 5,626 was signed, Libras started to be inserted as a mandatory subject for undergraduate courses in speech therapy, which is the most immersed course in the issues of language, communication and expression, and for degree courses. For the other higher education courses, the Libras discipline is offered as optional[16,20]. This decree represented the first step for Libras to be part of undergraduate health course syllabi.

This article aimed to identify how Brazilian Sign Language (Libras) training is being conducted in undergraduate health care courses at Higher Education Institutions and discuss options on how to train professionals to better attend their care needs of the Libras-speaking deaf population.

METHOD

This is a descriptive and cross-sectional study, developed using secondary data, collected from June 2018 to December 2019 from the Ministry of Education electronic database (e-MEC, https://emec.mec.gov.br/) and on the websites of each HEI. The curriculum and the pedagogical project of all undergraduate health care courses in Brazilian HEIs were analyzed, aiming to identify and characterize the Libras discipline.

First, health care courses were selected: Nursing, Physical therapy, Psychology, Pharmacy, Biomedicine, Nutrition, Dentistry, Medicine, Occupational Therapy and Speech Therapy. Then, the public and private HEIs that offered these respective undergraduate courses were selected. The last step was to access the website of each HEI and consult the pedagogical project and the curriculum for each course, in order to identify whether there was a specific discipline for teaching Libras on a mandatory or optional basis, the period in which it was offered and the workload assigned to it. Additionally, the average workload defined for teaching Libras in different courses was compared with the total workload for each course. The average workload of the Libras course offered by these courses was also compared with the workload recommended by the state school system in the state of São Paulo for contracting interlocutor teachers (translators and interpreters of Libras) in schools, which is at least 120 hours [21].

The collected data were shown in tables and graphs made using Microsoft Excel®. A descriptive analysis was carried out, presenting absolute and relative frequencies regarding mandatory, workload and periods in which the Libras discipline was offered.

RESULTS

A total of 5317 undergraduate healthcare courses were identified in Brazilian HEIs distributed throughout 26 Brazilian states and in the Federal District. Most courses (36%) were concentrated in the Southeast. From this total, the percentage of courses offered was: nursing (19.9%), physical therapy (15.3%), psychology (13.7%), pharmacy (13.1%), biomedicine (11.6%), nutrition (10.5%), dentistry (7.7%), medicine (5.3%), occupational therapy (1.7%) and speech therapy (1.2%).

From the 5317 identified courses, 2293 (43.1%) offered Libras, 16.7% were mandatory and the majority (83.3%) were optional (Appendix 1, Table A1).

As expected, it was observed that only the speech therapy course had 100% compulsory teaching of Libras. In the other courses, the frequency of the compulsory discipline was: 22% in psychology, 17.8% in nursing, 16% in medicine, 15.9% in biomedicine, 15.5% in physical therapy, 15.2% in pharmacy, 5% in dentistry and 2.9% in nutrition. All consulted occupational therapy courses offered the Libras discipline as an option. Figure 1 shows the distribution of the Libras discipline as mandatory or optional, in the 2293 courses analyzed.

From the 2293 courses that offered Libras, 983 (42.9%) provided information related to the semester in which the discipline was offered (Appendix 1, Table A2). In these courses, it was noted that the periods in which the Libras discipline was offered varied widely: 7.6% of the courses offered the discipline in the first period, 6.8% in the second period, 5.9% in the third period, 10.1% in the fourth period, 14.3% in the fifth period, 6.8% in the sixth period, 13% in the seventh period, 16.5% in the eighth period and some courses that lasted more than eight semesters, offered Libras in the ninth period (11%) or in the tenth period (8%). Figure 2 presents information regarding the different periods in which the Libras discipline was offered.

Regarding the workload for the Libras discipline, from the 2293 courses, 2077 (90.6%) provided this information. Among these, 11.1% offered the course with a workload of up to 20 hours, 49.4% with a workload between 21 and 40 hours, 29.9% between 41 and 60 hours, and 9.1% between 61 and 80 hours. Only 0.5% of undergraduate courses devoted more than 80 hours to teaching Libras. Figure 3 shows the distribution of the workload for teaching Libras across the different courses.

When analyzing the workload of the Libras discipline in undergraduate courses in public and private HEIs, it was found that the courses in public HEIs provided, on average, a workload of 53.1 hours, while the courses in private HEIs provided, on average, 45.8 hours. In public HEIs, when detailing the average workload of the Libras discipline in each course, the following was observed: nursing (61.7 hours), speech therapy (58.2 hours), medicine (56.8 hours), nutrition (55 hours), physical therapy (53.4), biomedicine (52.4 hours), psychology (52.1 hours), dentistry (50.2 hours), pharmacy (50 hours) and occupational therapy (41.4 hours). In private HEIs, the average workload

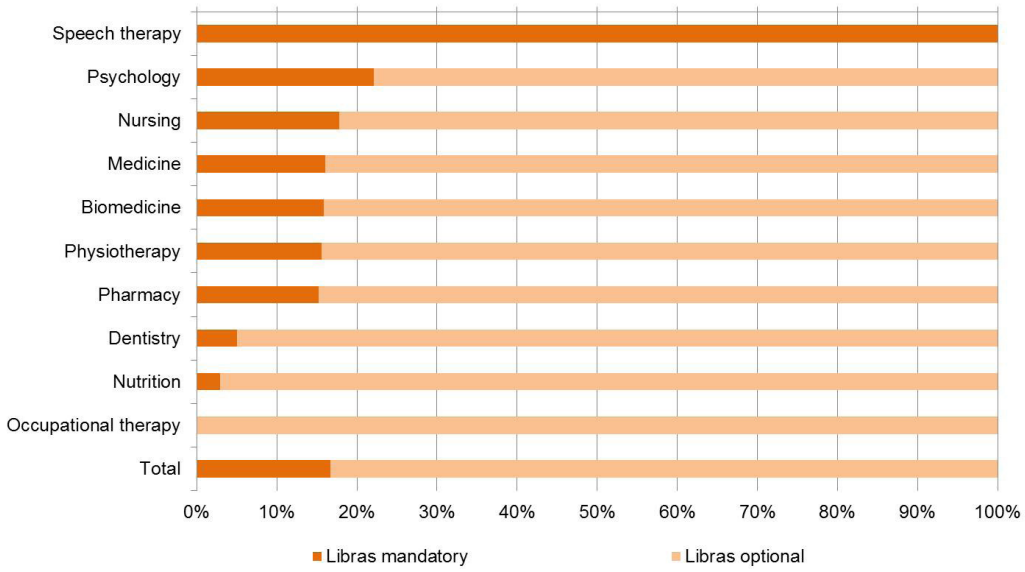

Figure 1. Distribution of Libras as mandatory or optional in Brazillian health courses (N=2293).

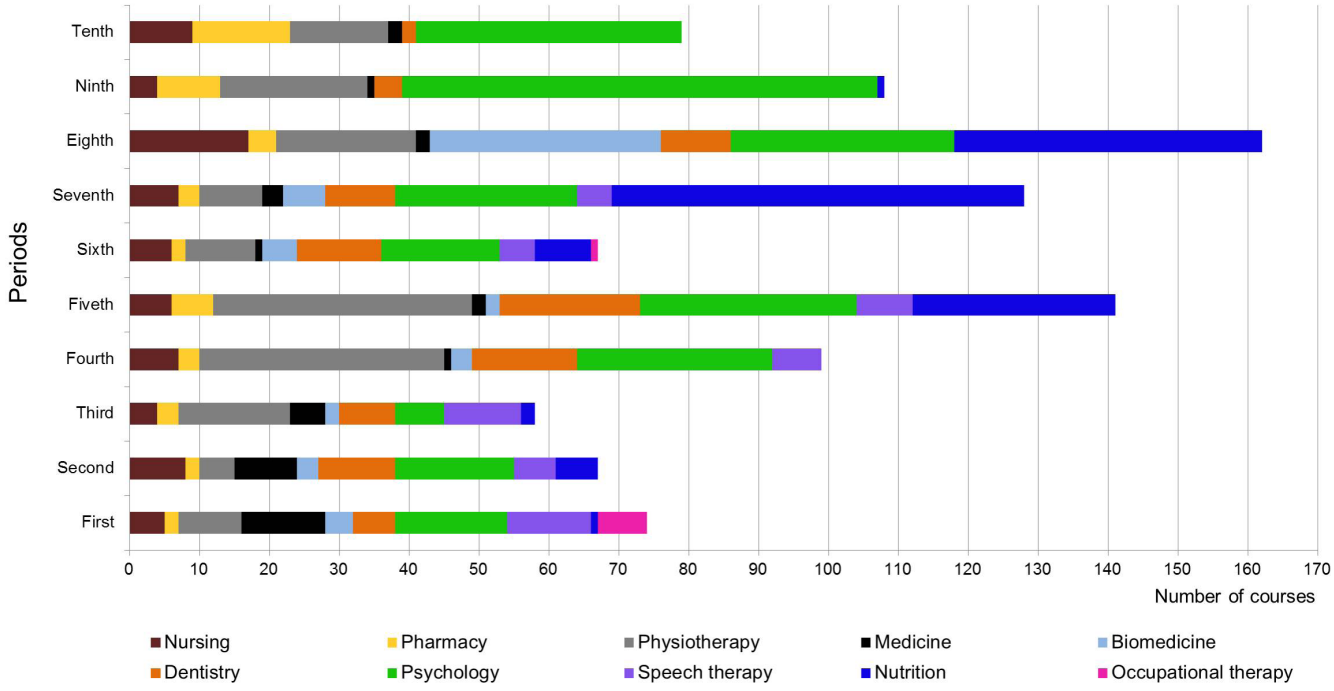

Figure 2. Different periods in which the Libras discipline was offered in health courses in Brazil (N=983).

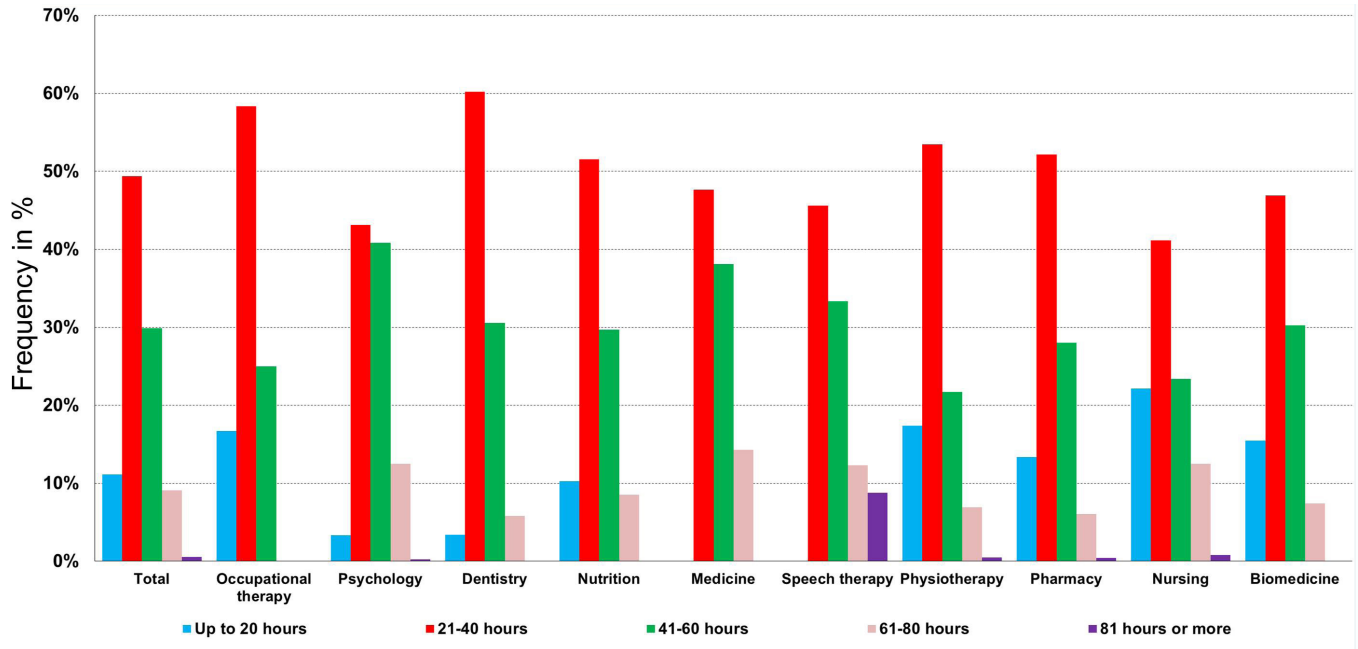

Figure 3. Hours dedicated to teaching Libras in different health courses in Brazil (N=2077).

of the Libras discipline was: speech therapy (62.5 hours), psychology (51.3 hours), medicine (45.9 hours), dentistry (44.7 hours), biomedicine (44.2 hours), nutrition (43.9 hours), pharmacy (43.4 hours), nursing (42.5 hours), physical therapy (42.4 hours) and occupational therapy (37.1 hours).

When comparing the average workload for the Libras discipline with the total workload for each course, the present study revealed that the Libras discipline did not represent more than 1.6% of the total hours. Figure 4 shows the average workload of the Libras course offered in the different courses and the representativeness of these hours, in percentage, within the total workload of each course, considering the courses in public HEIs (Figure 4A) and the courses in private HEIs (Figure 4B).

DISCUSSION

The results of this study revealed that there are weaknesses in training programs for health professionals in Brazil concerning teaching Libras. As shown in Figure 2 and Figure 3, there was,

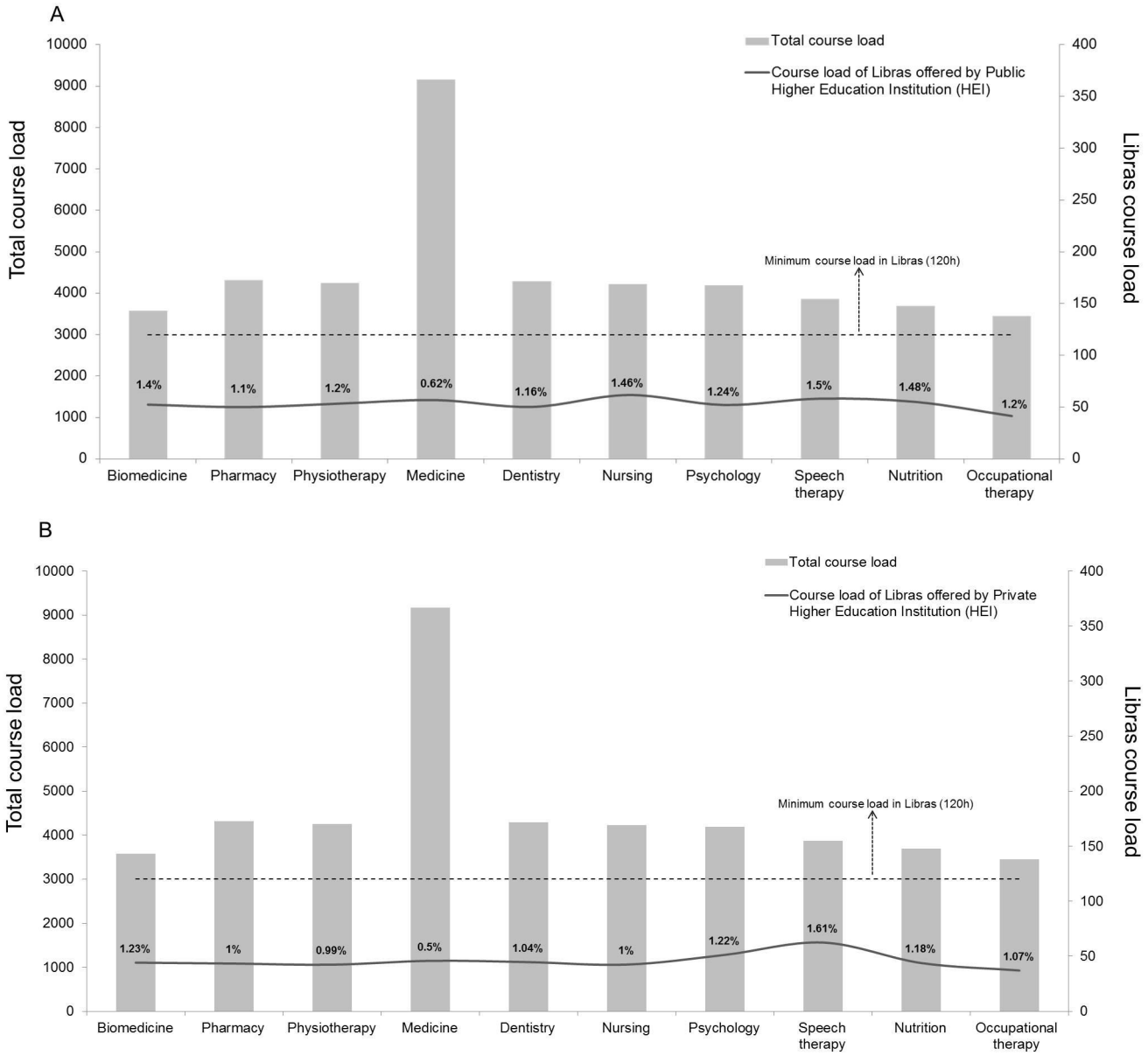

Figure 4. Average course load of the Libras course offered in different health courses in Brazil and presentation of these hours, in percentage, in relation to the total workload of each course.
Legend: A) Undergraduate courses in public HEIs (N = 217). B) Undergraduate courses in private HEIs (N = 1860).

respectively, heterogeneity regarding the period in which the Libras discipline was offered, in addition to a small workload for teaching the discipline. While courses such as speech therapy, occupational therapy and medicine predominantly chose to offer the discipline in the first periods, other courses, such as psychology, nutrition and pharmacy, offered it preferentially at the end of the course. It is reasonable to assume that communication disciplines are of great importance when administered at the beginning of the course, enabling communication skills and the professional health-patient relationship to be considered from the beginning of the undergraduate course and serve as a foundation for developing technical skills.

The results of this study agreed with a study that addressed the inclusion of Libras in undergraduate courses and that emphasized several problems related to learning Libras in higher education, such as a lack of guidelines, inefficient workload (less than 50 hours), teaching focused on the vocabulary and grammar of the language and the absence of an inclusive view in teaching[22].

In addition, as in undergraduate courses, health care courses have a low workload attributed to teaching Libras. When comparing the 53.1 hours offered, on average, by undergraduate courses at public HEIs with the 45.8 hours offered, on average, by private HEI courses, it appears that this number is close to the stipulated 50 hours for undergraduate courses. This low workload is more evident when compared to the minimum workload of 120 hours, required by the state school system in the state of São Paulo for Libras translators and interpreters[21]. The speech therapy course, offering the Libras discipline with an average of 60.3 hours, was the one that came closest to this minimum workload. The results presented in Figure 3 revealed

that only 0.5% of the courses that provided information on the workload allocated more than 80 hours to teaching Libras, making the Brazilian scenario of teaching this language a matter of concern.

Although 120 hours was considered the limit for learning Libras[21] (Figure 4), fluency in a language is much more complex and may require a significantly greater number of hours of study and contact with the language. To exemplify the difficulties in learning a second language, we analyzed the average time that native English speakers take to learn a second language. Proficiency levels can be classified from 0 to 5, in which 5 is equivalent to native proficiency. After eight weeks of training (240 hours), it is usually possible to reach level 1 in languages such as Portuguese, Spanish, Afrikaans, Danish, Norwegian, Swedish and Creole. At 16 weeks (480 hours), level 2 is often reached for these languages. To reach level 3, it takes approximately 24 weeks (720 hours). In the case of languages such as Russian and Greek, it takes, on average, 480 hours to reach level 1 and 1320 hours to reach level 3. Finally, for languages like Arabic, Japanese, Chinese and Korean, training takes longer, and it is estimated that 1320 hours are required to reach level 2[23].

There are courses in Libras that have modules lasting 100 hours, and which allow students to reach the basic level. To reach the advanced level, it takes more than 300 hours of dedication. However, as Libras is a spatial and visual language, spatiality, that is, the position of people/objects and where the signs come from, is highly important for fluency. The greater the use of the spatial association of points, morphosyntactic production and body referencing, the greater the fluency in Libras[24]. Thus, to achieve fluency in Libras, the time may vary from one individual to another, requiring, in addition to more hours of study, greater contact with the language and its elements. It is worth mentioning that the process for literacy in a new language demands, in addition to a longer time of theoretical and practical classes, dedication and student motivation.

When evaluating how health professionals communicate from 39 teams from Family Health Units in urban and rural areas, in the city of Vitória da Conquista, Bahia, it was found that more than 60% of professionals recognized the existence of Libras, despite not communicating with deaf patients through it. Almost 70% of these professionals had already attended a deaf person and none of them tried to take a course to learn Libras[25].

When assessing the perceptions of deaf individuals in relation to communication in primary health care, it can be observed that the lack of communication between deaf people and health professionals has a great impact on care. In a study carried out with 121 deaf adults, analyzing the impacts of the lack of communication between health professionals and deaf patients, from the user's point of view, it was observed that about 60% of dropouts in seeking health facilities were due to the absence of an interpreter during consultations, 66% of deaf patients felt insecure with the service provided by the doctor, 70% did not understand how to carry out the prescribed treatment and 82% did not understand the diagnosis [14]. These data reveal that the lack of communication between the health professional and the deaf patient can have a great impact on these individuals´health, and it is extremely important to invest in this communication.

One of the conceptions about language acquisition is that people have an innate capacity to learn a language, which is one of the most complex skills of a human being. There are two important reasons that lead people to learn a second language: learning based on technical or professional needs, featuring an instrumental stimulus and learning out of personal interest or curiosity, being an integrating stimulus, as motivation encourages people to become involved with culture and getting closer to individuals who use this language[26].

Individuals do not commonly perceive Libras as their own complex language, but as an extension of Portuguese and, for this reason, initially consider Libras to be easy to learn. The information on the number of hours needed for learning Libras is not clear and the speed of learning is very particular from individual to individual. In spite of this, a common aspect to almost all students of any language is that the transition from the proficiency level from beginner to intermediate is faster than from intermediate to advanced. In other words, an intermediate level of proficiency in Libras, which meets the needs of health professionals, could be reached more quickly[23].

Decree nº 5,626 [18], despite representing an advance in the question of inclusion of Libras learning in higher education, does not systematize how the teaching-learning process of that language should be. There is, therefore, no guidance on the objectives, contents, methodology and workload, as each institution is responsible for that organization. Neglect regarding the structuring of the Libras discipline among the undergraduate courses of the different HEIs can cause, for example, superficial teaching, which only complies with the law and does not meet students´ learning needs in the health field [27]. We point out, here, the urgency of extending the mandatory teaching of Libras to all courses in the health area, in addition to significantly increasing the workload for this teaching, since all health professionals, and not only speech-language pathologists attend deaf patients daily. It is also argued that the minimum workload of 120 hours should be implemented, so that a satisfactory level of knowledge in Libras is achieved, promoting an appropriate dialogue between health professionals and the deaf.

Most languages are oral auditory, while Libras is visual-gestural. This characteristic facilitates a teaching-learning approach widely used in the digital age, which is learning in a virtual environment. Distance learning can be an alternative to expand the hours needed for fluency in Libras, in addition to allowing dynamic learning, which can include specific signs used in the health area. To do this, technological resources with image quality, tools for exchanging messages between tutor and student, web conferences, pedagogical planning by coordinators and tutors are needed, and the Moodle® platform is an example of a tool that brings together such features, commonly used by HEIs. A face-to-face assessment is also essential, which allows the tutor to know the student's fluency in Libras[27].

During undergraduate studies, there are courses in the health area that use simulation stations, in which patients and students can do role plays. In this environment, simulations of caring for deaf patients could take place, requiring students to communicate strategies in Libras in a scenario close to the real one. It is important that the content of the courses and the digital material distributed addresses, in addition to the grammar of Libras, historical and cultural aspects of the deaf community, discussion about stigmas and prejudices that the deaf experience, as well as the understanding of sensory deprivation considering sound stimulus and the development of compensatory sensory skills, such as vision[28,29].

Teaching and updating in Libras should be part of the permanent education program for professionals who already work in the health care network. Training programs for these professionals can be encouraged through partnerships with HEIs. It is important to invest in training, in the production of texts and materials in Portuguese and in Libras[30], as well as financial incentives to collaborate in establishing these professionals in health units. Thus, health professionals will have contact with Libras and, gradually they will expand their vocabulary and spatialization, until they can communicate effectively with the deaf, which will facilitate the understanding of the health needs of this important part of the population. It is important to consider, however, that deafness is a heterogeneous condition and that training programs in Libras for health professionals will not exempt them from other care with oralized deaf people, who have their own specificities in relation to communication.

CONCLUSION

Weaknesses were found in training programs for health professionals concerning the Libras discipline, observed by the lack of standardization regarding the periods offered and the reduced workload. This weakness is an element that restricts communication between health professionals and deaf patients, impairing comprehensive care and contributing to the invisibility of the deaf population in health care.

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Appendix 1

Table A1. Distribution of Libras teaching in health care courses in Brazil and total number of health care courses in Brazil (N = 5317)

Courses	Mandatory Libras	Optional Libras	Total number of courses that reported (mandatory or optional Libras)	Total number of undergraduate health care courses
Nursing	51	235	286	1060
Pharmacy	43	240	283	696
Physical Therapy	63	342	405	812
Medicine	16	84	100	281
Biomedicine	31	164	195	619
Dentistry	11	210	221	407
Psychology	92	325	417	729
Speech therapy	66	0	66	66
Nutrition	9	298	307	557
Occupational Therapy	0	13	13	90
Total	**382**	**1911**	**2293**	**5317**

Table A2. Periods in which Libras is offered (mandatory or optional) in health care courses in Brazil (N = 983)

Courses	Períods																				Total
	1st		2nd		3rd		4th		5th		6th		7th		8th		9th		10th		
	MAN	OPT	MAN	OPT	MAN	OPT	MAN	OPT	MAN	OPT	MAN	OPT	MAN	OPT	MAN	OPT	MAN	OPT	MAN	OPT	
Nursing	5	-	7	1	2	2	5	2	5	1	5	1	4	3	12	5	2	2	4	5	73
Pharmacy	1	1	1	1	2	1	2	1	2	4	2	-	2	1	2	2	4	5	6	8	48
Physical Therapy	2	7	3	2	5	11	3	32	27	10	2	8	2	7	6	14	2	19	4	10	176
Medicine	5	7	2	7	-	5	-	1	1	1	1	-	1	2	1	1	-	1	-	2	38
Biomedicine	1	3	2	1	1	1	2	1	-	2	1	4	-	6	23	10	-	-	-	-	58
Dentistry	-	6	2	9	2	6	2	13	-	20	-	12	1	9	3	7	-	4	-	2	98
Psychology	11	5	9	8	3	4	7	21	23	8	5	12	7	19	7	25	8	60	9	29	280
Speech Therapy	12	-	6	-	11	-	7	-	8	-	5	-	5	-	-	-	-	-	-	-	54
Nutrition	-	1	1	5	2	-	-	-	-	29	1	7	-	59	-	44	-	1	-	-	150
Occupational Therapy	-	7	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	8
Total	37	37	33	34	28	30	28	71	66	75	22	45	22	106	54	108	16	92	23	56	**983**
	74		67		58		99		141		67		128		162		108		79		

Legend: MAN = mandatory; OPT = optional