Journal of Nursing

Revista de Enfermagem

UFPE On Line

ISSN: 1981-8963

ORIGINAL ARTICLE

EDUCATIONAL TECHNOLOGY ON GASTRIC CANCER TECNOLOGIA EDUCATIVA SOBRE CÂNCER GÁSTRICO TECNOLOGÍA EDUCATIVA SOBRE CÁNCER GÁSTRICO

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ABSTRACT

Objective: to describe the validation process of an educational technology on gastric cancer as an instrument of health education. **Method:** this is a methodological study following the Echer model. **Results:** the work was developed in three stages - literature review, construction of the educational booklet and content validation of educational technology. Content validation was carried out by fifteen professionals from the Family Health Strategy of Bela Cruz-Ceará and it was evaluated in terms of objectives, structure, presentation and relevance. **Conclusion:** the booklet "Knowing and describing Gastric Cancer" as an educational technology was validated. **Descriptors:** Health Technology; Nursing; Gastric Cancer; Health Education; Primary Health Care; Validation Studies.

RESUMO

Objetivo: descrever o processo de validação de uma tecnologia educativa sobre câncer gástrico como instrumento de educação em saúde. **Método:** trata-se de um estudo metodológico seguindo o modelo de Echer. **Resultados:** o trabalho foi desenvolvido em três etapas - revisão de literatura, construção da cartilha educativa e validação de conteúdo da tecnologia educativa. A validação de conteúdo foi realizada por quinze profissionais da Estratégia Saúde da Família de Bela Cruz-Ceará e ele foi avaliado quanto aos objetivos, estrutura, apresentação e relevância. **Conclusão:** foi validada a cartilha "Conhecendo e descrevendo o Câncer Gástrico" como uma tecnologia educativa. **Descritores:** Tecnologia em Saúde; Enfermagem; Câncer Gástrico; Educação em Saúde; Atenção Primária à Saúde; Estudos de Validação.

RESUMEN

Objetivo: describir el proceso de validación de una tecnología educativa sobre cáncer gástrico como instrumento de educación en salud. **Método:** se trata de un estudio metodológico, siguiendo el modelo de Echer. **Resultados:** el trabajo fue desarrollado en tres etapas - revisión de literatura, construcción de la cartilla educativa y validación de contenido de la tecnología educativa. La validación de contenido fue realizada por quince profesionales de la Estrategia Salud de la Familia de Bela Cruz-Ceará y él fue siendo evaluado en cuanto a los objetivos, estructura, presentación y relevancia. **Conclusión:** fue validada la cartilla "Conociendo y describiendo el Cáncer Gástrico" como una tecnología educativa. **Descritores:** Tecnología de la Salud; Enfermería; Cáncer Gástrico; Educación para la Salud; Atención Primaria a la Salud; Estudios de Validación.

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INTRODUCTION

The use of printed educational materials of the health area is common practice in the Unified Health System (UHS). Health care manuals, leaflets and booklets are capable of delivering expressive results to participants in educational activities. The contribution of these materials to the promotion of health depends on the principles and forms of communication involved in the elaboration processes, thus improving the interaction between professional-patient / patient.¹

The educational materials have been used to improve the population's knowledge about certain subjects. It is recommended its use written by health professionals as a tool to reinforce verbal orientations. Teaching material can have a positive impact on patient education and be able to help them answer questions that may arise when they are not interacting with the health professional.²

They should be elaborated as a proposal for health promotion, with understandable contents, within the reality of the target audience, taking into account common and popular knowledge as a strategy of health education. They must be attractive to the interlocutor, dynamic, objective and relaxed.³

In this context, the promotion of health related to gastric cancer is important and necessary, since this is the most frequent malignant neoplasm of the digestive system and, although it has shown a decline in its incidence in the country, there is still a high prevalence and mortality - more than 80% of diagnosed cases. In Brazil, gastric cancer affects the general population, but is, strictly speaking, the fourth most frequent malignant tumor among men getting behind prostate, lung and colon / rectum. Among women, it is the fifth most incident losing only to the breast, cervix, colon / rectum and lung.⁴

In this context, the individual, having cancer, has his life and his family transformed and often reaped by diagnosis and treatment. Thus, this scenario shows, to the professionals who assist it, that it is necessary and fundamental, as well as technical and scientific knowledge and skills, to cultivate the capacity to be continents in relation to the patient's feelings and to be available to allow manifestation of all the doubts about the new living condition.

Thus, this subject becomes, more and more, necessary to be discussed with professionals and with the general public through educational actions, as a form of teaching and training, making use of

educational technologies in health to facilitate learning.

Educational technologies are tools that help the health education process and make its use safe and accurate, but this kind of material needs to be validated. This process aims to analyze the degree to which an instrument is appropriate to measure what it is supposed to measure.⁵ The validation of educational technologies is characterized as a strategy to elaborate a new intervention / instrument, or to improve an existing one, to from the systematic use of available knowledge.⁶

The content validation of the technology must be evaluated by a group of judges or experts who will be responsible for analyzing the items and judging whether they are comprehensive and representative, or if the content of each item relates to what one wants to measure.⁵

In view of the above, it is important to use these resources in the promotion of care, because, in addition to helping to assimilate the guidelines through texts and figures, they also represent an available resource so that they can consult you in the moment of doubts and needs emerged.

In the context of Nursing, it acts in educational interventions, teaching contents and evaluating educational resources produced for health education. The increasing use of educational materials enables the teaching-learning process through interactions mediated by the speaker (nursing), patient and family (reader) and written educational material (object of the speech). However, this poses challenges and requires clear definition of the educational objectives to be achieved by the target audience.²

Nursing, being in constant contact with the patient, is constantly questioned about their health needs, which makes it opportune to exercise the important role of educator by providing the patient with necessary information related to his treatment.⁷

In this sense, it is possible to observe that validated educational technologies refer to the validation process as evaluation. In this way, printed technologies such as folders, posters, booklets, manuals, guidelines or handouts are not always (or almost never) submitted to a validation process. This is mainly due to the fact that many nursing professionals do not know how to carry out the validation procedure by delivering untested or validated materials directly to the population. Another important challenge is the development of methodological research to validate these technologies, since they

involve a participatory and inclusive process, since they need to be submitted to the content judgments (expert judges) and form (target audience).⁵

Therefore, promoting health means seeking better conditions, through both individual and collective strategies, involving health professionals and citizens organized in communities. However, such strategies should guide the population to reliable knowledge, with educational assumptions, facing the challenge of promoting campaigns with the potential to create meaning for different groups in society.

Thus, in the search to instrumentalize Nursing care in the moments of health education, a primer was developed on gastric cancer called "Knowing and describing Gastric Cancer" to be used as an educational technology by health professionals.

OBJECTIVE

♦ To describe the validation process of an educational technology on gastric cancer as an instrument of health education.

METHOD

Methodological study. This type of study focuses on the development, evaluation and refinement of tools and methodological strategies. The validation of the content of an instrument is necessarily based on a judgment and indicates to what extent the instrument has an appropriate sample of items to measure the specific construct and adequately cover its domain.⁸ Thus, this research proposed to validate the content of a booklet on gastric cancer guidelines in order to become an educational technology and strategy to be used in care practice.

The methodological proposal for the construction and validation of the instrument describes this step as a verification of the quality of the material elaborated, conducting a content analysis related to the clarity of the instructions and their importance as a whole.⁹

The validation process was carried out with fifteen professionals from the Primary Health Care service, with 11 nurses and four physicians working in the territories of the Family Health Strategy (FHS) in the city of Bela Cruz, Ceará. They were invited to participate in the research through an invitation sent by the researcher and delivered by the coordinator of Primary Care of the municipality.

For the evaluation of the educational booklet, a meeting was held with participants in which the technology was presented with its objectives and relevance. The judges then completed the validation tool and, in order to express their opinion, each participant read the printed material as well as its oral presentation by the researchers and then answered the questions at four levels by the scale of Likert: 1. Totally suitable; 2. Appropriate; 3. Partially adequate; 4. Inadequate. At the end of each evaluation block, the judges could justify their answers and / or propose suggestions, as well as were directed to make corrections in the book itself if they felt necessary.

The evaluation instrument was divided into two sections: the first contained information about the judge in order to characterize him as to the identification data (age, sex, profession, training time, time in the area, titration and scientific production in the area of oncology) and the second addresses questions about the structure and adequacy of the content of the guidance booklet.

The validation of the educational technology was consolidated in October 2016. Then, the analysis of the information was started. Based on the completion of the forms, the quantitative analysis of the answers was done in all the evaluative items, identifying the Content Validity Index (CVI), being necessary that the agreement between the judges is equal to or greater than 0.80 and measured by the number of items agreed by the total number of judges.⁹

According to the ethical-legal precepts, the research respected, in all its phases, the Resolution of the National Health Council (NHC) 466/2012, being sent to the Health Department of the municipality of Bela Cruz to obtain the Letter of Consent and submitted to the Research Ethics Committee (CEP) of the Vale do Acaraú State University (UVA) where it obtained a favorable opinion with number: 1,692,089.

RESULTS

After completing the instrument of evaluation of the primer, the data obtained were analyzed when the IVC and discussed as presented in table 1.

Table 1. Analysis of the answers of the expert judges. Sobral (CE), 2016, Brazil.

Evaluated items	Adequate n	%	CVI* A
Objectives			
1.1	15	100	1
1.2	14	93	0.93
1.3	15	100	1
Structure and presentation			
2.1	13	86	0.86
2.2	15	100	1
2.3	13	86	0.86
2.4	15	100	1
2.5	15	100	1
2.6	15	100	1
2.7	13	86	0.86
2.8	15	100	1
2.9	15	100	1
Relevance			
3.1	15	100	1
3.2	15	100	1
3.3	15	100	1

* Content Validity Index

As shown in table 1, there was a tendency for judges to choose the answers accordingly.

When analyzing the judges' evaluation of the objectives, they considered the purposes, goals or ends that one wishes to achieve with the use of the booklet. As shown in Table 1, this item had three items, with an average CVI rate of 0.97. Regarding item 1.1, when asked about the coherence between the needs of health professionals and the general population, 100% considered it adequate and did not present suggestions.

Regarding item 1.2, about promoting changes in users' behavior and attitude, 93% considered it appropriate, being suggested for product improvement: *"I consider the objectives to be appropriate, but, it would be interesting to act more directly with the population, informing and teaching activities to achieve lifestyle changes"*(JA08).

When asked about 1.3, about the possibility of circulating in the scientific milieu of the oncology area, 100% considered as adequate and did not suggest suggestions, which demonstrates the contribution and relevance of the production for the advancement of research in the area.

Regarding the evaluation of the structure and presentation of the booklet, it refers to the way of presenting the guidelines. This includes your overall organization, structure, presentation strategy, consistency, and formatting. Still as shown in table 1, this item has nine items, with a mean IVC rate of 0.97.

When evaluating, in item 2.1, if the messages are presented in a clear and objective way, 86% thought they were adequate and did not make any suggestions. In this topic, the authors drafted the content of the primer comprehensively with clarity,

consistency, item criticism, objectivity, relevance, sequence of content and uniqueness.

Regarding item 2.2, if the information presented is scientifically correct, 100% stated that they were adequate and did not offer suggestions. Regarding 2.3, if the material is appropriate to the socio-cultural level of the proposed target audience, 86% determined it as appropriate, suggesting the changes listed below.

*Since the majority of the population we work with is socially disadvantaged, I would suggest adapting the language to this audience, with less professional terms and a bit more popular everyday words (JA09).
I identify some scientific terms, so I suggest that it suit the audience that will be worked out (JA15).*

In section 2.4, in relation to the adequacy of the texts to the language, culture and knowledge of the target audience, 100% of the judges also considered them adequate and, regarding item 2.5, if there is logical sequence of the proposed content, 100% and without suggestions as to the subject being defined, yet, as 100% adequate with respect to the coherence of information on the cover, back cover, summary, thank you and / or presentation.

Related to topic 2.6, if title and topic size is adequate, 100% have established as appropriate and without suggestions. Already on topic 2.7, if the illustrations are expressive and sufficient, 86% elucidated as adequate and was recommended: *"I suggest more pictures to facilitate the understanding of the lay population that we work"* (JA05).

Regarding the material (paper, printing), in item 2.8, if appropriate, 100% judged as

adequate and evaluated, also with 100% adequacy, regarding the number of pages made available in item 2.9, without other suggestions.

Finally, it was evaluated as to the relevance of the booklet, referring to the characteristic that evaluates the degree of significance of the presented educational material. This item had three items, as was discussed in table 1, with an average CVI rate of 1.

When questioned, in item 3.1, if the themes highlighted in the booklet portray key aspects that should be reinforced, 100% considered them adequate, reflecting that the authors emphasized contents about gastric cancer as its concept, how it manifests, how to diagnose, its treatment, its prevention and how it is faced in the Brazilian health system.

In this sense, according to item 3.2, the booklet proposes to the patient to acquire knowledge to perform self-care, being validated with 100% of adequate form, as it clearly demonstrates its main causes contributing in the process of disease prevention and promotion of health. Thus, according to item 3.3, it is considered that the study book is suitable for use by any professional working with patients with gastric cancer and others, evaluated with 100% of adequate form.

DISCUSSION

Health education technology "Knowing and describing Gastric Cancer" points out that the educational tools developed and validated, in order to produce the expected effect, should have a focus, delimitations and convince the user about the objectives, and measure what is proposed.¹⁰

In this perspective, to analyze table 1, it is emphasized that, for the delimitation of the objectives of the booklet, clarity, objectivity and accessibility were applied, aspects considered important in the language used for the interaction with the public that will be worked with the elaborate booklet.¹¹

In this way, the objectives of the book were based on the needs identified from the bibliographical review, proposing changes in the behavior of the people and serving as an instrument that can subsidize other research in the area, when circulating in the scientific environment.

It is known that, when interacting with the population, it is necessary to adapt the language to be used, as it is considered as a factor that significantly interferes in the relationship between the health professional

and the user, since it makes it difficult to understand of the subject and the objective of the activity is not achieved. Thus, the suggestion was accepted by the authors.

In this sense, the adequacy of the texts to the language, culture and knowledge of the target audience is complex and requires skill with the use of scientific language so that there is a good relationship with mutual learning.¹²

The images were very well evaluated and this proves the power of the communication by the illustrations. Its use functions in the book as an animation, captivating the reader to a greater willingness to learn and stimulating, on the part of those who receive the message, a specific kind of expectation and different from what a verbal message stimulates.

The images present in the booklet were selected by the authors, according to the subject addressed, in an attempt to make a dynamic reading, attractive and not tiresome for those who are reading. In this way, the suggestion was accepted and other images were added.

It is considered the booklet with structure and appearance validated, accepting the suggestions proposed and improving the material produced so that, when applied to the population, it feels contemplated with the technology used as a way of instrumentalizing the health guidelines. In this context, the creation, validation and use of educational technologies by health professionals is considered as a way of reinforcing the natural desire to improve care, while at the same time representing the best way to carry out health education for the population.¹³ Thus, it is important to note that the booklet "Knowing and describing Gastric Cancer" is considered validated by the judges who evaluated it, having great relevance to be applied and contributing to the advancement of research related to the subject. It should be noted that all suggestions were adhered to.

CONCLUSION

It can be affirmed that the objective of this study was reached when validating the guidelines book on Gastric Cancer as an educational technology making it feasible to be used by health professionals. It has become a tool for safe and effective care, contributing significantly to professionals as an aid to educate the population in order to promote health and prevent this pathology.

In this aspect, this research contributes to the advancement of studies related to the

subject, allowing, as a result, a product to be implemented in public, a fact that is identified as a perspective of this work that can be effectively applied to the population in general so that, in fact, there is awareness about the relevance of prevention of this disease.

As the fundamental role played by Nursing is to educate in health, it is necessary to use tools that allow distraction and fun allied to learning, and this is allowed with the use of educational technologies in health.

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Submission: 2017/10/17

Accepted: 2018/03/08

Publishing: 2018/04/01

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