Original articles

Construction and validation of an informative handbook on speech-language-hearing therapy in primary health care

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ABSTRACT

Purpose: to develop and validate an informative handbook on the role of speech-language-hearing therapy in primary health care.

Methods: handbook development was preceded by a bibliographical survey for the theoretical framework. Validation consisted of two stages, with respectively 10 and eight speech-language-hearing judges in the first and second ones. An online questionnaire with 14 statements on content, language, illustrations, layout, and motivation assessed the material, scoring it with a 5-point Likert scale of agreement. It also had room for suggestions. The quantitative analysis was performed with two measures: Content Validity Index and Content Validity Coefficient. Values below 80% indicated the need for revision. The qualitative analysis was based on the judges' comments.

Results: in the first stage, despite obtaining satisfactory indices, the qualitative analysis revealed aspects to be improved. The handbook's "Content" and "Language" were adjusted, and it was resent to the judges for further review. In the second stage, the quantitative analysis revealed increased agreement rates for most of the investigated items.

Conclusion: the validation stages had high approval rates, indicating that the handbook may be used as a guide for speech-language-hearing practice in primary health care.

Keywords: Primary Health Care; Health Centers; Speech, Language and Hearing Sciences; Family Health; Health Promotion

INTRODUCTION

The field of work of the speech-language-hearing (SLH) sciences has been increasingly expanding since it was regulated in the 1960s. That was the time when logopedics courses were first offered in the Otorhinolaryngology Clinic at the Clinics Hospital of the School of Medicine at the University of São Paulo and the Psychology Institute at the Pontifical Catholic University of São Paulo[1].

When the profession was in its beginnings and even after SLH therapists were included in the Unified Health System (SUS) in 1988, their work was essentially centered on communication disorders – i.e., in a biomedical model focused on identifying problems and providing treatment[2]. This model, however, pointed to the need for changes in health professionals' training in general.

Thus, universities have been striving to restructure their curricula, so professionals can provide greater quality and comprehensiveness on this attention level[3]. Moreover, SUS has created policies to encourage professionals' training in primary healthcare (PHC). Multiprofessional residencies, established in 2005[4], strengthened the inclusion of SLH therapists in the whole SUS healthcare network, helping qualify their training, especially in PHC[5]. The implementation of Family Health Support Centers (NASF, in Portuguese), in 2008 – later renamed Extended Center for Family Health and Basic Care (NASF-AB), in 2017[6] and Extended Center for Family Health and Primary Care (NASF-AP), in 2020[7] – also helped further involve these professionals in PHC teams, improving the population's access to SLH care[8].

In 2019, the new form of funding PHC and the revocation of NASF-AB left it to the discretion of the municipalities to link multiprofessional occupations to the PHC teams[9]. Indeed, despite the lack of funds to maintain NASF-AB, many municipalities continued with this multiprofessional team arrangement[10].

Regardless of the type of SLH therapists' bond with teams, not only other professionals[11,12] but also the SLH therapists have a reductionist view of their role in PHC. Working in PHC means acting beyond technical specificities. According to the National PHC Policy[6], professionals must provide comprehensive care, know social health determinants in the region, prevent and control risks of health conditions, and plan actions for health surveillance, protection, and promotion.

The SLH literature has scarce material to describe SLH therapists' various work possibilities on this attention level[13-22]. Many authors have highlighted the importance of further research and publications addressing SLH therapy in public health to emphasize its relevance and ground the knowledge of their work in PHC[3,5,13,22-24].

Hence, it is rather important to develop instructive material on the role of SLH therapy in PHC, validated by a group of SLH therapists who work on this attention level, thus incrementing the existing literature. Gathering the information in a single material can help SLH therapists who work in these services rethink and expand their practices. Given the above, this study aimed to develop and validate an informative handbook on the role of SLH therapy in PHC.

METHODS

This descriptive study involved the construction and validation of informative material on the work of SLH therapists in PHC.

The research project was approved by the Research Ethics Committee of the Clinics Hospital of the Medical School of Ribeirão Preto at the University of São Paulo (HCFMRP-USP) under number 4.347.347 and CAAE number 38854820.0.0000.5440. All participants read an online informed consent form and agreed to participate.

Handbook Construction

The informative handbook was developed in two stages: a) surveying the bibliography to provide the theoretical framework of the material; b) constructing the handbook, as described in detail below.

Bibliographical survey

In this stage, researchers surveyed publications that approached the study topic. The research question for this survey was as follows: "What is the role of SLH therapists in PHC?". The following keywords were used to search scientific articles: Speech, Language, and Hearing Sciences; Primary Healthcare; Health Centers; Family Health; Health Promotion; Primary Prevention; Health Education; Home Visits; User Embracement; Continuing Education. They were searched in the databases of LILACS, SciELO, and Capes Journal Portal, using the Boolean operators OR and AND to combine the term "Speech, Language, and Hearing Sciences" with the other ones. The inclusion criteria were as follows: articles published preferably in the last 10 years, in Portuguese, available for reading in full

text, and clearly describing SLH therapists' work possibilities in PHC.

Besides the scientific articles, further content was searched in conference proceedings on the websites of the Federal SLH Council and the Ministry of Health, and in online dictionaries, using Google Scholar regardless of the year of publication.

Altogether, 28 references served as a basis to construct the material, as shown in Chart 1.

Chart 1. Information on the material selected to help writing the handbook

Authors	Title	Type of Literature	Year
Arakawa AM[25]	Continuing education for community health agents of Rondonia State: a Speech-Language and Hearing approach about the elderly health	Dissertation	2011
Araújo ES, Jacob-Corteletti LCB, Abramides DVM, Alvarenga KF[26]	Community health workers training on infant hearing health: information retention	Scientific article	2015
Brazil. Ministry of Health[6]	Regulation no. 2.436, of September 21, 2017. It approves the National Primary Care Policy, reviewing guidelines to organize primary care in the Unified Health System (SUS)	Official document of the Ministry of Health	2017
Brazil. Ministry of Health[27]	Regulation no. 825, of April 2016. It redefines home healthcare in the Unified Health System (SUS) and updates accredited teams.	Official document of the Ministry of Health	2016
Brazil. Ministry of Health[28]	Department of Healthcare. National Policy of Humanization. Primary Care/Ministry of Health, Department of Healthcare, National Policy of Humanization.	Official document of the Ministry of Health	2010
Brazil. Ministry of Health[29]	Regulation no. 1.996, of August 20, 2007. It provides guidelines to implement the National Policy on Permanent Health Education	Official document of the Ministry of Health	2007
Etymological Dictionary[30]	Matrix	Website: https://www.dicionarioetimologico.com.br/m/2	Accessed in 2021
Dimer NA, Canto-Soares N, Santos-Teixeira L, Goulart BNG[31]	The COVID-19 pandemic and the implementation of telehealth in speech-language and hearing therapy for patients at home: an experience report	Scientific article	2020
Fedosse E, Schiavo LP, Miolo SB[15]	Speech-language-hearing practice in primary healthcare: An experience report in a multiprofessional residency program	Conference proceedings	2015
Goulart BNG, Chiari BM[32]	Human communication and children health: reflecting on promoting health in childhood and preventing communication disorders	Scientific article	2012
Leitão GGS, Silva TPS, Lima MLLT, Rodigues M, Nascimento CMB[33]	Educational actions in human communication health: telehealth contributions in primary care	Scientific article	2018
Lima ILB, Delgado IC, Lucena BTL, Figueiredo LC[34]	Contributions of the institutional diagnosis for speech language pathology and audiology practice in schools	Scientific article	2015
Lima LVC, Andrade FCB[35]	Unique therapeutic projects as a primary healthcare strategy: An implementation approach in São Pedro do Piauí	Scientific article	2020
Limeira RRT, de Castro RD, Figueiredo SC, Silva SM, Alencar SAL, Figueirêdo LC et al.[18]	Internship in collective health: training in speech therapy	Scientific article	2017

Authors	Title	Type of Literature	Year
Lopes NC, Vieira GASS, Pena SRB, Lemos SMA[36]	Community health workers: mapping of knowledge before and after training workshops	Scientific article	2015
Luchesi KF, Toledo IP, Vieira AS, Meurer BE, Quadros DI, Corso MT et al.[17]	Speech-language Pathology and Audiology and Dentistry in Primary Care: Experience Report on Health Education	Scientific article	2016
Medeiros EA, Maia RM, Cedro MO, Barbosa MLC, Correia RBF, Tavares PMB et al.[13]	The inclusion of speech-language-hearing therapy in the strategy of family health: experiences in Sobral – CE	Scientific article	2009
Mendonça JA, Lemos SMA[37]	Health promotion and speech and language therapy actions in infantile education	Scientific article	2011
Ministry of Health [Internet homepage] Available from: https://aps.saude.gov.br/ape/pse[38]	School Health Program	Official document of the Ministry of Health	Accessed in 2021
Moura D, Arce VAR[39]	Primary health care: concepts and practices of speech language pathologists and audiologists professors	Scientific article	2016
Nascimento CMB, Lima MLLT, Sousa FOS, Novaes MA, Galdino DR, Silva ECH et al.[19]	Telespeech therapy as a continued education strategy in primary health care in the state of Pernambuco, Brazil	Scientific article	2017
Nascimento EN, Gimeniz-Paschoal SR, Sebastião LT[40]	Prevention of domestic child accidents: an educational intervention conducted by Speech Therapy trainees in a Family Health Care Unit	Scientific article	2019
Padilha FYOMM, Rodrigues ACG, Silveira IC, Arakawa-Belaunde AM[20]	Speech, language and hearing sciences and bullying: Health promotion action at school	Scientific article	2019
Pereira FM, Barbosa VBA, Vernasque JRS[41]	Continuing education experience for auxiliary nurses as a management strategy	Scientific article	2014
Reis FV, Brito JR, Santos JN, Oliveira MG[42]	Health education in the waiting room – case studies	Scientific article	2014
Santos ID, Santos JC, Oliveira AC, Guedes-Granzotti RB, Baldrighi SEZM, César CPHAR[43]	Stomatognathic system screening in preschoolers and its importance for the elaboration of an intervention program in health	Scientific article	2019
Warschauer M, Carvalho YM[44]	The concept of "Intersectoriality": contributions to the debate from the Leisure and Health Program of the Prefecture of Santo André / SP	Scientific article	2014
Xavier IALN, Santos ACO, Silva DM[45]	Teachers' vocal health and primary health care	Scientific article	2013

Handbook Construction

The surveyed materials were read to extract as much information relevant to the topic as possible. The content was structured per theme, of which the two main ones were "Responsibilities common to all PHC professionals" and "SLH therapists' specific work in PHC". Each part's content is shown in Chart 2.

Chart 2. Content in each part of the first handbook version

Parts of the handbook	Aspects addressed
1) Responsibilities common to all PHC professionals	Regional issues, registry, feeding the current information system, input management (material used at the unit), home visits, embracement, active search, community mobilization, health promotion, contribution to the process of regulating access from primary healthcare, home healthcare, verifying the Family Allowance welfare program, unique therapy project, waiting list management, health education, participating in administrative team meetings, participating in permanent health education activities
2) SLH therapists' specific work in PHC	Home visits, home healthcare, health education, shared attention, skill development and improvement groups, speech-language teletherapy, assisted waiting, proximity to educational institutions, School Health Program, individual care, Extended Center for Family Health and Basic Care (NASF - AB)

The first version of the handbook, named "SLH practice in PHC", had 21 pages and 27 illustrations. The text was clear and brief, with some examples created by the researchers to illustrate the information.

The handbook's graphic design was developed in Canva, selecting free images provided by this software to help illustrate the content.

The handbook design is exemplified in Figure 1.

Figure 1. Example of the handbook cover and one of its pages

Handbook Content Validation

Sample: inclusion criteria

The validation process had two stages, with 10 SLH therapists in the first one and eight in the second stage. This number of judges meets that recommended by Lynn[46] for validation studies. The second stage had fewer participants because two judges did not answer the validation questionnaire.

SLH judges were included based on the following inclusion criteria: SLH therapists who had been working in PHC units for at least 3 years, regardless of sex, age, the institution from which they graduated, and the place where they worked. SLH therapists who agreed to participate but did not fill out the questionnaire were not included.

Collection Instrument

The online questionnaire was adapted from that by Alexandre et al.[47]. It was developed in the Google Forms research management application.

The instrument was divided into two parts. The first one sought information on the judges' demographic and academic/professional characterization, such as region of origin, time working in PHC, work modality in PHC, and complementary training. The second part investigated the judges' perception of five categories of the material that had been developed (content, language, illustrations, layout, and motivation). These five categories were encompassed in 14 statements:

- Content: "The content is adequate for the target population (SLH therapists who work in PHC)"; "The content has enough relevant information for the target population"; "The text is written in a logical and coherent sequence".
- Language: "The handbook's vocabulary is adequate for the target population"; "The written text is clear and objective".
- Illustrations: "The illustrations are necessary to understand the content"; "The illustrations encourage people to look at the handbook"; "The illustrations (layout and resolution) are adequate for the target population".
- Layout: "The text has adequate font types and sizes"; "The layout is visually attractive and organized"; "The handbook's colors are adequate"; "The number of pages is adequate".
- Motivation: "The content piqued your interest"; "The content answered questions on the topic".

The judges' answers were recorded on a 5-point Likert scale (totally disagree, partially disagree, indifferent, partially agree, totally agree)[48]. There was also room at the end for suggestions and comments on these categories.

Invitation and Collection Procedure

The sample was recruited online through the National Health Establishment Registry (CNES, in Portuguese) in August, September, and October 2021. After surveying the professionals' names and places of work, the researchers tried to reach them to present the research and invite them to participate. First, they tried to reach the professionals by calling their work phone numbers. If they could not be reached, another attempt was made via social media.

A link to an online informed consent form, also developed in Google Forms, was sent to the professionals who showed interest in participating. If they agreed with it, they should click on "I accept to participate". They were then redirected to a Google Drive file with the first handbook version in PDF for them to read and the online validation questionnaire.

The second validation stage, which took place from mid-November to late December 2021, began after changes were made in the handbook according to the judges' considerations. Then, the new handbook version and the online validation questionnaire were sent to participants via email.

Data Analysis

The scores of each category (content, language, illustrations, layout, and motivation) and item were arranged in a spreadsheet as follows: (1) for totally disagree, (2) for partially disagree, (3) for indifferent, (4) for partially agree, and (5) for totally agree.

The sample of judges was characterized by calculating the mean, median, and standard deviation (SD) of the time since they graduated. The regions of origin, work modalities, and complementary training were presented in frequency.

Content validation was performed with the Content Validity Index (CVI) and Content Validity Coefficient (CVC).

The item CVI (I-CVI) was calculated by dividing the number of judges who gave a score of 4 or 5 in each item by the total number of judges. The category/total CVI (T-CVI) was calculated based on the mean scores

of the items in each category. The minimum interjudge agreement index was set at 80%[49].

CVC was calculated according to the judges' responses, in five stages: 1) the means of the answers in each item was calculated; 2) each mean was divided by the maximum value for each answer (five), resulting in the I-CVC; 3) the error (I-PE) was calculated to compensate for possible biases on the part of the judges regarding each statement; 4) I-CVC was subtracted from I-PE, resulting in each statement's C-CVC; 5) the total CVC (T-CVC) was calculated based on the mean C-CVC of all statements in each category.

Values below 80% indicated the need for review[50].

The qualitative analysis was based on the judges' comments.

RESULTS

Concerning the demographic characterization of the participating judges, they had been working in PHC for 3 to 30 years (mean = 12.7 years; median = 10.5; SD = 9.2). They were from different regions of Brazil, and half of them were from the state of São Paulo, as shown in Figure 2.

Federative Units
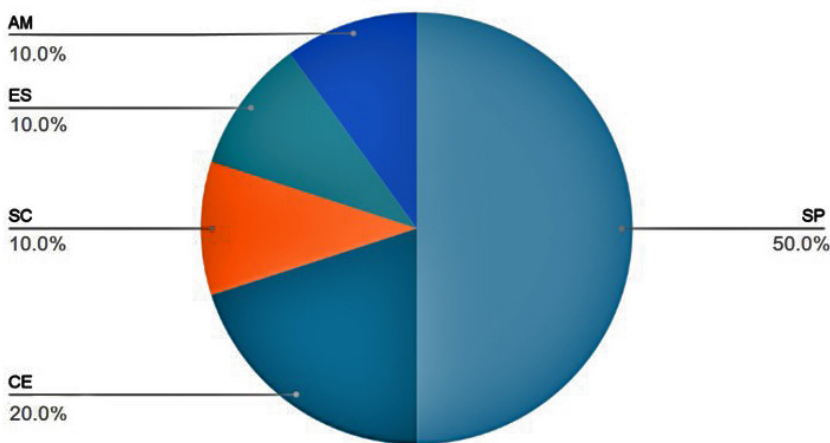
Captions: % = percentage; AM = Amazonas; CE = Ceará; ES = Espírito Santo; SC = Santa Catarina; SP = São Paulo

Figure 2. Distribution of the judges' states of residence

The judges worked in different PHC modalities, as seen in Figure 3.

Regarding academic and professional characterization, 80% had some specialization. Of these, 87.5% had a clinical specialization, and 25% had a public health specialization.

The validation process had two stages. In both, the quantitative analysis found values equal to or above the cutoff, as seen in Tables 1, 2, and 3.

Primary healthcare modalities
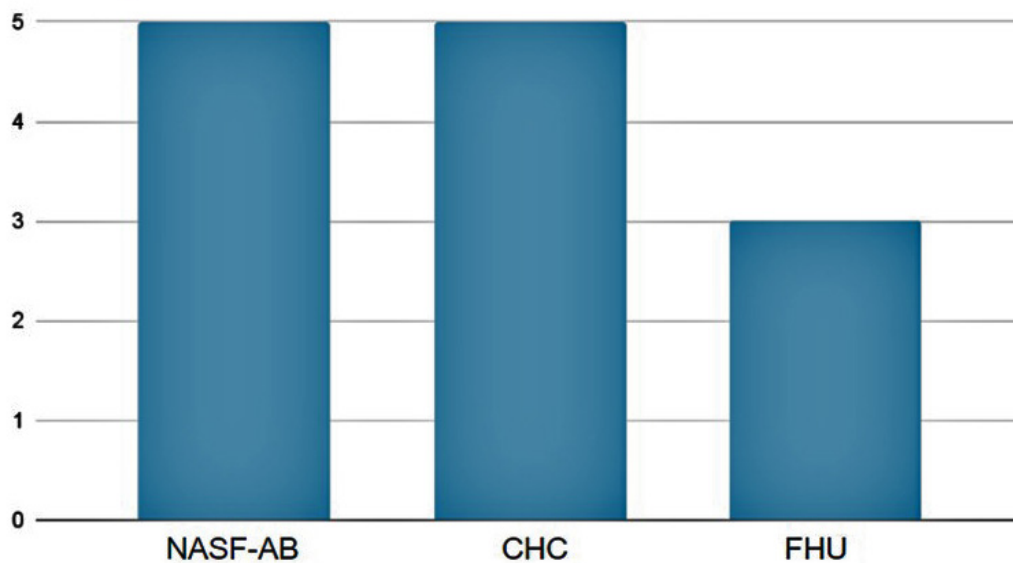
Captions: NASF-AB = Portuguese abbreviation of Extended Center for Family Health and Basic Care; CHC = Community Health Center; FHU = Family Health Unit

Figure 3. Distribution of the judges' work modality in primary healthcare

Table 1. Comparison of the judges' responses on the Likert scale regarding the first and second handbook versions, based on the scores (from 1 to 3 and above 3) and content validity index (%) per item

Categories	Items investigated	First version			Second version		
		1,2,3	4,5	I-CVI	1,2,3	4,5	I-CVI
Content	The content is adequate for the target population	0	100%	100%	0	100%	100%
	The content has enough relevant information for the target population	10%	90%	90%	0	100%	100%
	The text is written in a logical and coherent sequence	20%	80%	80%	0	100%	100%
Language	The handbook's vocabulary is adequate for the target population	10%	90%	90%	0	100%	100%
	The written text is clear and objective	10%	90%	90%	0	100%	100%
Illustrations	The illustrations are necessary to understand the content	20%	80%	80%	0	100%	100%
	The illustrations encourage people to look at the handbook	20%	80%	80%	0	100%	100%
	The illustrations (layout and resolution) are adequate for the target population	10%	90%	90%	0	100%	100%
Layout	The text has adequate font types and sizes	10%	90%	90%	0	100%	100%
	The layout is visually attractive and organized	10%	90%	90%	0	100%	100%
	The handbook's colors are adequate	10%	90%	90%	0	100%	100%
	The number of pages is adequate	10%	90%	90%	12.5%	87.5%	87.5%
Motivation	The content piqued your interest	10%	90%	90%	0	100%	100%
	The content answered questions on the topic	20%	80%	80%	12.5%	87.5%	87.5%
Total		12.1%	87.8%	87%	1.7%	98.2%	98.2%

Captions: I-CVI = content validity index per item; % = percentage

Table 2. Comparison between content validity coefficients calculated in the first and second handbook versions per item

Categories	Items investigated	First version		Second version	
		I-CVC	C-CVC	I-CVC	C-CVC
Content	The content is adequate for the target population	90%	89.9%	97%	96.9%
	The content has enough relevant information for the target population	90%	89.9%	97%	96.9%
	The text is written in a logical and coherent sequence	88%	87.9%	97%	96.9%
Language	The handbook's vocabulary is adequate for the target population	90%	89.9%	97%	96.9%
	The written text is clear and objective	90%	89.9%	97%	96.9%
Illustrations	The illustrations are necessary to understand the content	86%	85.9%	92%	91.9%
	The illustrations encourage people to look at the handbook	92%	91.9%	95%	94.9%
	The illustrations (layout and resolution) are adequate for the target population	96%	95.9%	97%	96.9%
Layout	The text has adequate font types and sizes	94%	93.9%	95%	94.9%
	The layout is visually attractive and organized	96%	95.9%	97%	96.9%
	The handbook's colors are adequate	96%	95.9%	95%	94.9%
	The number of pages is adequate	96%	95.9%	87%	86.9%
Motivation	The content aroused your interest	94%	93.9%	97%	96.9%
	The content answered questions on the topic	86%	85.9%	90%	89.9%
Total		91.7%	91.61	95%	94.9

Captions: I-CVC = content validity coefficient per item; C-CVC = content validity coefficient per item after subtracting the percentage of error per item (I-PE); % = percentage

Table 3. Comparison between content validity indices and content validity coefficients obtained in the first and second handbook versions per category

Category investigated	First version		Second version	
	T-CVI	T-CVC	T-CVI	T-CVC
Content	90%	89.2%	100%	96.9%
Language	90%	89.9%	100%	96.9%
Illustration	83.3%	91.2%	100%	94.6%
Layout	90%	95.4%	96.8%	93.4%
Motivation	85%	89.9%	93.7%	93.4%
Total	87.6%	91.1%	98.1%	95%

Captions: T-CVI = total content validity index of the category; T-CVC = total content validity coefficient of the category; % = percentage

Despite the high CVI and CVC values, the qualitative analysis revealed comments (compliments, critiques, and suggestions) that led researchers to revise the handbook. "Content" was the category that received the most comments.

Regarding compliments in the first stage:

"Excellent content! All this theory is expected to be put into practice to encompass more people in the population who need SLH care".

"Congratulations! The content has simple language, so everyone can understand what is being conveyed!".

Critiques and suggestions for changes in "Content" are shown in Chart 3.

Chart 3. Judges' critiques and suggestions regarding the "Content" per handbook topic they addressed

Topics	Proposed changes
Handbook title	Characterizing PHC modalities more in-depth or changing the handbook title to "SLH practice in the Family Health Strategy"
Team cooperation	Explaining the idea of "team cooperation" the first time it is used and approaching it more in-depth.
Home visits	Describing SLH practice more in-depth, emphasizing that rehabilitation does not take place in home visits; replacing the example of SLH practice (which highlighted changes in a child's reading and writing development) with another one addressing health prevention and promotion.
Home healthcare	Describing the existing home healthcare levels and the responsibilities of PHC and the Home Healthcare Service.
Individual care	Explaining in which PHC modalities individual care is provided.
Shared attention	Adding an example of SLH attention shared with other PHC professionals.
Assisted waiting	Highlighting that PHC is always responsible for users that belong to the population under their jurisdiction, even after they are referred to secondary services.
Other topics	Approaching more incisively the role of PHC in the Healthcare Networks, involving care coordination, teamwork, and network cooperation within and between sectors.

Captions: PHC = primary healthcare; SLH = speech-language-hearing

The title of the category was not changed, and individual attention was not discriminated regarding PHC modality, because the handbook is intended to generally present all work possibilities.

The comments regarding "Illustrations" and "Layout" were positive *("The illustrations are great"; "I don't think the illustrations are necessary to understand the content, but they make reading lighter and more pleasant (than a handbook with only text in it)"; "I liked the layout! Congratulations on your choices!!")*. They suggested numbering the pages, which the researchers decided not to do due to the few pages.

Some of the positive comments on "Motivation" include: *"It's very nice to read material with simple language and illustrations that draw attention to the content. It's an objective and clear summary of the SLH practice in PHC"; "I loved your work!! SLH therapy has too little visibility!"*. They suggested including an introduction to the handbook's purpose and content, which the researchers did.

The handbook underwent changes based on the comments and was resent to the judges' appraisal. CVI and CVC remained within the cutoff score (Tables 1, 2, and 3), with small variations in their values due to changes in the sample number.

The second handbook version received the following compliments: *"Great support material!"; "Congratulations! I loved the material; I loved participating!"; "I loved the new additions. It's very didactic and explanatory"; "Congratulations again for your initiative! It was my pleasure to read the material!!"*.

The judges had no critiques of the second handbook version; rather, they only made some reflections *("I suggest taking a look at the paragraph on NASF; since it was extinguished, I don't know if it is the case to keep it in the handbook. On the other hand, I suppose some information on NASF is necessary")*. Another judge suggested including a brief closing text at the end of the handbook. The information on NASF was maintained on the last page, but the researchers did not include a closing text.

The final version of the handbook named "SLH practice in PHC" has 25 pages, 29 figures, and three main parts, whose contents are shown in Chart 4.

The final content of the handbook is available directly from the researchers.

Chart 4. Content in each part of the final handbook version

Parts of the handbook	Aspects addressed
1) What this handbook is about	Handbook objectives and authorship
2) Responsibilities common to all PHC professionals	Regional issues, registry, actions between sectors, care coordination, feeding the existing information system, input management (material used at the unit), home visits, embracement, active search, community mobilization, health promotion, contributing to the process of regulating access from primary healthcare, home healthcare, following up on patients benefitted by the Brazil Assistance Program, unique therapy projects, waiting list management, health education actions, participating in administrative team meetings, participating in permanent health education activities.
3) SLH therapists' specific work in PHC	Individual care, home visits, home healthcare, health education actions, shared attention, skill development and improvement groups, speech-language teletherapy, assisted waiting, proximity to educational institutions, School Health Program, Extended Center for Family Health and Basic Care (NASF - AB)

DISCUSSION

Half of the participating judges were from the state of São Paulo, which is justified by the greater number of SLH therapists in this than in other states[51]. The sample also had SLH therapists from three different PHC modalities, working in NASF-AB, community health centers (CHC), and family health units (FHU), which benefits the handbook's validation process. It must be highlighted that some municipalities in Brazil maintained NASF-AB even after the federal government terminated its financial support.

Regardless of the team modality to which SLH therapists belong in PHC, they should have a broader perception of their work possibilities on this attention level. To work in PHC, which is usually the users' entryway to SUS, professionals must understand the characteristics of this attention level and its workers' responsibilities. Hence, PHC is capable of reaching "great solution-making, with clinical and care capacity, incorporating diagnostic and therapeutic technology regarding relationships, knowledge, and material resources, and coordinating PHC with other parts of the healthcare network"[4].

The literature has often described the construction and validation of informative handbooks[52-55]. These are justified by the importance of disseminating reliable content based on knowledge previously described in the literature and assessed by professionals with practical experience on the topic.

The first handbook version in this study obtained high acceptability indices from the judges, according to the quantitative analysis. As for the qualitative analysis, the judges' comments revealed aspects to be improved, indicating the importance of integrating both types of analyses[54-56]. Such integration, named methodological triangulation, makes the study results more robust[57].

The second versions of material undergoing validation tend to reach higher acceptability indices[54-56], reinforcing the importance of two validation stages[54-56,58]. The indices in the present study either increased or remained the same in the second version, except for "Layout", which decreased. This lower value is believed to be due to the lack of page numbers, which a judge had suggested.

The main changes in the first validation stage occurred in "Content" and "Vocabulary", which corroborates other studies on educative material validation[59-61]. Adjusting these categories favors readability[58], making the text more interesting[60] and understandable[59].

"Illustrations" and "Layout" had good acceptability in the quantitative and qualitative analyses. Illustrations in such materials aim to make text reading more pleasant and draw and maintain the reader's attention[52,54,56,59].

"Motivation" also had high approval indices, similar to other studies[48,61]. A comment led to the inclusion of another part in the handbook, named "What this handbook is about", which is essential to contextualize its objective and authorship to readers. Moreover, a comment stood out, which said that *"SLH therapy has too little visibility"*, reinforcing that PHC professionals do not know the role of SLH therapists, as previously reported in the literature[11,12].

It is important to point out that not all recommendations were accepted, mainly because of the incompatibility of the suggestion with the handbook's purpose. Other authors have likewise declined suggestions

for not meeting the objective of the material they had developed or not agreeing with the literature[52,58,62,63].

The greatest difficulty dealt with in this study was the delay in finding SLH therapists with work experience in PHC who were willing to participate in the research to judge the handbook. Moreover, the decrease in sample number in the second validation stage is a challenge that other researchers also faced[54,56].

The participants' positive comments show the importance of research focused on the practice of SLH therapists who work in PHC. One participant expressed their expectation that "*the whole theory in this handbook would be put into practice*", impacting the quality of care provided to the population with SLH needs. This same expectation was the original motivation for this research.

This study did not aim to address the "SLH work in PHC" exhaustively. Rather, it gathered, in a single material, information previously described in scientific articles, experience reports, and official government material, having it validated by a group of judges with experience on this health attention level. This validated material is expected to be presented in undergraduate SLH programs, multiprofessional residencies focused on PHC/family health, and municipal departments of health.

Further material should be developed and validated to discuss each experience more in-depth, enriching the SLH literature on the topic and expanding the understanding of SLH therapists' work possibilities in PHC.

CONCLUSION

This research developed and validated an informative handbook on SLH therapists' role in PHC.

The material was validated by experienced SLH therapists working on this attention level, which made it possible to gather content adequate for professionals and scholars in the field.

This material will hopefully reinforce the important role of SLH therapists in PHC, as well as their various work possibilities beyond their technical specificities.

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Authors' contributions

NAC: data acquisition, research project conceptualization and writing, data analysis and interpretation, article writing, critical review of intellectually relevant content, and approval of the final version for publication;

TMJ: research project conceptualization and writing, data analysis and interpretation, article writing, critical review of intellectually relevant content, and approval of the final version for publication.