

Validation of a speech therapy guidelines booklet for dysphagic cancer patients

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ABSTRACT

Purpose: to validate the content and appearance of a booklet of speech therapy guidelines on dysphagia for adult oncology patients presented with dysphagia.

Methods: a methodological study with a mixed approach, developed for the validation of a guidebook. The validation of the guidebook was made by five expert judges and eleven non-specialist ones. For validation, the Content Validity Index was used: CVI for each item, as well as for the general items.

Results: the expert judges assigned the Content Validity Index value above 80% and of 92.20%, and the non-specialist judges attributed values above 90.9% and of 98.0%, which were considered excellent.

Conclusion: the proposed guidebook was validated according to content and appearance. It is believed that this material can contribute to the understanding of the health-disease process, promote self-care and arouse the interest of other health professionals in the development of educational technologies in search of better health conditions for the target population.

Keywords: Speech, Language and Hearing Sciences; Deglutition Disorders; Health Education; Head and Neck Neoplasms; Validation Study

A study conducted at the Federal University of Health Sciences of Porto Alegre, Porto Alegre, RS, Brazil.

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INTRODUCTION

Head and neck cancer (HNC) is considered the fifth most common type of cancer in the world, the most frequent being squamous cell carcinoma (SCC)¹. HNC is related to malignant neoplasms that affect the superior aerodigestive tract, a region that includes the lip, oral cavity, pharynx and larynx, corresponding to approximately 95% of tumors, with a significant incidence, prevalence and mortality, which expresses the relevance of the disease to public health¹. Individuals with head and neck, lung, esophagus, stomach and central nervous system (CNS) neoplasms, frequently experience dysphagia².

Dysphagia is any condition in one or more phases of swallowing that makes it difficult or impossible to swallow safely, efficiently and comfortably³. As a consequence of dysphagia, food can enter the lower airways, causing complications such as cough, respiratory infection, asphyxia, laryngotracheal aspiration, dehydration, weight loss and even death².

The National Cancer Institute (INCA) estimates that there will be a significant increase in cases of head and neck cancer. This estimate shows the need for early diagnosis strategies, effective treatment and guidance for the caregiver. It is also important to note that the recovery and quality of life of patients depend on the work of a multidisciplinary team, which includes medical speech-language pathologists⁴.

The medical speech-language pathologist is the professional responsible for the prevention, assessment, diagnosis, habilitation/functional rehabilitation of swallowing and the management of swallowing disorders. Their work involves a range of skills such as: indicating the placement and removal of alternative feeding routes, prescribing the consistency of food, the volume, the rhythm of food intake, the use of utensils, the necessary maneuvers and postures⁵. In addition, the medical speech-language pathologist helps to identify the need for instrumental tests for the diagnosis of dysphagia, manages rehabilitation programs for swallowing disorders, among other tasks related to the specialty of Dysphagia⁶.

Due to the complexity of therapeutic approaches in different areas of health and their consequences, it's necessary for the individual to receive instructions and support for their health-disease process⁷. The use of a booklet containing post-discharge guidelines for dysphagic cancer patients is essential, given this complexity and the possible acute and/

or late complications, such as bronchoaspiration and aspiration pneumonia, which can result in readmissions. Therefore, it's considered that the development and validation of guidance booklets can make a major contribution to maintaining patient safety, facilitating the work of the multidisciplinary team in guiding family members, caregivers and patients through the treatment, recovery and self-care process⁸.

Health booklets are essential educational materials for informing patients and health professionals about medical conditions, procedures and self-care practices⁸. They help promote knowledge, enabling individuals to make informed decisions about their health. In addition, they are fundamental for empowering patients by providing clear and understandable information about their health conditions, which can improve adherence to treatment and health outcomes. They can also facilitate communication between patients and health professionals, making consultations more efficient and effective⁸.

Several studies in the literature have developed booklets or manuals with favorable outcomes in different areas, such as education, health and safety⁹. However, due to the lack of materials in the field of speech therapy on guidelines for the specific demands of cancer patients with dysphagia, this study aims to validate the content and appearance of a booklet of speech therapy guidelines on dysphagia for these adult patients.

METHODS

The study is part of the Integrated Multiprofessional Health Residency Program with an emphasis on Oncohematology and the Speech and Hearing Therapy course at the Federal University of Health Sciences of Porto Alegre, RS, Brazil. It was submitted to the Research Ethics Committee (CEP) of the Irmandade da Santa Casa de Misericórdia de Porto Alegre (ISCOMPA) and to the CEP of the Federal University of Health Sciences of Porto Alegre (UFCSA), with approval number 5.278.448 and a certificate of submission for ethical appraisal (CAAE): 55159422.4.0000.5335.

The research respected the ethical principles and criteria set out in Resolution No. 466/12 of the National Health Council, taking into account responsibility, respect and the commitment to obey the precepts of this law¹⁰.

This is a quantitative and qualitative methodological study, developed in stages, the first stage being the

validation of content by expert judges and the second stage the validation of appearance by non-expert judges of a booklet entitled “Speech therapy orientations for dysphagic cancer patients”.

For validation, the study followed the parameters recommended in the literature¹¹, so that validation was carried out by a group of experts on the subject and by a group of patients with the target event of the guidance booklet. These professionals and patients were called judges, who were allowed to express their judgment and contribute to the construction of the final product¹².

This study was carried out between April and September 2022. The material was prepared, adapted and finalized in a first version by speech therapy residents from the Multiprofessional Oncohematology Residency Program in 2021.

In 2022, the guidelines booklet was reorganized into a second version and the material was validated with specialist and non-specialist judges in an oncology hospital in southern Brazil.

The process of building and validating the guidelines booklet is shown in Figure 1.

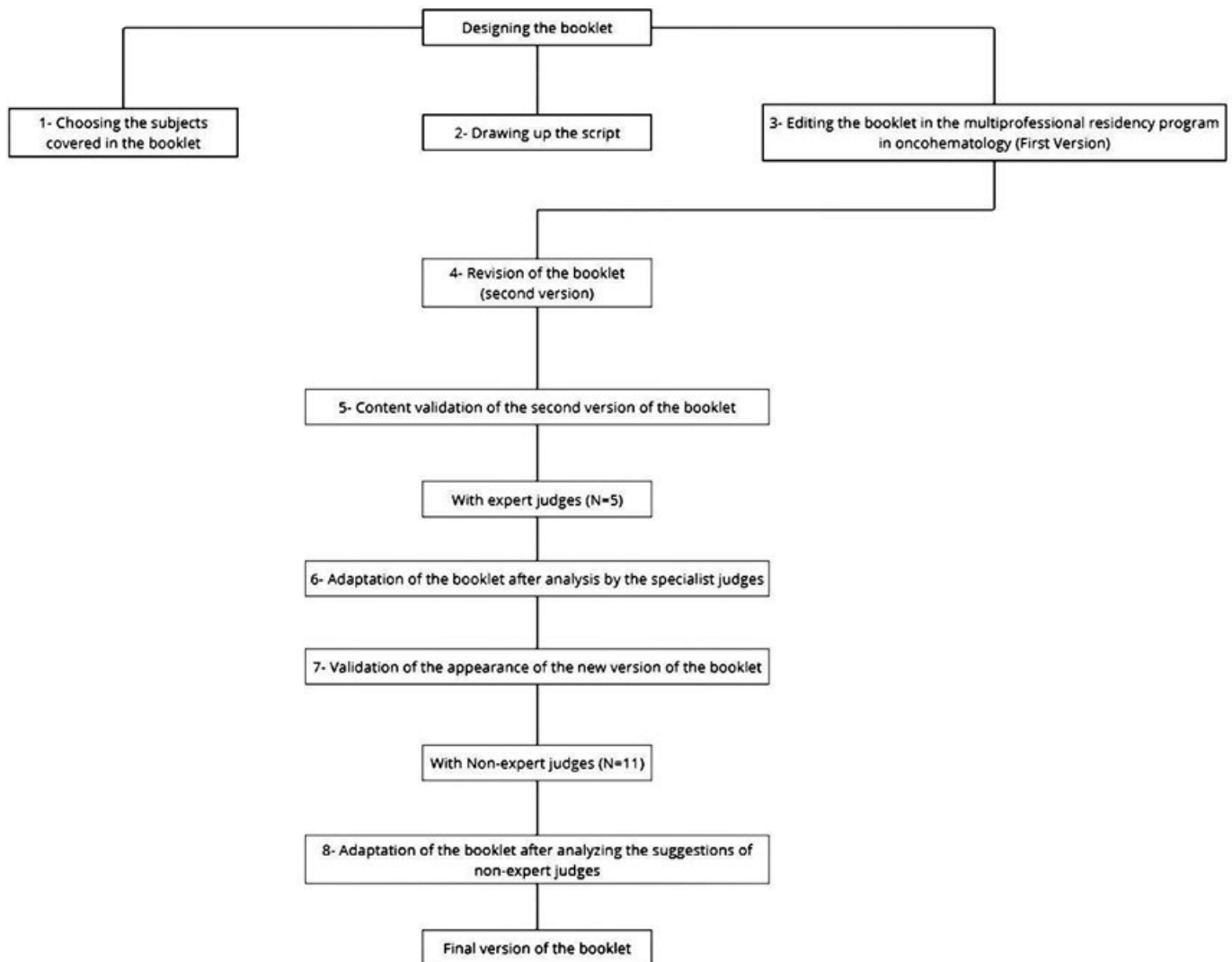


Figure 1. Flowchart for preparing and validating the booklet

The study population consisted of experts in the fields of Speech and Hearing Therapy, Odontology, Nutrition, Head and Neck Surgery and Oncology and Public Health, and the target audience, which was made up of patients in the oncology unit of a hospital in Brazil.

The expert judges were selected by convenience sample, as were the non-specialist judges. An odd number of five specialist judges and eleven non-specialist judges made up the target audience, in order to avoid a tie in opinions.

The validation process¹² was carried out through the evaluation of expert judges who met the following inclusion criteria: having knowledge/skills acquired through experience, having specialized skills/knowledge that would make them an authority on the subject and analysis of CVs on the Lattes Platform, available from the Coordination for the Improvement of Higher Education Personnel (CAPES). Those with less than five years training and who did not work in the field of dysphagia were excluded.

As for the non-specialist judges, they were selected according to the following criteria: having a diagnosis of dysphagia; being over 18 years old; being literate (at least four years of schooling); having stable clinical conditions to take part in the study; having preserved cognitive status; not having neurological sequelae, such as: aphasia (altered language formulation and comprehension), hemianopsia (partial or total loss of vision in one half of the visual field); and/or diplopia (double vision), as reported by the participant themselves.

Once the specialist judges had been selected, an invitation letter was sent to each judge via email and, once they agreed to take part in the study, the Informed Consent Form (ICF) was sent to obtain their agreement, as well as the assessment instrument and a copy of the guidelines booklet. For the specialist judges, a deadline of three weeks was set.

As for the non-specialist judges, they were invited to take part in the validation of the guidelines booklet at the hospital unit where they were being treated and, once they had accepted, they were asked to sign the Informed Consent Form (ICF). They were then given a copy of the booklet, which had already been revised by the expert judges, to read and were given information about the material.

During data collection, two evaluation instruments were used to assess whether the purpose of the construct had been met. These were created by the researchers based on parameters from the literature^{13,14}.

One evaluation instrument was aimed at experts and the other at the target audience (non-expert judges).

The instrument for expert judges was divided into two parts. The first contained identification data (degree, length of training and time working in the field). The second part provided the instructions for filling in the instrument and the evaluation items of the booklet in the following areas: content, images, layout and clarity of information. As for the evaluation of the subjects presented in the booklet, the expert judges evaluated each item based on a Likert scale, with a score of 1 to 5 points, and if there was a decrease at the end of each item of the questionnaire, a space was reserved for comments and observations from the judges, in order to improve the guidance booklet.

The instrument for non-expert judges was reformulated according to the previous contributions of the expert judges in the first stage of content validation. This way, each item that received a score of 1, 2 or 3 was restructured according to the requirements related to the problem exposed by each expert judge in order to improve the guidance booklet and presented by an individual interview (due to the difficulty of understanding and reading) and the evaluation took place confidentially so that the participant could give their opinion without risk of judgment.

The evaluation construct was divided into three parts. The first part contained identification data such as: name initials, age, pathology/location, education and contact details. The second part provided the patient with guidelines for completing the questionnaire and the third part was made up of the questionnaire and the evaluation items in the guidelines booklet, which involved the domains of: objective, organization, language, appearance and motivation.

The answers to the questions in this instrument were rated as follows, using a Likert scale: (1) Strongly disagree; (2) Disagree; (3) Not sure; (4) Agree and (5) Strongly agree. In addition, ten days after the validation process by the non-expert judges, a follow-up questionnaire was administered in order to understand whether the individual had used the booklet and its effectiveness. The questionnaire consisted of three questions: "Was the information useful?", "Are you doing anything differently that you didn't do before?" and "How do you feel about receiving/having the information you need for self-care in this way?".

The data collected was entered and analyzed in a Microsoft Excel® 2019 spreadsheet database. The Content Validity Index (CVI) was used to analyze the

data. This index was calculated for each item on a scale (I-CVI), as well as for the overall scale (S-CVI/AVE). The I-CVI of each item was calculated by adding the answers “4” or “5”, being agree and totally agree, respectively. The result of this sum was divided by the total number of responses obtained for the item.

For the S-CVI, the I-CVI was calculated for each item and then the average I-CVI between the items was calculated. This process is called S-CVI/AVE (AVE = average variance extracted).

In this analysis, the acceptable content validity index must be at least 0.78 for I-CVI and 0.80 for S-CVI, and preferably greater than 0.90¹⁴.

RESULTS

Regarding the validation stage with the expert judges, Table 1 shows their characterization data. As for the highest degree, 60% (N=3) had an academic doctorate and 20% (N=2) had a master's degree, and 60% (N=3) were teaching in higher education institutions.

Table 1. Characterization of the expert judges

	EJ 1	EJ 2	EJ 3	EJ 4	EJ 5	average	SD
Time working in the field	28 years	25 years	26 years	10 years	12 years	20.2	8.49
Training time	33 years	25 years	26 years	14 years	12 years	22	8.80
Degree	Speech and hearing therapy	Dentistry	Speech and hearing therapy	Medicine	Nutrition	-	-

Captions: SD=standard deviation. EJ= Expert Judge.

As for the non-specialist judges, 27.2% (N=3) had completed elementary school, 27.2% (N=3) had incomplete elementary school, 27.2% (N=3) had completed secondary school, 9.0% (N=1) had incomplete secondary school and 9.0% (N=1) had incomplete higher education. With regard to the topography of the cancer, 45.4% (N=5) of the non-specialist judges

had cancer in the larynx, 18.1% (N=2) in the floor of the mouth, 9.0% (N=1) in the pharynx, 9.0% (N=1) in the esophagus, 9.0% (N=1) in the lungs and 9.0% (N=1) in the tongue. In addition, the mean age was 70.6 (sd=9.2) years, 72.7% (N=8) were male and 27.2% (N=3) female. The characterization of the non-expert judges is shown in Table 2.

Table 2. Characterization of non-expert judges

	Age (years)	Gender	Topography	Education level
NEJ 1	78	Female	Tongue	Complete elementary school
NEJ 2	83	Male	Lungs	Complete high school
NEJ 3	55	Male	Larynx	Incomplete high school
NEJ 4	80	Male	Esophagus	Complete elementary school
NEJ 5	58	Male	Floor of the mouth	Complete high school
NEJ 6	67	Male	Larynx	Complete elementary school
NEJ 7	70	Male	Larynx	Incomplete elementary school
NEJ 8	62	Male	Pharynx	Incomplete elementary school
NEJ 9	78	Male	Larynx	Incomplete university degree
NEJ10	72	Female	Larynx	Complete high school
NEJ 11	74	Female	Floor of the mouth	Incomplete elementary school

Caption: NEJ= Non-Expert Judge.

In terms of appearance and content analysis, none of the items were rated as inadequate. All the items judged by the expert and non-expert judges had excellent content validity (I-CVI), above 78%, and the

total validity of the scale via S-CVI/AVE reached 92.20% by the experts and 98.0% by the non-experts. The results are shown in Charts 1 and 2.

Chart 1. Judgment of the expert judges (N=5) on items in the booklet

ITEM	Attribution	EJ 1	EJ 2	EJ 3	EJ 4	EJ 5	No. of judges with "4" or "5" grades	Agreement "4" or "5" in the 5 judges *	I-CVI	S-CVI/AVE
1	Content: Consistency.	5	5	5	5	5	5	1	100%	92.20%
2	Content: Promoting behavioral change.	5	5	4	5	5	5	1	100%	
3	Content: Circulation in scientific circles.	1	5	5	5	5	4	0	80%	
4	Content: Complies with the objectives of working with dysphagia.	5	5	5	5	5	5	1	100%	
5	Images: Consistency.	5	5	5	5	5	5	1	100%	
6	Images: Appropriate.	4	5	3	5	5	4	0	80%	
7	Images: Expressive.	4	5	4	5	5	5	1	100%	
8	Layout: Appropriate material.	4	5	5	5	5	5	1	100%	
9	Layout: Disclosure.	1	5	5	5	5	4	0	80%	
10	Layout: Formulation.	3	5	5	5	5	4	0	80%	
11	Layout: Nice material.	4	5	5	5	5	5	1	100%	
12	Clarity: Scientific basis.	3	5	5	5	4	4	0	80%	
13	Clarity: Logical sequence.	3	5	4	5	5	4	0	80%	
14	Clarity: Concordance and spelling.	5	5	5	4	5	5	1	100%	
15	Clarity: Writing style.	5	5	3	4	5	4	0	80%	
16	Clarity: Understanding and knowledge acquired.	4	5	5	5	5	5	1	100%	
17	Clarity: Addressing the necessary issues.	5	5	5	5	5	5	1	100%	
18	Clarity: Key aspects.	5	5	5	5	5	5	1	100%	

Captions: EJ= Expert Judge. S-CVI/AVE= general scale. I-CVI= Validity index of each item. *Agreement between the judges is shown as 1 and absence of agreement as 0.

Chart 2. Judgment of the non-expert judges (N=11) on items in the booklet

ITEM	Attribution	NEJ 1	NEJ 2	NEJ 3	NEJ 4	NEJ 5	NEJ 6	NEJ 7	NEJ 8	NEJ 9	NEJ 10	NEJ 11	No. of judges with "4" or "5" grades	Agreement "4" or "5" in the 5 judges **	I-CVI	S-CVI/AVE
1	Objective: The booklet makes it possible to provide help at home.	5	4	4	5	4	5	5	5	5	5	5	11	1	100.0%	98.0%
2	Objective: Already had prior knowledge of the topic covered in the booklet. *	5	1	3	4	4	1	1	1	4	1	1	4	0	-	
3	Appearance: The images are expressive enough.	5	4	4	5	4	4	5	5	5	5	5	11	1	100.0%	
4	Language: The information is presented clearly and objectively.	5	5	4	5	4	4	5	5	5	5	5	11	1	100.0%	
5	Motivation: The booklet can generate changes in attitude/behavior.	4	5	3	5	4	5	5	5	5	5	5	10	0	90.9%	
6	Organization: The number of pages is adequate.	4	5	4	5	4	3	5	4	5	5	5	10	0	90.9%	
7	Objective: The content presented is in line with your needs.	5	5	4	5	4	5	5	5	5	5	5	11	1	100.0%	
8	Language: Approach the necessary subjects.	4	5	4	5	4	5	5	5	5	5	5	11	1	100.0%	
9	Appearance: The font style and size are appropriate.	5	5	4	5	4	5	5	5	5	5	5	11	1	100.0%	
10	Goal: The booklet is suitable to be made available.	5	5	4	5	4	5	5	5	5	5	5	11	1	100.0%	

Captions: NEJ = non-expert judge. S-CVI/AVE = general scale. I-CVI= Validity index of each item. *This item does not assess the booklet but the reader's prior knowledge, so the CVI analysis does not apply. **Agreement between the judges is shown as 1 and absence of agreement as 0.

In this analysis, the number of points 4 or 5, considered to be positive, were taken into account when calculating the CVI. In order to keep the content validity analysis more conservative, neutral point 3 ended up being analyzed along with points 1 and 2, which were considered negative.

The expert judges suggested excluding some items and adjusting the written language, the excess of images and changes to the layout, as shown in Table 3.

Table 3. Synthesis of the comments made by the expert judges

Field	EJ 1	EJ 2	EJ 3	EJ 4	EJ 5
Content			The booklet aims to promote behavior change. It is not possible to predict the effects of health education materials in practice. It goes beyond clinical work and is a tertiary prevention proposal of great relevance.		
Images	Visual overkill, I suggest smaller images. They're fine.	Photo and filters are of a tracheostoma. Adapt term.	The warning symbols (Avoid) could be yellow to give them more prominence and reinforce their importance in all the information provided.		
Layout	Make it cleaner. It's not clear how it will be publicized. I like the material, but I would suggest making adjustments to the table of contents (fewer items) and smaller fonts.		As there are a lot of images, I suggest making the background plain. Reduce the title.		
Clarity of information	Page 7 - I suggest using: Has your voice changed after swallowing? I think they should expand the possibilities. TQT pages: I think it's worth discriminating between the type of cannula!	Page 12 - write nutritionist and doctor. Page 14- where it says to brush the tongue, I would write "...and take care not to hurt the tongue, lightly on the hand".	Page 5 - Reinforce that, in addition to flavors, maintaining the color of the food is also important. Page 6 - the statement "If you're sleepy don't eat!" could say eat at another time. Where it says: Avoid - "Dry food, if possible" I would remove if possible. Page 7 - Explain the term throat clearing. I suggest talking about speech therapy earlier in the text. I suggest having some reference, even in the introduction. In the introduction, I suggest briefly explaining what an oncology patient is. In the case of the right to supplies for pulmonary rehabilitation, I suggest using "talk to the health professionals accompanying you". It would be important to review some of the terminology used in the booklet, from the point of view of translating the meaning to have a wider reach, considering the lay population. (Aspiration pneumonia and explaining oral hygiene, as well as probes).	I think it's worth replacing a nasogastric tube with a feeding tube, to make it easier to understand. to make it easier to understand. Absolutely. The writing was very good and the booklet will help our patients a lot. Congratulations on the initiative!	Page 8 - I suggest separating the diets - liquefied consistency - food beaten in a blender. Pasty consistency - well-cooked rice - replace with porridge rice. Soft consistency - bean broth. Page 10 - filtered or normal or boiled water.

Caption: EJ= Expert Judge.

With regard to the validation process carried out by the non-expert judges, seven items obtained 100% agreement. After analyzing the booklet as a whole, some non-expert judges made positive comments regarding the content presented in the booklet on oral hygiene, cleaning the tracheostomy tube, cleaning the tube, food consistencies and radiotherapy. Other judges showed satisfaction with the content of the

booklet through their comments, referring to it as important. Table 4 shows the responses from the follow-up process of the non-specialist judges, whose questionnaire was applied after ten days of analyzing the booklet. There were no suggestions for changes to the guidelines booklet, so the final version of the booklet was defined.

Table 4. Summary of the follow-up process with the non-expert judges

	Was the information helpful?	Are you doing something different that you didn't do before?	How do you feel about receiving/having the information you need for self-care in this way?
NEJ1	Totally agree	Oral hygiene	Safe and happy because of the professional's care for the patient
NEJ2	Totally agree	I use the examples of food types (consistencies) in the meal	Well
NEJ 3	Agree	I'm looking into using filters to protect the tracheostome	Well oriented
NEJ4	Totally agree	Probe cleaning	With more knowledge about the disease and its consequences
NEJ5	Agree	Already carried out the procedures previously, but oral hygiene has improved	Grateful
NEJ6	Agree	Hygiene of the tracheostomy tube	Very good, because if you have any doubts, look in the booklet
NEJ7	Totally agree	I'm gradually adapting to the use of food consistencies, the examples are helping!	Happy, it's very useful
NEJ8	Totally agree	All feeding guidelines (speed, consistency, food separation...)	Grateful, the booklet is very helpful and contains a lot of useful information
NEJ9	Totally agree	Yes, there's a lot I didn't know and I'm using all the guidelines a lot	Guided, it helps a lot to have more information
NEJ10	Agree	I'm trying to eat according to the instructions	Very good, I can clear up my doubts
NEJ11	Totally agree	Probe cleaning and oral hygiene primarily	My family and I are happy with the care, we feel well looked after

Caption: NEJ = Non-expert judge

DISCUSSION

The choice of theme for the guidance booklet came from reflections on the impact of swallowing disorders and their influence on the daily lives of cancer patients, both in terms of the changes caused by dysphagia and in terms of post-discharge care and monitoring of the health-disease process.

CCP can result in social isolation and stressful situations for individuals, due to the impact it has on their daily lives. Thus, there is a need for care that goes beyond functional rehabilitation. In order for this to happen, it is necessary to integrate multidisciplinary

work, in other words, the work of different specialties¹⁵. Bringing together professionals from areas such as Medicine, Nutrition, Odontology and Speech and Hearing Therapy to treat individuals aims to rehabilitate all aspects of the patient's life. It also provides support for their development in the social sphere and improves their well-being¹⁶. In this context, it is clear that speech therapy and a multidisciplinary team are important during hospitalization and post-discharge, seeking to preserve or readapt the individual's eating functions and self-care, which has a clear impact on their quality of life¹⁷.

The choice of expert judges was made considering the multiple areas of healthcare. Although the booklet was developed by the Speech and Language Therapy department, judgment by professionals from different areas is recommended in the literature. This way, the validation method becomes authentic, as it follows the parameters of content and appearance validity. In addition, the view of different professionals, who often have different approaches to care, provides an opportunity to standardize and certify patient care procedures¹⁸. Thus, it is possible to obtain a more complex analysis, aimed at collective health and the greater specificity of the topic addressed, according to the unique view of each analysis of the items. This analysis, from the singular point of view of different areas of health, is important because it is in line with the concept that prevention and health promotion is the result of a set of knowledge and practices represented by a multidisciplinary team with the aim of improving patients' quality of life¹⁹.

The judgment of the booklet by expert and non-expert judges makes it possible for it to become a reliable support tool for patients, caregivers, family members and professionals. The analysis of these patients and professionals, presented by the CVI values for the items that made up the content and appearance analysis, indicates that the information contained in the booklet was considered meaningful to the public. These results of over 78%, considered excellent¹³, are relevant for this technology to be used as a health education tool, both in print and digitally. This positive judgment shows that the material can be used as a legitimate means of spreading information. Thus, it fulfills the idealized objective of being an instrument for disseminating speech therapy guidelines for dysphagic cancer patients.

The reconstruction of the content and appearance was aimed at better organization and logical sequencing, considering the importance of synthesizing complex content. The analysis of experts and non-experts made it possible to adapt the booklet so that it could be understood, regardless of the level of education of the reader.

From the point of view of analyzing appearance, the layout and design of the instrument are important, as they make it easier to read and more pleasant for the reader. Therefore, the font used, as well as its size and color, are important points to be analyzed²⁰. The graphic design of the booklet was considered to be well presented and practical, except for the font, which was

considered large by some experts. However, considering that the patients are mainly elderly, it was decided to keep the font size appropriate to the reading ability of this population. The positive analysis of these domains is very important and demonstrated the readability and comprehension of the text, which has the function of attracting the reader, arousing and maintaining their interest in reading, adding and reinforcing information²¹.

The considerations made by the expert judges regarding linguistic aspects such as writing style, scientific basis, agreement and spelling were accepted and were related to the substitution of terms, which helped to make the language of the booklet more appropriate for non-expert judges. The agreement of these judges was significant, which shows that the content was conveyed clearly to the users of the booklet, demonstrating their understanding. This shows that the adjustments suggested by the expert judges during the first validation stage were effective. Written and illustrated material brings advantages to people with reduced schooling and reduced reading skills, as long as mechanisms are incorporated during the planning process to make reading clearer, simpler and more objective²¹. Therefore, the analysis helped to minimize the possible obstacles in communicating with non-specialist judges (the target audience).

According to one study, educational booklets have a positive response as an appropriate technology to help families, caregivers, patients and health professionals²². Therefore, the use of alternative media such as animated videos, manuals and booklets, according to the findings in the literature, increases understanding of the health-disease process, as well as promoting greater adherence to the therapeutic interventions required during the treatment process²³. The results presented in the follow-up process applied with the non-expert judges corroborate these findings, as do the low scores presented before the follow-up process in the item that asks whether the patients already had prior knowledge of the information presented in the booklet, showing that the sharing of information provided patients with health education and also security about their pathological condition.

The theoretical study entitled Leventhal's self-regulation model indicates that individuals process information about their illness or any threat to their health through parallel channels which, in turn, represent cognitive and emotional dimensions²⁴. This theoretical model is structured around a diagram which suggests that these individuals develop mental

images about their health problem based on five main points: 1) Identity, i.e. the symptoms of the disease; 2) Cause (infections, heredity, way of life, etc.); 3) Consequences (pain, functional impact, quality of life); 4) Time (duration, when it started); and 5) Control (questions about whether or not there is a cure)²⁴. As a consequence of this theoretical study, studies have shown that, when applying Leventhal's diagram in practice, it is possible to see that cancer patients, when receiving information from the medical team, process this information through the channels mentioned above (cognitive and emotional)^{23,24}. Based on this model, it's believed that the use of alternative means of health education offers something practical and available, in a more uniform way when compared to verbal information that can be lost over time and not achieve the same clarity. In this way, the guidance booklet for dysphagic cancer patients was developed so that, at the time of treatment and after hospital discharge, it is possible to establish knowledge about the health-disease process and minimize patients' insecurities; contributing to the effectiveness of exposing and reinforcing information and seeking to promote behavioral changes aimed at self-care²⁵.

The agreement and results (considered excellent) of the content validation were significant. This judgment made it possible to demonstrate the reliability of the instrument, considering the results of over 80% also presented in another validation study in Brazil²⁶. The booklet can therefore be seen as a complementary tool, as support for health professionals, as a means of assistance in emergencies and as a means of providing important guidance on safe feeding, oral hygiene, tracheostomy care and cleaning and handling feeding tubes.

It should be emphasized that a guidance booklet is not a substitute for verbal guidance provided by the team accompanying the person being cared for, but rather complements the clinical work. Above all, the booklet is based on promoting the patient themselves as the main instrument of rehabilitation, proposing their autonomy²⁷.

So far, no published studies have been found on the use of more specific speech therapy guidelines for patients with dysphagia, due to neoplasms. However, the use of guidance booklets has been advocated in several studies, with success for education in other health domains²⁸.

As for the limitations of this validation study, it is important to highlight the type of methodology, which

does not allow for the sample calculation of participants, the perceptions of users of the private network, which were not analyzed, and the difficulty of obtaining feedback from the research subject in the follow-up process related to communication problems resulting from surgery.

This booklet, which has been through the validation phase, can be used in education programs, in hospitals and especially in home care. In this way, it fulfills its purpose of promoting quality of life for cancer patients and strengthening the relationship between family members and health professionals.

CONCLUSION

The booklet entitled "Speech therapy guidelines for cancer patients with dysphagia" obtained excellent scores from the expert and non-expert judges. All the judges evaluated the booklet positively in terms of content and appearance. The booklet was therefore, validated.

This validated material can help patients, their families and other health professionals, so that it can be printed or made widely available on digital media, and patients can take advantage of a tool designed and built with the aim of influencing perceptions, as well as increasing demand for health services, reinforcing knowledge, countering misconceptions and clearing up doubts.

It is hoped that the study will arouse the interest of other health professionals in developing educational technologies in the search for better health conditions for the target population.

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GCS; MCB: Conceptualization; Data curation; Formal analysis; Investigation; Methodology; Project administration; Resources; Software; Supervision; Validation; Visualization; Writing – Original Draft; Writing – Review & editing.

IK: Data curation; Resources.

EDP; NP: Visualization; Writing – Original Draft; Writing – review & editing.

VBM: Supervision; Validation; Visualization; Writing – original draft; Writing – review & editing.

Data sharing statements:

Individual participant data are not available for sharing.

SUPPLEMENTARY MATERIAL

Supplementary material accompanies this paper.

SPEECH THERAPY GUIDELINES FOR DYSPHAGIC CANCER PATIENTS

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