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RESEARCH

VALIDATION OF EDUCATIONAL TECHNOLOGY FOR FAMILY/CAREGIVERS OF ONCOLOGY PATIENTS ELIGIBLE FOR PALLIATIVE CARE AT HOME

VALIDAÇÃO DE TECNOLOGIA EDUCACIONAL PARA FAMILIARES/CUIDADORES DE PACIENTES ONCOLÓGICOS ELEGÍVEIS AOS CUIDADOS PALIATIVOS NO DOMICÍLIO

VALIDACIÓN DE TECNOLOGÍA EDUCATIVA PARA FAMILIARES/CUIDADORES DE PACIENTES ONCOLÓGICOS ELEGIBLES PARA CUIDADOS PALIATIVOS EN EL HOGAR

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ABSTRACT

Objective: to validate the content of a booklet to improve the quality of life in the daily lives of family members/caregivers of cancer patients in-home palliative care. **Methods:** this was a methodological study. Data were collected from September 2021 to May 2022. Participants were 17 experts, 14 from health care and 3 from other areas. The study was mediated by a questionnaire structured according to the Likert scale, with items arranged in objectives, structure, presentation, and relevance. **Results:** of the 21 items in the questionnaire of the health area experts, only three resulted in a score of I (inadequate). The technology was validated since, according to the literature, obtaining a content validation index of at least 70% is necessary, and the index achieved was 88%. According to the experts' suggestions, the appropriate technology version was produced. **Conclusion:** the booklet is considered validated and, with the adjustments, it may promote self-care, reducing unawareness and giving more quality of life to family members/caregivers of cancer patients at the end of life.

Keywords: Educational Technology; Validation Studies; Health Education; Oncology Nursing; Caregivers; Palliative Care.

RESUMO

Objetivo: *validar o conteúdo de uma cartilha para melhorar a qualidade de vida no cotidiano de familiares/cuidadores de pacientes oncológicos em cuidados paliativos domiciliares.* ***Métodos:*** *estudo de caráter metodológico. Dados coletados de setembro de 2021 a maio de 2022. Os participantes foram 17 juízes especialistas, sendo 14 da área da saúde e 3 de outras áreas. Estudo mediado por um questionário estruturado de acordo com a escala Likert, com itens dispostos em objetivos, estrutura, apresentação e relevância.* ***Resultados:*** *dos 21 itens do questionário dos juízes da área da saúde, somente três resultaram em escore I (inadequado). Revela-se a tecnologia validada, pois, conforme a literatura, é necessário obter um índice de validação de conteúdo em pelo menos 70%, e o índice alcançado foi de 88%. Conforme as sugestões dos juízes, produziu-se a versão adequada da tecnologia.* ***Conclusão:*** *considera-se que a cartilha está validada e, com os ajustes, poderá a promover o autocuidado, podendo reduzir desconhecimentos e dar mais qualidade de vida aos familiares/cuidadores de pacientes oncológicos em fim de vida.*

Palavras-chave: *Tecnologia Educacional; Estudos de Validação; Educação em Saúde; Enfermagem Oncológica; Cuidadores; Cuidados Paliativos.*

RESUMEN

Objetivo: *validar el contenido de un folleto para mejorar la calidad de vida en el día a día de los familiares/cuidadores de pacientes oncológicos en cuidados paliativos a domicilio.* ***Métodos:*** *estudio metodológico. Datos recogidos desde septiembre de 2021 a mayo de 2022. Participaron 17 jueces expertos, siendo 14 del área de salud y 3 de otras áreas. El estudio estuvo mediado por un cuestionario estructurado según la escala de Likert, con elementos ordenados en objetivos, estructura, presentación y relevancia.* ***Resultados:*** *de los 21 elementos del cuestionario de los jueces del área de la salud sólo tres resultaron en la puntuación I (inadecuado). Se revela la tecnología validada, ya que según la bibliografía es necesario obtener un índice de validación de contenido de al menos 70%, y el índice alcanzado fue de 88%. De acuerdo con las sugerencias de los jueces, se produjo la versión adecuada de la tecnología.* ***Conclusión:*** *se considera que el folleto está validado y con los ajustes podrá promover el autocuidado, pudiendo reducir el desconocimiento y dar más calidad de vida a los familiares/cuidadores de pacientes con cáncer al final de la vida.*

Palabras claves: *Tecnología Educacional; Estudios de Validación; Educación en Salud; Enfermería Oncológica; Cuidadores; Cuidados Paliativos.*

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INTRODUCTION

Among the most lethal diseases, cancer stands out, causing most deaths worldwide and causing great discomfort in the lives of patients and family members. The irregular and accelerated growth of immature cells in different types of cells and tissues characterize cancer. These cells circulate in the blood and spread to other locations and distant organs, causing metastasis.[1]

Palliative care is a holistic advance that improves the well-being of patients with diseases that can lead to death and their families, acting on social, emotional, spiritual, and physical aspects.[2] It is recommended to incorporate them early in the disease trajectory, even with potentially curative treatments. Current treatment technology is providing the best therapeutic resources; however, the benefits of palliative care are still crucial and significant in raising the quality of life for patients and their families.[1,3]

The problems caused by the advance of the disease and proximity to the end of life increase the demands and need for greater care. These transformations affect the informal caregiver and the patient, resulting in feelings of uncertainty and anxiety, especially when they are at home, which makes care challenging. Providing clear and appropriate information to caregivers and patients at the right time makes all the difference in this experience, helping to alleviate the patient's and family's fears.[4]

Printed educational technologies, such as booklets, manuals, brochures, folders, books, and educational games, can disseminate information and raise awareness among the population. It is possible, with this, to outline alternatives to promote health with the population's involvement, in an exchange of knowledge, besides allowing caregivers and family members to read as many times as needed. In addition, it ratifies verbal orientations that may be forgotten and can provide guidance in cases of doubt and facilitate day-to-day decision-making.[5]

In the context of health and Nursing practice, educational technologies have been produced in multiple formats: an educational booklet,[6] videos for decision-making for patients,[7] online programs directed to the patient, and Anticipated Care Planning (ACP).[8] However, these materials are not always made available to the population after being evaluated, tested, and submitted to a validation process, because many health and Nursing professionals are unaware of this process.[9]

Given these considerations, the relevance of this study is that developing science-based and proven educational technologies such as primers will produce positive changes in the quality of life of family members and caregivers, reflecting directly on their clients or family members, in addition to assisting in the clinical and educational care of nurses by making available reliable educational material.

Given the above, this study sought to validate the content of a booklet for family members/caregivers of oncology patients eligible for palliative care at home.

METHODS

This is a content validation study of methodological character. This type of study is characterized by researching, systematizing, and analyzing data to build, validate and consider research instruments and strategies. It relies on constructing its tools to increase the security and legitimacy of these materials and procedures.[10]

The technology was constructed after reading 16 articles selected in an integrative review, and content analysis was used.[11] From the analysis, the following categories emerged: experiences of family members and caregivers, difficulties faced by caregivers in specialized care, and quality of life of caregivers. Based on the categories, the following topics were defined: care tips for the family/caregiver; and care tips for the family member and/or client.

The study was conducted between September 2021 and May 2022 and focused on the content validation of an Educational Technology (ET) produced by the authors in the booklet model. The first version was organized with pre-textual elements (summary and presentation of the booklet) and textual elements (contents: what is cancer?; common changes in cancer; what is palliative care?; is it possible to care at home?; what are the advantages of home care? understanding the problems and difficulties experienced; what to do if you do not find help?; finding support in taking care of oneself; healthy eating tips; how to deal with death at home?) and post-textual (final words, extra tips, exercise for the caregiver, recipes, word search, crossword puzzle, and references). The booklet was entitled *Guidelines and care tips to improve your quality of life*, with 54 pages and 34 topics.

The study was conducted in five stages: Identification and invitation to the experts; Content validation; Quantitative analysis; Qualitative analysis; and Preparation of the second version of the booklet.

The experts evaluated the booklet from the health area and other areas. For the health area experts, they needed to meet at least two of the following criteria: have clinical-care experience with family/caregivers of patients in oncologic palliative care (theme-focus) for at least three years; have studies published in journals and/or events related to the theme-focus; have works published in journals and/or events related to constructing and validating

the ET in the subject of the ET; and be a specialist (*lato-sensu* and/or *stricto sensu*) in oncology and/or palliative care.[12]

For experts from other fields, they should meet at least two of the following criteria: have occupational experience with the modality-type of TE for at least 2 years; have papers published in journals and/or events about TE; have studies published in journals and/or events related to the construction and validation of TE; have papers registered and/or employed with the modality-type of TE; be a specialist (*lato-sensu* and/or *stricto sensu*) in his/her professional field.[12]

The number of experts met the recommendation[13] from 6 to 20 specialists, which was also used in other studies validating educational products in the health area.[14-15] The experts were selected using network or snowball sampling methods. When a subject is identified as meeting the criteria for participation in the study, other experts are suggested.[16]

The entire validation process was done virtually through the *Google Forms* platform. The experts were previously selected by analyzing the *Lattes* curricula on the *Lattes Platform website*. According to the selection criteria, they were invited by electronic mail (via e-mail) or contacted by phone (via *WhatsApp*®). After acceptance, they signed the Free and Informed Consent Form. Soon after, they received a copy of the booklet in Portable Document Format (PDF) and the link to the evaluation instrument. They were asked to return the completed instrument within 15 days. A total of 17 professionals agreed to participate, 14 specialist-nurse experts and 3 experts from other areas (1 with a PhD in ET and 2 pedagogues; one with a PhD and another with a specialization).

Two instrument models were applied for data collection, one for health experts and the other for experts from other areas. Both instruments had already been used in other validation studies.[12] The expert questionnaire has the following composition: identification of the experts; instructions for completion; blocks with the questions; and a part for general comments and suggestions. There are three blocks of questions configured: I) objectives, II) structure and presentation, and III) relevance. The Likert Scale scores the items as follows: 1 point for Totally Adequate (TA), 2 points for Adequate (A), 3 points for Partially Adequate (PA), and 4 points for Inadequate (I). The questionnaire for the experts from other areas is structured in four parts: identification of the experts; instructions for answering; blocks of questions; and a final part for general comments and suggestions. There are five blocks of questions, namely: I) content, II) language, III) graphic illustrations, IV) motivation, and V) cultural appropriateness. The Likert Scale scores according to the following items: 2 points for Adequate (A), 1 point for Partially Adequate (PA), and 0 points for Inadequate (I).

In order to achieve technology validation by the experts, the item and total must result in a Content Validity Index (CVI) equal to or above 70%.[17] The formula (CVI = number of agreements/total number of questions x 100) is used to calculate the CVI, which determines the proportion of experts agreeing on a certain question in the instrument. This calculation was possible because a Likert scale with scores from 1 to 4 was used. The result of the index is obtained by the sum of the agreement of the items, marked as "1" and "2" by the experts, and divided by the total number of responses[(18)].

The instrument assigned to experts from other areas, whose main emphasis was on design, was developed regarding an American instrument presented in 1996 to evaluate the disagreement and conformity of educational materials, entitled Suitability Assessment of Materials (SAM). This instrument has a list to analyze aspects of content, writing style, appearance, motivation, and cultural appropriateness of the educational instrument produced.[16] To evaluate the appropriateness of the technology by experts from other areas, the SAM Score was obtained. The SAM score is calculated from the sum of points obtained on the instrument by each expert. In order to be adequate, the technology must obtain a score equal to or greater than 10 points.[18]

According to the ethical-legal precepts of the resolution of the *Conselho Nacional de Saúde* (CNS) No. 466/2012, the study was submitted to the evaluation of the Ethics and Research Committee of the institution *Faculdade Metropolitana da Amazônia*, receiving the approved opinion under number 4,599,834.

RESULTS

The results will be discussed in three topics: i) description of the first version of the educational technology; ii) validation (participants' profile, validation of health experts and experts from other areas); and iii) description of the second version of the educational technology after adaptation.

Description of the first version of Educational Technology

The first version, with 54 pages (including cover and references), was built on sheets with a grid paper background, using multiple colors and the Adobe Photoshop© software. The content was structured as a table

of contents and initial presentation, followed by introductory topics: What is cancer?; Common cancer changes; What is palliative care?; Is care possible at home?; and What are the advantages of home care? After the introductory topics, in part 1, care tips for the family member/caregiver were included; in part 2, care tips for the family member and/or client.

Part 1 contains topics directed only to the caregiver: taking care of oneself; and how to deal with death at home. Part 2 contains topics for both the caregiver/family member and the palliative care client, such as: how to care for the colostomy bag and information about feeding.

Validation of the educational technology

Content validation with nurse experts: 14 nurses participated as experts. As for the time of training, 8 are trained from 2 to 10 years (57.14%), 3 from 11 to 15 years (21.43%), 2 from 16 to 20 years (14.29%), and 1 for more than 21 years (07.14%). As for the area and time of work, they all have a degree in oncology; the shortest time is 2 years, and the longest is 25 years. These data highlight the professional experience in oncology, ensuring an evaluation of the booklet supported by experience.

The objective aspects such as structure and presentation and the relevance that we expect to achieve with the use of the booklet are exposed in the form of tables, which correspond to the organization of the validation instrument, with the responses achieved in each item, per block, according to the frequency of variables (i.e., the number of times each value appeared and the CVI result) per item. Table 1 lists the results of the first block

This block refers to the purpose that one wants to achieve with the use of the booklet. We verified that the first block had five items, totaling 70 answers, 34 (48.5%) indications for TA, 31 (44.2%) for A, 5 (7.1%) for PA, and 0 (0%) for I. According to the answer options, the scores TA and A add up to 64 (92.7%), which is equivalent to the CVI in this block; the lowest CVI among the items was (78.5%) and the highest (100%).

Next, the structure and presentation of the booklet were evaluated in relation to how it arranged the guidelines. This encompasses its organization as a whole: structure, presentation technique, coherence, and formatting (Table 2).

In this aspect, the answers were: 36 (23.3%) for TA, 83 (53.8%) for A, 35 (22.7%) for PA, and 0 (0%) for I. Of the 154 (100%) answers resulting from the sum of all items in this block, 119 (77.1%) were for TA and A. Of the 11 items that c omprise the second block, 8 reached the CVI, which varied from 71.4% to 92.8%; therefore, they were considered valid. However, 3 did not reach the established index: a value lower than 70%. Thus, this block reached a CVI of 77.1%, and the booklet, in general, a CVI of 88%, acceptable and validated.[17]

Finally, the third evaluation block addressed the relevance of the booklet (i.e., it focused on the particularities that evaluate the level of significance of the educational tool developed), as shown in Table 3.

In this block, the answers were: 44 (62.8%) for TA, 22 (31.4%) for A, 4 (5.7%) for PA, and 0 (0%) for I; thus, of the 70 (100%) answer choices, they calculated 66 (94.2%) for TA and A. The block in question reached an above-average agreement index of 70%, the lowest average being 92.8%. The sum of all the TA scores resulted in a total of 114, and for A, a total of 136. Thus, the tendency toward concordant answers among the experts for TA (38.7%) and A (46.2%) scores is recognized.

Table 1 - Responses of oncology specialists regarding the objectives of the booklet. Manaus, AM, Brazil, 2022

Goals	TA	A	PA	I	CVI
1.1 The information/content is consistent with the everyday needs of the ET target audience.	8	6	0	0	100%
1.2 The information/content is important for the quality of life of the target audience of ET	8	5	1	0	92.8%
1.3 The ET invites and/or prompts changes in behavior and attitude	2	9	3	0	78.5%
1.4 Can circulate in the scientific environment of the area	8	5	1	0	92.8%
1.5 Meets the objectives of institutions where the target audience circulates and/or is served	8	6	0	0	100%
Total	**34**	**31**	**5**	**0**	**92.7%**

Legend: 1- Totally Adequate (TA); 2- Adequate (A); 3- Partially Adequate (PA); 4- Inadequate (I).

Table 2 - Evaluation of oncology specialists regarding the structure and presentation of the booklet. Manaus, AM, Brazil, 2022

Structure and presentation	TA	A	PA	I	CVI
2.1 The ET is appropriate to be used by the target audience	4	8	2	0	85.7%
2.2 The messages are presented clearly and objectively	3	8	3	0	78.5%
2.3 The information presented is scientifically correct	3	10	1	0	92.8%
2.4 The material is appropriate to the socio-cultural level of the ET target audience	2	7	5	0	64.2%
2.5 There is a logical sequence of proposed content	2	10	2	0	85.7%
2.6 Information is well structured in agreement and spelling	2	9	3	0	78.5%
2.7 The style of the writing corresponds to the level of knowledge of the target audience	3	7	4	0	71.4%
2.8 The information on the cover, back cover, abstract, acknowledgments, and/or presentation is consistent	4	7	3	0	78.5%
2.9 Title and topic lengths are appropriate	4	5	5	0	64.2%
2.10 Illustrations are expressive and sufficient	5	7	2	0	78.5%
2.11 The number of pages is adequate	4	5	5	0	64.2%
Total	**36**	**83**	**35**	**0**	**77.1%**

Legend: 1- Totally Adequate (TA); 2- Adequate (A); 3- Partially Adequate (PA); 4- Inadequate (I).

Table 3 - Evaluation of oncology specialists regarding the structure and presentation of the booklet. Manaus, AM, Brazil, 2022

Relevance	TA	A	PA	I	CVI
3.1 The themes portray key aspects that must be reinforced for the target audience to live well and with quality of life	9	5	0	0	100%
3.2 The TE enables transfer and generalization of learning to different contexts	8	5	1	0	92.8%
3.3 The TE proposes knowledge construction	9	4	1	0	92.8%
3.4 The TE addresses the subjects necessary for the target audience's know-how	10	3	1	0	92.8%
3.5 It is suitable for use by the target audience of the TE	8	5	1	0	92.8%
Total	**44**	**22**	**4**	**0**	**94.2%**

Legend: 1- Totally Adequate (TA); 2- Adequate (A); 3- Partially Adequate (PA); 4- Inadequate (I).

None of the 21 questionnaire items represented in the three charts had a score of I (inadequate). Keeping in mind that for the technology to be validated, it must reach a minimum CVI of 70%, and the resulting overall CVI was 88%, the educational technology was validated.

Content validation with experts from other areas: Individuals that participated as experts from other areas included 1 with a PhD in Educational Technology (expert 1), 1 with a PhD in Education/Pedagogy/Assistive Technology (expert 2), 1 with a specialization in Special Education, Neuropsychopedagogy, and Sign Language (expert 3), reaching a final sample of 3 experts. The experts' ages ranged from 43 to 64 years, and their training time ranged from at least 9 years to a maximum of 30 years. As for the time they have been working, they have between 9 and 30 years. One of the participants works as a visiting professor, the other in education, and the third expert works as a pedagogical supervisor and sign language interpreter.

The sum of the points obtained on the instrument by each expert resulted in the following SAM scores: expert 1 scored 22, expert 2 scored 26, and expert 3 scored 26. Given the recommendation that to be adequate, the technology must reach a score of 10 points or more, the experts' scores were 22, 26, and 26. Therefore, the technology was considered adequate. Table 4 shows the score achieved by the booklet according to the perception of these experts.

Description of the second version of the Educational Technology

The experts highlighted some points with suggestions to improve the material (health experts and experts from

Table 4 - Evaluation of the experts of other areas regarding the adequacy of the booklet. Manaus, AM, Brazil, 2022

Expert	1.1	1.2	1.3	2.1	2.2	2.3	3.1	3.2	4.1	4.2	4.3	5.1	5.2	SAM Score
1	2	2	2	2	2	2	2	2	2	2	2	2	2	22
2	2	2	2	2	2	2	2	2	2	2	2	2	2	26
3	1	1	1	2	2	2	1	2	2	2	2	2	2	26

Legend: Suitability Assessment of Materials (SAM)

other areas). Among the main suggestions, the experts pointed out: change in the fonts used throughout the text; change in the cover title; change in background colors; textual corrections and use of a more simplified language; decrease in the size and number of images; and decrease in the number of pages. After analyzing the suggestions and considering that most experts considered the technology too extensive, we divided the booklet into two volumes.

Volume 1 was titled *"Health of the Caregiver of People with Advanced Cancer at Home: Tips for Healthy Living."* It contains information and guidelines that help care for one's own health. It has 33 pages and the following topics: Understanding the problems and difficulties experienced; What to do if you cannot find help; Finding support; Caring for yourself; Healthy eating tips; and How to deal with death at home.

Volume 2 was entitled *"Caring in the context of palliative care at home."* It contains issues related to the care that the family member/caregiver needs to know to care for their family member and/or client. It has 36 pages and the following topics: What care for the cancer patient when faced with infectious diseases? It has 36 pages and the following topics: What to take care of when taking medications; How to administer medications using a subcutaneous catheter; Information about changes in feeding; Tube feeding and care; How to take care of a bladder catheter; How to perform minor bandages; How to clean a colostomy bag; How to move my patient and/or client; Preventing pressure injuries; Personal hygiene; Dealing with symptoms at home; Symptoms that need immediate care; and Contacts in case of emergencies at home. Its emphasis is on improving the quality of life of family members/caregivers of palliative care oncology patients at home.

For the illustration, figures depicted common signs and symptoms of cancer; people talking and others sharing tasks indicating support to the caregiver; healthy and unhealthy foods; risks of falls; among many others. We considered points that would make the technology more dynamic, easy to read, informative, and at the same time, objective.

DISCUSSION

In general, the experts' answers from both areas were in agreement. According to the responses obtained in the CVI, the overall average was 88%; thus, the level of agreement of the responses was satisfactorily adequate for validation. Therefore, the booklet that obtained high scores in the validation process presents the high relevance conferred by the experts and agrees with other studies[12-19] that have also validated materials.

The method applied has proven capable of contributing to creating an attractive, comprehensive, and easy-to--understand educational technology. This may help construct other educational technologies, both in this subject and in any other that involves the need for care.[20]

By sending the evaluation material by e-mail, associated with educational technology, it was possible to include experts from other Brazilian states, including experiences in realities experienced in different regional conditions. This strategy has also been employed by other authors[21] in creating printed didactic instruments, such as workbooks and serialized albums, to encompass cultural diversities, corroborating for greater and more reliable applicability of the material in different parts of the country.[22]

After building an educational technology, it is crucial to perform content validation. These types of validation are performed by experts and are currently being widely applied by researchers in evaluating technologies. The Brazilian Ministry of Health recommends that the language used in educational technologies is a point of special attention because it can help or hinder the transmission of the message. Therefore, the text should be objective and colloquial, appropriate to users' individualities, enabling a light, attractive, and easy-to-understand reading.[23]

After validation, points for improvement were identified in the booklet regarding readability and presentation. The organization of a printed booklet in terms of a text sequence, font types used, figures and images,

arrangement of information, marking of important points and ideas, use of color, and spacing facilitates the readability of educational materials.[24]

In a validation study of a handbook on sickle cell disease, the language and presentation were a point of attention of the evaluators, who considered it important to change some terms to make the text more understandable, as suggested in the validation of this booklet. A clearer and more understandable language improves the interpretation of the information provided and enhances the initiative in decisions and self-care, as well as the performance in self-care.[25]

As cancer patients increase their survival with a better quality of life, more time will be dedicated to caregiving, and this intensifies at home and brings about several changes in family dynamics. This is why it is more urgent than ever to bring innovative solutions that respond to these new challenges, as well as to attend to the family member who gets sick together with the patient who is under their care at home. There is no doubt that caring for a person with cancer has a negative impact on quality of life, and family caregivers are more likely to experience physical, social, and emotional distress, being more overwhelmed than those who are not caregivers[(26)].

Not only the person with a serious illness requires attention and care, but the whole family that experiences the situation, which can also become ill - especially the family caregiver who, when caring for a person with a serious life-threatening illness, is faced with a great challenge and have to experience the insecurity of performing actions for which they are not prepared, with the possibility of developing stress and overload. The family or informal caregiver can be any person willing to provide support and care that the ill person needs; it can be a friend, relative, or companion.[27]

Although there is much information about palliative care in digital tools, folders, manuals, and primers, much of it is directed to health professionals, not the patient and his family. A study that reviewed the use of educational technologies on palliative care aimed at cancer patients and their families identified only one ET was focused on the care of the caregiver of cancer patients.[24]

Therefore, the creation of an educational technology focused on the orientation of care that nurses can use appears as an essential material to promote the health of those who care and orient professionals who work with palliative care. The technologies in care and Nursing have presented clear progress in terms of health, providing direct improvement in the provision of care to the person who wants to promote quality of life, including favoring the adoption of healthy habits, as well as helping to understand more quickly stimulate the necessary changes in self-care practices.[26]

It is essential to start making available adequate tools and materials capable of helping caregivers and family members, assisting them in the care process. The option for a printed booklet is explained by the fact that, in the Brazilian context, there is still a lot of unequal access to the Internet and electronic devices; therefore, the booklet is user-friendly material, as it does not need electronic resources to be consulted.[22]

As they constitute a body of knowledge that supports, prepares, and intercedes the educational exercise, educational technologies offer support to the individual so that they can better live life situations and seek ways to solve problems, helping in critical reflection and taking new positions. Educational technologies corroborate the health education process: an adherence and elevation of the understanding of the subject, facilitating communication and intensifying the orientations passed on by health professionals.[25]

As a limitation of the study, it is vital to highlight the validation of the technology with the target audience, which will be done in a later study.

CONCLUSION

The second version of the booklet was validated and adequate to be made available to family members/caregivers of cancer patients. The suggestions pointed out by the experts reinforced the need and the importance of submitting educational instruments to validation processes.

One can assume that the material produced will provide adequate information about palliative oncology care and the home care patients need. The merit of this study is related to the opportunity of making the information more accessible to the target audience and making viable support material for nurses and other health professionals in the mediation of care.

Hence, it is understood that ETs produced based on scientific knowledge and validated are dynamic, creative, and appropriate tools for the care directed to patients in palliative care and for the health education of caregivers/family members who care for individuals in the context of oncologic palliative care.

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