



Validation of a booklet designed to promote comfort of relatives of hospitalized patients

Validação de cartilha para promoção do conforto de familiares com parentes hospitalizados

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Objective: to validate the content of an educational booklet to promote comfort of relatives of hospitalized patients. **Methods:** methodological study developed in an Intensive Care Unit carried out in three stages: construction of the educational booklet, expert validation, and semantic analysis. The Content Validity Index was used to analyze the degree of relevance and pertinence of the content and the images; values ≥ 0.80 were adopted. **Results:** the booklet obtained a satisfactory evaluation in to the evaluated criteria, with an overall Content Validity Index of 0.87. Items that did not reach the content validity index adopted were reformulated. The evaluation made by the judges evidenced that the content was adequate to the main information needs. **Conclusion:** the content of the educational booklet presented adequate validity indices, thus representing an aid to clarify doubts of relatives, and being, therefore, a tool for health education.

Descriptors: Validation Studies; Teaching Materials; Intensive Care Units; Family Nursing.

Objetivo: validar o conteúdo de cartilha educativa para promoção do conforto de familiares com parentes hospitalizados. **Métodos:** estudo metodológico, desenvolvido em Unidade de Terapia Intensiva, em três etapas: construção de cartilha educativa, validação por especialistas e análise semântica. Para análise do grau de relevância e pertinência do conteúdo e imagens, empregou-se o Índice de Validade de Conteúdo e adotaram-se os valores $\geq 0,80$. **Resultados:** a cartilha obteve avaliação satisfatória em relação aos critérios avaliados, obtendo Índice de Validade de Conteúdo geral de 0,87. Os itens que não alcançaram índice de validade de conteúdo adotado foram reformulados. Na avaliação realizada pelos juízes, evidenciou-se adequação do conteúdo às principais necessidades de informação. **Conclusão:** o conteúdo da cartilha educativa apresentou índices de validade adequados, constituindo-se subsídio para esclarecer dúvidas de familiares, sendo, portanto, ferramenta para educação em saúde.

Descritores: Estudos de Validação; Materiais de Ensino; Unidade de Terapia Intensiva; Enfermagem Familiar.

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Introduction

The hospitalization of a person in an Intensive Care Unit usually occurs unexpectedly, contributing to family maladjustment because various discomforts are experienced. The discomfort of family members in this context has been understood as changes, disturbances and difficulties of a physical, psychic and social nature, resulting from the interaction of the family member with the process of hospitalization⁽¹⁾. The feelings of anguish, fear of not knowing the real clinical condition of the relative, helplessness before the treatment, and change to an environment whose norms and routines are strange are factors that contribute to this discomfort. Such discomfort directly affects the family nucleus, causing emotional changes and, inevitably, disruption in the daily life of members⁽²⁾.

There are other factors that contribute to and potentiate the discomforts or comforts of these family members, such as having information about the clinical improvement of the relative, with consistent indicators of clear and sincere guidance that help minimize doubts, fear of uncertainty about the fate of the family or, even, the absence of control of the situation experienced, representing an essential element for the embracement⁽²⁻³⁾.

The lack of information and guidance can increase the emotional imbalance of these families. This need can be met through conversations with health team professionals during visits, being present and interacting with the relative, and also through printed educational material⁽⁴⁾. Information provided in the form of written materials such as leaflets and booklets has been used to improve the comfort of family members of hospitalized patients.

Printed educational material has been a useful tool because it is considered an educational technology applied in health education that can improve the knowledge, satisfaction and adherence not only to treatment but also to self-care of patients in various situations of illness⁽⁵⁻⁶⁾. In this sense, educational booklets represent one of the strategies used to promote

comfort through the delivery of written information and guidance to family members in the hospital context. It is known that the families appreciate written guidelines and this material works as a readily available resource, as they are within the reach of the family members, who can consult it when necessary, favoring the organization of the family group and the activation of coping mechanisms⁽⁷⁾.

However, in order for this information to reach the expected efficacy, a validation process is necessary. This process aims to evaluate the essential points to aid the readers' understanding of the lived reality, and for the adequacy of the content and the language employed⁽⁸⁾.

The importance of information for family comfort, whether verbal or written, has been described in the literature⁽⁹⁾. However, the number of publications about the process of creation and dissemination of educational booklets to guide families of patients admitted to intensive care units is scarce, hindering their systematic development. The lack of studies addressing the practices adopted in the preparation of materials for family members in the context of hospitalization was a motivating element. The following databases were searched: Latin American and Caribbean Health Sciences Literature, Online Medical Literature Search and Analysis System, and Scientific Electronic Library Online. The keywords first employed were: booklet, family and care Intensive care. No time limitation was established. This search did not result in any article directly related to the theme, this showing a gap in the production of studies about the family, from the perspective of comfort.

The content of the proposed booklet may be valid to minimize the discomforts experienced by family members, to improve their physical, psychological, spiritual well-being and, consequently, to help them in coping with the situation and making decisions, so that they can be able to deal with this experience of having a family member in intensive care. Thus, aiming at promoting comfort, the following question was raised: does the booklet designed to promote family

comfort in intensive care have adequate content validity indices? Thus, the objective was to elaborate and validate the content of an educational booklet to promote the comfort of relatives of hospitalized patients.

Methods

This is a methodological study that was conducted from March to July 2017. The study scenario was a large public hospital, in the countryside of Bahia, Brazil, with two adult intensive care units with a total of 18 beds. The study participants were eight specialists with experience in the subject, and eight family members who went through the experience of having a family member hospitalized in the abovementioned hospital unit.

Because the study was about an informative manual, the theoretical procedures for the development of the material ranged from the explanation of the theory about the object studied to the elaboration of the informative booklet for the family. The first step consisted of the construction of the topics to be approached in the educational booklet. For this purpose, a bibliographic survey was carried out in scientific articles and databases, without establishing a specific time interval, about the needs, feelings, comfort and discomfort of families living the situation of hospitalization, aiming at building a booklet based on scientific evidence. A total of 21 articles that addressed the main needs of relatives in terms of information living the situation of hospitalization were selected. After selection and reading of the articles, the information identified as important for families was categorized, giving rise to the topics presented in the educational booklet. After that, the internal structure of the booklet was prepared, joining the textual parts with the illustrations, whose selection was based on the criterion that the images approached the reality found by relatives in the hospital. Then, the layout of the material was structured, resulting in the first prototype of the booklet that was sent to print.

The educational booklet was titled: "What does

a family member need to know when he or she has a relative in Intensive Care?" The booklet has 14 sheets, consisting of pre-textual elements (cover and presentation page), textual elements (six topics, converting since the purpose of the Intensive Care Unit up to guidance on comfort for family members), and post-textual elements (references).

In order to make the information comprehensible to the target audience, simple and easy-to-understand language was adopted. The topics covered were: What is an Intensive Care Unit? What is a waiting room? Who are the health professionals working in this sector? Which are the resources used for treatment? Hospital Visit, Purpose of the medical report, and How to take care of your relative in the Intensive Care Unit?

The second step consisted of expert analysis of the booklet. The pilot booklet was subjected to expert analysis to judgment and opinion on the extent to which the selected items meet the object of central interest, which is, in the case of this study, the information to be provided to relatives of people in critical health condition. The booklet was evaluated by a committee of eight expert judges, who were selected according to the following inclusion criteria: being a researcher or health professional with experience in intensive care and/or with families in the situation of hospitalization, and working during the daytime, since the interaction with the family members occurred during this time of the day.

These specialists were contacted by means of a letter of invitation where the purpose of the research and the importance of the evaluation was explained, accompanied by the declaration of acceptance and a specific form containing at least three items to evaluate each topic of the booklet.

The judges initially evaluated the instrument by topic, checked whether each set of content was adequately addressed, and whether all dimensions representing the object of interest were included. After that, the topics of the booklet were analyzed in terms of clarity and relevance, considering a four-point Li-

kert scale: 1-no, 2-little, 3-partially, and 4-fully. When the options 1 and 2 was selected, the specialists should presented a justification in a space reserved for descriptive evaluation. Regarding clarity, the wording and comprehensibility of the contents were analyzed. In the analysis of relevance, it was evaluated whether the contents of each topic reflected the concepts involved, and whether they were relevant and sufficient to achieve the proposed objective. The adequacy of the images to the reality experienced by family members was also analyzed.

Judges made their evaluations using an online survey form, called Google Forms, which is one of Google Drive's applications. After analysis by the judges, the booklet was re-evaluated and the modifications suggested and necessary for improvement were made and maintained in a pilot version II to be evaluated by family members.

The third step consisted of semantic analysis by the target audience. After expert analysis, the second version of the pilot booklet was subjected to semantic analysis to verify whether the content of the booklet was understandable to the target audience. In this step, eight family members of patients hospitalized for three days or more in the waiting room were invited to participate. It is estimated that this time interval (three days of hospitalization) is enough for relatives to recognize the main information needs. After accepting to participate, they signed the Informed Consent Form. The evaluation took place individually, using a printed instrument similar to that used by the specialists, but focusing on the clarity of the information.

To measure the proportion or percentage of judges who agreed on aspects of the booklet, the Content Validity Index (CVI) was calculated by summing the agreement of items that were scored 3 or 4 by the experts, divided by the total number of answers. To obtain the overall CVI of the topics, the arithmetic mean of individual CVIs was calculated. The CVI considered adequate ≥ 0.80 . Items that had a CVI value lower than 0.80 were reviewed⁽¹⁰⁾.

This study was approved by the Research

Ethics Committee of Feira de Santana State University, and approved according to Opinion 1,758,708/16.

Results

The process of content validation was initiated after analysis by a committee of eight specialists, including six health professionals working in the hospital during the day (one doctor, three nurses, one psychologist, one social worker) and two researchers in the area who were selected by means of publications. They had more than five years of experience in the object of central interest, most of them were female, over 30 years old.

The evaluation of the booklet took place by topics, verifying if each set of content was adequately contemplated. Then, the booklet was analyzed according to the objectives, structure and presentation.

In the overall evaluation of the booklet, only two items had individual CVI lower than the established minimal value. Regarding the domain structure and presentation, the lowest scores were related to the grammatical aspects (0.62) and adequacy of the images to the lived reality (0.75), being corrected once again according to the suggestions of the evaluators.

The items related to the objectives obtained the maximum score (individual and global CVI = 1), showing that the booklet really addressed the information that most provoked doubts and curiosity among family members.

In structure and presentation, the judges considered that the informative instrument was appropriate for family members who had relatives in intensive care (CVI=1), the information was scientifically clear and had logical sequence (CVI=1), the language was appropriate to the schooling level of the target audience (CVI=0.87), the layout of the cover and presentation page were consistent (CVI=0.87), and the font size and number of pages were appropriate (CVI=1). The evaluation of the structure and presentation resulted in some recommendations, especially in the item about concordance and spelling of the texts (CVI=0.62), so

all items that were pointed out were reviewed and corrected.

In the evaluation by topics, in the topic What is an Intensive Care Unit? and What is a waiting room?, the judges evaluated the way the topics were explained and the accessibility to the target audience, the relevance of the information and the adequacy of the images to the lived reality. The item that obtained the lowest score was the one about the quality of the images, with an individual CVI of 0.75 and the recommendation given was: reevaluate the sharpness of the images, which was a suggestion accepted and incorporated for improvement of the booklet (Figure 1). Overall, the topics were well evaluated, reaching an overall CVI of 0.87.

The topic about health professionals working in intensive care obtained the lowest individual and global CVI (0.75). The judges considered that it was necessary to adjust some information to allow a better understanding of family members. They suggested to include other health professionals, besides those already mentioned in the booklet, among them: social worker, speech therapist and dentist. The item with the lowest individual CVI was the one on the competences of health professionals, with a score of

0.50. The main recommendations were: to review the competences of the nursing team and of the intensive care physician. Regarding the adequacy of the images (CVI=0.75), the suggestion was to bring images of Brazilian professionals in action. In this topic, the clarity of the item obtained the highest score, reaching an individual CVI of 0.87.

The topic about resources used in the treatment of the hospitalized family member also needed to be reviewed, as the overall CVI obtained a score of 0.74, and the clarity of the language adopted to explain them a score of 0.75. The item about the devices and/or equipment that most aroused doubts in family members obtained the lowest score (0.62), being adjusted according to the experts' main suggestions regarding the inclusion of some devices: the mechanical ventilator next to the respirator, the oxygen catheter and the nasogastric tube. Explanations about the purpose of tracheostomy and of the so-called egg box mattress were given because these terms are frequently used in the hospital routine and are important for the understanding of family members, since the item related to image quality obtained the highest individual CVI (0.87).

Topics/Items	Suggestions from expert judges	CVI*
Are the illustrations appropriate to the content?	They are not sharp enough, they do not allow family members to perceive important aspects in the environment; review the quality of the images shown in the booklet, because they are blurred.	0.75
Is the health team of the intensive care unit presented in the material in a consistent way with reality?	Even though social workers are not assigned to work at the unit, family members can count on the support of the Emergency Social Work Team; include the dental professional and speech therapist in the specification of professionals.	0.75
Do the definitions demonstrate the role of each professional in providing care?	Add in: nurse's functions to perform more complex care; role of the intensive care physician: provision of medical report; and role of the nursing technician: preparation of solutions, provision of food to the hospitalized person, when in case of oral diet.	0.50
Are the illustrations appropriate?	Bring images of Brazilian professionals and portraying them working.	0.75

*CVI: Content Validity Index

Figure 1 – Specification of the items of the informative instrument that obtained CVI<0.80 in relation to the topics

The topics that addressed hospital visits, medical reports and how to take care during the hospitalization of the person reached high individual and global CVI values, and for this reason they did not need to be reformulated. The judges believed that they were clear and the approach was closely related to the needs of family members. Table 1 shows the results of the evaluation of the participating family members.

After making the changes suggested by the judges, the booklet was submitted for evaluation by the target audience. This step had the participation of eight family members, mostly women, between 20 and 30 years old, daughters, with hospitalization time between seven and 10 days. In the evaluation of the

target audience, the CVI values in the semantic analysis according to topics are shown in Table 1. The topics What is an Intensive Care Unit/Waiting Room, Resources used for treatment, Medical report, and How to take care of yourself during hospitalization, reached the highest overall and individual CVI. The topic “Who are the health care professionals working in the Intensive Care Unit?” reached an overall CVI of 0.8, but one evaluative item related to the knowledge of family members about health professionals, presented in the booklet, obtained CVI=0.20, which is explained by the lack of knowledge of the family members about the diversity of professions present in the Intensive Care Unit.

Table 1 – Analysis of the informative topics in the booklet by family members

Topics	CVI*	Global CVI
What is an intensive care unit? What is a waiting room?		
Were the topics explained in a simple and easy-to-understand way?	1.0	0.91
Does the information answer your main questions?	0.87	
Do the images portray the reality found in the hospital?	0.87	
Who are the health care professionals working in the Intensive Care Unit?		
Did you already know the health professionals mentioned in the booklet?	0.20	0.80
Are definitions of the role of each professional easy to understand?	1.0	
Was the topic explained in a simple way?	1.0	
Are the images appropriate to the topic?	1.0	
Resources used for treatment in the Intensive Care Unit		
Were the devices and/or equipment presented in the booklet the ones that most aroused your doubts or curiosities?	0.87	0.91
Has the explanation of the function of each device and/or equipment been given clearly?	0.87	
Are the images similar to those found in the Intensive Care Unit?	1.0	

*CVI: Content Validity Index

Table 2 – Analysis of the informative topics in the booklet by family members

Topics	CVI*	Global CVI
Hospital visit		
Does the topic answer your main doubts?	0.87	0.83
Is the information sufficient?	0.75	
Are the tips mentioned important and easy to understand?	0.87	
Medical report: Time of the information		
Does the topic answer your main doubts?	0.87	0.91
Is the information written clearly?	0.87	
Are the tips on what to ask the medical professional important?	1.0	
How to take care of yourself during the hospitalization of the relative in the Intensive Care Unit?		
Is the topic written in a simple way?	1.0	0.96
Is the information sufficient?	1.0	
Are tips important in helping you cope with this moment?	0.87	

*CVI: Content Validity Index

Table 2 also shows that in the topic Hospital visit, the family indicated that the amount of information was insufficient (CVI=0.75). After evaluation by the participating family members, it was found that no item needed to be removed. The family members thought that the topics were written in a clear way and that the information addressed was important for them to face this experience more strengthened.

Discussion

The impossibility of evaluating the effectiveness of the booklet in clinical practice to reduce anxiety and discomfort levels was the main limitation of this study, emerging as a goal for future research.

Educational technologies as a strategy to meet information needs have been recognized as an important tool for embracement and promotion of comfort of people with acute illnesses and their families. These tools can instrumentalize the family in certain aspects of the experience they go through which are not discussed with health professionals in the daily routine of hospitalization, favoring the coping and even decision-making of the family concerning the sick individual⁽¹¹⁾.

A study about the importance of communication with family members hospitalized in intensive care found that contact with family members was restricted to visiting hours and, in general, the team had not met the family's informational and emotional needs and this could transform the experience of hospitalization in a negative and frustrating process⁽¹²⁾. The anticipated actions performed by the entire multidisciplinary team may address the most frequent doubts and questions that have not yet arisen, producing the perception of humanization of the environment and of the care for the family members⁽¹³⁾. The lack of knowledge of family members when questioned about the multidisciplinary team pointed to the importance of the work of the health care team with the family, so that they may acknowledge the diversity of professions present in the Intensive Care Unit.

The moment of the visit in intensive care are the most important for family members because this is the time to be closer to the hospitalized relative, thus reducing the distance in the relationship that is caused by the illness. However, only allowing the family member to enter the environment is not enough to provide comfort; it is necessary to prepare and accompany the family during the visit, so as to identify and clarify their doubts⁽¹⁴⁾. In this topic of the booklet, family members wanted a broader explanation to feel more confident. This preparation goes through the presentation of the dynamics of the unit, the circumstances that the relative may face, possibly with various devices, as well as guidance about the attitudes to be adopted by the family towards the patient⁽¹⁵⁾. Therefore, the validated instrument intended to address content that contemplated the most common aspects of this experience, to instrumentalize family members.

In general, the informational tool "What do you need to know when you have a relative in the intensive care unit?" was positively evaluated by the participating expert judges. The analysis of the material supported the improvement of the booklet in terms of information, structure and presentation. The judges' statements pointed that the use of this informational material brings benefits inside and outside the hospital environment. Obtaining information through the booklet at moments when stress is low, for example at home, and whenever deemed necessary, has been effective because obtaining information directly from professionals in an environment with stressors may compromise the ability grasp news and reports.

The semantic evaluation showed that comfort for families was associated with the fact that they received clear information about the dynamics of the inpatient unit and, especially, about the clinical evolution of the family member. Moreover, the validity and relevance of the elaborated material lies in the identification that the expectations and priorities of the family members regarding this experience were covered in the elaborated content, indicating that this material is sufficient and easily understood, and the-

refore able to improve the knowledge and satisfaction of family members.

It is recommended to use the booklet immediately after the patient's admission to intensive care. The booklet may be offered by any health professional, before the first visit, so that family members may read the material and benefit from elements that assist them in the treatment and in the coping with the illness of their relative. In this sense, the use of educational technologies can come as a care-educational support, contributing to the embracement and health education of relative of people admitted to intensive care units.

Conclusion

The CVI values indicated that the elaborated instrument covers the information of interest to family members who experience the hospitalization process. The educational material may be useful to help them face this reality in more strengthened way, since misinformation is a major diffuser of discomfort.

Collaborations

Bezerra JS contributed to the writing of the article, design of the study, and analysis and interpretation of data. Freitas KS collaborated with the conception, design of the study, analysis and interpretation of data and relevant critical review of the intellectual content. Góis JA and Lima AB assisted in the writing of the article, analysis, interpretation of data and final approval of the version to be published. Fontoura EG and Oliveira MAN cooperated with the writing of the article.

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