CONSTRUCTION AND VALIDATION OF A CHEMOTHERAPY ORIENTATION GUIDE

CONSTRUÇÃO E VALIDAÇÃO DE UM GUIA DE ORIENTAÇÃO SOBRE O TRATAMENTO QUIMIOTERÁPICO

CONSTRUCCIÓN Y VALIDACIÓN DE UNA GUÍA DE ORIENTACIÓN SOBRE EL TRATAMIENTO DE QUIMOTERAPIA

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ABSTRACT

Objectives: To describe the construction and validation of a guidance guide for patients undergoing chemotherapy. Methods: Methodological development research, with a quantitative approach, carried out in a chemotherapy outpatient clinic of a public hospital in southern Brazil. The subjects were 12 judges and 12 patients undergoing chemotherapy. Two instruments were applied in the form of questionnaires, organized on the Likert scale that contained blocks with affirmative phrases. Results: The analyzed data was, first, of the expert judges, in which the majority of the answers reached the proposed value of 70%. Regarding patients, there was no need for modifications, as all evaluated the guide as being of great relevance to the service. Conclusion: The construction of the guidance guide was of paramount importance as it was material developed through the literature and evaluated by health professionals and patients, to subsidize information about chemotherapy treatment and supporting nurses to promote health education.

Descriptors: Neoplasms; Nursing; Health Education; Drug Therapy.

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RESUMO

Objetivos: Descrever a construção e validação de um guia de orientações para pacientes em tratamento quimioterápico. Métodos: Pesquisa de desenvolvimento metodológico, com abordagem quantitativa, realizada em um ambulatório de quimioterapia de um hospital público do Sul do Brasil. Os sujeitos foram 12 juízes e 12 pacientes em tratamento quimioterápico. Aplicaram-se dois instrumentos em forma de questionários, organizados na escala Likert que continha blocos com frases afirmativas. Resultados: Os dados analisados foram, primeiramente, dos juízes especialistas, em que a maioria das respostas atingiu o valor proposto de 70%. Em relação aos pacientes não houve necessidade de modificações, pois todos os avaliaram o guia como de grande relevância para o serviço. Conclusão: A construção do guia de orientação foi de suma importância, por ser um material elaborado através da literatura e avaliado pelos profissionais de saúde e pacientes, para subsidiar as informações sobre o tratamento quimioterápico e apoiando enfermeiros para promover educação em saúde. Descritores: Neoplasias; Enfermagem; Educação em Saúde; Quimioterapia.

RESUMEN

Objetivos: Describir la construcción y validación de una guía de orientación para pacientes sometidos a quimioterapia. Métodos: Investigación de desarrollo metodológico, con enfoque cuantitativo, realizada en una clínica ambulatoria de quimioterapia de un hospital público en el sur de Brasil. Los sujetos fueron 12 jueces y 12 pacientes sometidos a quimioterapia. Se aplicaron dos instrumentos en forma de cuestionarios, organizados en la escala Likert, que contenían bloques con frases afirmativas. Resultados: Los datos analizados fueron, primero, de los jueces expertos, en los cuales la mayoría de las respuestas alcanzaron el valor propuesto del 70%. Con respecto a los pacientes, no hubo necesidad de modificaciones, ya que todos evaluaron la guía como de gran relevancia para el servicio. Conclusión: La construcción de la guía de orientación fue de suma importancia, ya que es un material desarrollado a través de la literatura y evaluado por profesionales de la salud y pacientes, para subsidiar información sobre el tratamiento de quimioterapia y apoyar a los enfermeros para promover la educación en salud. Descriptores: Neoplasias; Enfermería; Educación en Salud; Quimioterapia.

INTRODUCTION

Cancer is considered a multifactorial disease and classified as a chronic-degenerative disease, constituting today one of the greatest challenges for the sciences and health policies of developed and developing countries.  

Regarding the forms of antineoplastic treatment, studies highlight chemotherapy as the mainstay of systemic treatments; however, the occurrence of adverse effects of medications causes several disorders to patients.  

Side effects arising from chemotherapy treatment result in changes in daily activities or in the fact that the person is unable to perform what was previously a common routine. These factors may be related not only to the body having lost the vigor it once had, but the psychological aspect that interferes with the way the
patient faces the disease must be taken into account.\textsuperscript{5}

In this context, chemotherapy is a preliminary process that transforms life, causes losses, but it is given value for allowing hope to be cured, despite its adverse events.\textsuperscript{4} It is estimated that 40\% to 60\% of patients diagnosed with cancer will be treated with chemotherapy.\textsuperscript{5}

In this sense, nursing must create strategies and actions in their care that aim to maintain the self-esteem of patients undergoing chemotherapy, since psychosocial rehabilitation does not end after a certain period of cancer discovery, it goes beyond the treatment phase.\textsuperscript{6} Educational actions are of great relevance, and must be associated with the appropriate conditions of life, enabling the person to choose healthy practices for health promotion and cancer prevention. In this context, it is important to raise awareness and encourage healthier lifestyle habits.\textsuperscript{7}

In oncology, the educational actions developed by nursing are essential to promote better adherence to treatment, the promotion of quality of life and prevention of health problems resulting from treatment.\textsuperscript{8}

Thus, it is evident that an appropriate interpersonal relationship with this patient contributes to elucidate doubts, reducing the degree of anxiety and contributing to treatment adherence. When starting chemotherapy, patients feel terrified, with doubts, fears and taboos related to the procedures that will be performed, as well as the type of treatment and side effects.\textsuperscript{9}

With this in mind, educational instruments in the form of a printed manual can be important support strategies for health education activities, since they help the individual to assimilate and understand the information transmitted to them.\textsuperscript{10} Its use at the time of nursing consultations contributes to foster the dialogue between professional, patient and family members, elucidating information about the disease and its treatment.\textsuperscript{9} Thus, an educational manual, as a health intervention, is a valid instrument for achieving positive results in the behavior of patients in search of improvements in their treatment.\textsuperscript{10}

Based on this, the relevance of developing educational materials capable of guiding patients is highlighted, thus alleviating the lack of knowledge about the disease and its treatment, to prevent injuries and promote health. Thus, the research is justified due to the dimension occupied by this problem. Although there is a service with a multidisciplinary team and with a sufficient physical structure to meet the current demand, there is still no printed material in the service that helps to promote care and control symptoms resulting from chemotherapy. In view of the above, the present study aims to describe the process...
of construction and validation of an orientation guide for patients undergoing chemotherapy treatment.

METHOD

This is a methodological development study. This type of research refers to the investigation of methods of obtaining, organizing and analyzing data in an attempt to develop, validate and evaluate research instruments and techniques.\(^{11}\)

The construction of manuals must follow some essential phases, such as: bibliographic survey, preparation and construction of the manual, qualification and validation. In addition, some steps must be followed for the preparation of a booklet, such as the systematization of content, choice of illustrations, content composition and validation.\(^{12}\)

The research site was the chemotherapy sector of a hospital in southern Brazil. The research subjects totaled 12 professionals and 12 patients undergoing chemotherapy. The professionals selected as expert judges were five nurses, two pharmacists, a social worker, an occupational therapist, a nutritionist, a psychologist, a doctor who did the content validation.

Judges were invited to participate through oral contact and received an invitation letter; when accepting, they received a copy of the booklet to be evaluated, with the respective evaluation instrument to be returned, within a period of seven days. The inclusion criteria for the judges were: having a specialization in the area of oncology, having at least one year of professional experience in the oncology theme, having a dissertation, thesis or monograph on the theme in oncology, having articles published in the last five years on the theme, accepting to participate in the research and minimum time in service of three months.

The 12 patients undergoing chemotherapy were the target audience. These participated in the appearance validation process after the evaluation of the expert judges. The inclusion criteria for patients were: being on chemotherapy, being literate, being over 18 years old, being lucid and oriented, having clinical conditions to answer the questions.

Data production took place from October 2017 to January 2018, in six stages described below. The participants were informed about the objectives of the study, after being asked to sign the Free and Informed Consent Term (FICT) in two copies. One copy was delivered to the participant and the other, filed by the researcher. The approval of the Ethics Committee was obtained with Protocol 2,307,366, according to Resolution 466/12.
**First stage: literature review**

For the preparation of the guidance guide, a literature review was carried out, through the search and reading of materials and studies related to the theme, from 2013 to 2017, on the website of the Ministry of Health and INCA, and on the Pubmed databases and Lilacs, using the nursing descriptors: chemotherapy, health education, combined by OR and AND Boolean operators, according to the search strategy used in each of the searched electronic databases.

**Second stage: planning and construction of the guidance guide for patients undergoing chemotherapy**

After searching the literature, an orientation guide was built with the main themes: what cancer is, the effects of chemotherapy, treatment guidelines, useful phone calls, tips on taking care of possible side effects, from all professionals in different areas and how to proceed if you have any symptoms, how chemotherapy is carried out, how the chemotherapy service works and which professionals the service counts on to assist patients in this way during the treatment phase.

**Third stage: validation with service professionals**

The evaluation of version 1 happened, initially, with the judges. And so, they had the function of evaluating the clarity and understanding of the items, ease of reading, understanding and appearance of the instrument, through a questionnaire organized according to a Likert scale, with items distributed in three blocks, containing questions related to the evaluation the content of educational material. The guidance guide was revised and updated based on these contributions.

**Fourth step: content validation**

Responses that indicate a specific level of agreement or disagreement with each statement were scored and added up, generating a total score. It was also up to the judges to describe their opinions.

For the quantitative analysis of the judges' validation, the adequacy of the items' behavioral representation was calculated. In view of this analysis, the Totally Adequate (TA), Adequate (A), Partially Adequate (PA) and Inadequate (I) response options were grouped. Then, each item was analyzed in relation to these obtained averages, and most items should reach an average above 70% (positive averages); items that obtained lower than
expected averages should be modified. The judges were instructed to read and note in the guidance guide and in the questionnaire the general comments and suggestions, corrections and recommendations they deemed necessary. The guidance guide has been updated and prepared for the next moment (version 2).

Fifth step: target audience assessment of the guidance guide

The evaluation process for version 2, with patients undergoing chemotherapy, was carried out individually in the chemotherapy outpatient clinic, at the time of chemotherapy. The guidance guide was given to patients and a shared reading was done, which took about 30 to 60 minutes. After reading and evaluating the orientation guide by the patients, they answered the form, also organized according to a Likert scale, with items distributed in five blocks, with the following themes: objective, organization, writing, appearance and material, if they are able to cause some impact, motivation and / or interest.

Sixth stage: Development of the latest version of the guidance guide

It consisted in the construction of the guidance guide based on the considerations of the target audience, with the aim of giving quality to the instrument.

RESULTS

In this step, the analysis of the results obtained from the validation of the script for the guidance guide will be presented, through the formulation of questions in which the participants chose one of four variations named: totally adequate, adequate, partially adequate and inadequate. The instruments available for the two groups (expert judges and target audience) were different; therefore, the analysis was performed according to the group of participants and their respective instrument.

As for the judges' evaluation, an agreement value greater than 70% was found. The instrument for judges has 19 items divided into three blocks. The sum of all the evaluation items of the total of 12 instruments (12 judges) is 228 items (100%). Thus, the responses to the three blocks were: 95 or 42% for Totally Adequate (TA), 112 or 49% for Adequate and 21 or 9% for Partially Adequate.

In view of the above, it can be deduced that there was no significant disagreement, since, of the 19 items evaluated, none obtained score I (inadequate).

**Block 1: objective** – It has five items, which evaluate the objectives, purposes, goals or ends that you want to achieve with
guidance. The maximum score for the validation of this block is 60 (100% of the answer options), since the number of participants was 12 people, that is, 5 (items) x 12 (judges) = 60 points. The responses of the expert judges were: 27 (45%) for TA, 30 (50%) for A, three (5%) PA, and zero (0%) for I. According to these response options, of the 60 (100%), 57 (95%) went to TA and A, confirming the acceptance of the items in this block, making the booklet adequate to the objectives.

**Block 2: structure and presentation**

It refers to the structure and presentation and has nine evaluative items, ascertaining: whether the guidance guide is appropriate for patients undergoing chemotherapy, whether the messages are presented in a clear and objective manner and whether the information presented is scientifically correct, regarding the item, if the information is well structured in agreement and spelling, the writing style corresponds to the level of knowledge of the target audience, if the information on the cover, back cover, summary, acknowledgments and / or presentation are consistent, the size of the title and topics are adequate, the illustrations are expressive and sufficient, if the material is appropriate to the socio-cultural level of the proposed target audience, if the information is scientifically correct, so that the maximum score for validation is 108 (9 items x 12 expert judges = 108 points). The responses of the expert judges were: 42 (38.88%) for TA, 51 (47.22%) for A, 15 (13.88%) for PA and zero (0%) for I.

Regarding the validation process, each item has its value so that the educational material does not reach the target audience inappropriate.

**Block 3: relevance of technology**

It refers to the relevance and characteristics that assess the degree of significance of the technology and has a total of five items, so that the maximum score is 60 (5 items x 12 expert judges = 60 points). On the themes, whether key aspects that should be reinforced are portrayed, whether the guidance guide allows the transfer and generalization of learning, whether the guidance guide proposes to the patient to acquire knowledge to perform self-care, whether the guidance guide addresses the issues needed by the patient undergoing chemotherapy treatment, if the guidance guide is suitable for use by any professional working with patients undergoing chemotherapy treatment. The total responses for this block were: 26 (43.33%) for TA, 31 (51.67%) for A, three (5%) PA and zero (0%) for I. Therefore, out of 60 (100%) answer options for the items in this block, 57 (95%) were TA and
A, confirming that the booklet is valid in terms of relevance.

Of the 12 expert judges, only one made no suggestion to change the guide. As written and guided by the judges, items such as immediate care, tips from professionals regarding side effects, chemotherapy monitoring card, as well as patient identification data were added. Thus, the first version of the guidance guide had 16 pages with presentation, summary, topics and references.

After the evaluation of the expert judges, it went on to 22 pages. The judges evaluated the guidance guide as a working tool that will assist in the process of clarifying information about treatment, elucidating information for patients undergoing chemotherapy.

In the second stage of the evaluation, carried out by the target audience, composed of 12 patients undergoing chemotherapy, the age between the participants ranged from 21 years to 64 years, and the education ranged from incomplete elementary school, to complete higher education.

As for the instrument delivered to the target audience, it has 16 items divided into five blocks. The sum of all the evaluation items of the total of 12 instruments (12 representatives of the target audience of the guidance guide) is 192 items (100%). Thus, the responses to the three blocks, considering the sum of all items, were: 186 (100%), 97% for Totally Adequate (TA) and five or 2.5% for Adequate and one or 0.5% for PA. It was found that the ratings that obtained the most responses were TA and A, with an emphasis on TA, with a rating greater than 95%. The inappropriate rating (I) did not score among the participants of the target audience.

With that, perceive a tendency for the agreement between the responses of the target audience to the validation instruments referring to the script, obtaining a positive evaluation 1, that is, the majority of TA or A. Therefore, it can be understood that there is no significant indication of disagreement between the participants. The evaluation of each block of this instrument is presented below.

**Block 1:** It has three items, which evaluate objectives, purposes, goals or ends that you want to achieve with the guidance guide. The maximum score for the validation of this block is 36 (100% of the answer options), since the number of participants is 12 people (3 items x 12 (target audience) = 36 points). The responses of the target audience were: 34 or 94.4% for TA and one or 2.8% for A, for PA, one or 2.8%, and I did not score.

**Block 2:** It refers to the organization and has four evaluation items, so that the
maximum score for validation is 48 (4 items x12 (target audience) = 48 points). The target audience responses were: 47 or 98% for TA and one or 2% for A, PA and I did not score. The first item in block 2 refers to the cover, if it is attractive and indicates the content of the guidance guide; the second, if the size of the title and content in the topics is adequate; third, whether the material (paper / printing) is appropriate, and whether important aspects are portrayed. Thus, it is considered that all items in this block were validated, as they obtained an approval rate greater than 70%, adding the responses of TA and A.

**Block 4:** It is about appearance. It has two blocks in total, so that the maximum score is 24 points (2 items x 12 (target audience) = 24 points). The total responses for this block were 24 or 100% for TA. The first item refers to whether the pages or sections appear organized; the second, whether the illustrations / photographs serve to complement the text of the guidance guide. It is worth mentioning that in this block PA and I did not score. Thus, it is considered that all items in the block were validated, as they obtained an approval rate greater than 70%, adding the responses of TA and A.

**Block 3:** It refers to the style of writing. It has a total of three items, so that the maximum score is 36 points (3 items x 12 (target audience) = 36 points). The total responses for this block were: 35 or 97% for TA and one or 3% for A, PA and I did not score in the items related to block 3. The first item deals with writing (if it is appropriate), the second item, if the text is clear, and the third refers to the style of writing, if it corresponds to the level of knowledge of the target audience. Thus, it can be considered that all items in this block were validated, as they obtained an approval rate higher than 70%, adding the responses of TA and A.

**Block 5:** It is allusive to motivation: if the material has the capacity to cause any impact, motivation and / or interest. It has a total of four blocks, so that the maximum score is 48 points (4 items x 12 (target audience) = 48 points). The total responses for this block were: 46 or 96% for TA and 4% for A. The first item determines whether the guidance guide is appropriate for the profile of the target audience; in the second, the necessary subjects are addressed; in the third, behavioral changes are instigated during the treatment phase; in the fourth, if the guidance guide proposes changes during the treatment phase. Thus, it is considered that all items in the block were validated, as they obtained an approval rate higher than 70%, adding the responses of TA and A.
The agreement percentages between the blocks showed values above 70%. A research instrument that obtains Alpha greater than or equal to 0.70 is considered satisfactory. In this respect, it can be deduced that the booklet reached the level of significance of validation. This corroborates that patients undergoing chemotherapy treatment evaluated the guidance guide as suitable for use. There was no need for modifications, as all patients assessed the guide as being of great relevance to the service. The different cultural and educational levels among patients did not hinder the validation of the booklet.

**DISCUSSION**

This study sought to understand all the necessary steps for the validation of the material produced, which were important for each next step in the construction of the educational material. The step of validating the guidance guide was divided into two groups, allowing to know how each participant read, analyzed and exposed his opinion and suggestions that culminated in a validated instrument.

Regarding the validation process, the professional diversity of the expert judges proved to be a very favorable factor, since it grouped different specialized knowledge within the theme addressed by the material, resulting in a multidisciplinary work. The sensitivity of the multidisciplinary team demonstrates the humanization of the care process and the importance of comprehensive care, with multidisciplinary work being of great importance to collaborate in the treatment of the patient.

The items in the first block refer to the objective. In general, the responses of the expert judges were in agreement. The educational manual was considered valid in relation to its ability to achieve the objective for which it was proposed.

The educational materials should be to facilitate the work of the health team in the communication and orientation of patients and family members, in the search for the student's learning, to be considered educational. These materials support the verbal guidance of health professionals and streamline Health Education activities.

The second evaluation block refers to how to present the guidelines to the target audience, their organization, structure, coherence and formatting. Of the 12 expert judges, 11 made suggestions for the guidance guide and the considerations made by the participants were accepted.

Therefore, it is essential to use language accessible to all layers of society, regardless of the education level of the target population, considering that the material needs to be easy to understand.
Thinking about it, color illustrations were used, in an attempt to ensure less impactful material, more relaxed and lively. The authors highlight the importance that figures occupy in communication. The use of images becomes essential, as it transforms textual information into visual language, as a way of stimulating interest in reading and facilitating its understanding.\(^\text{16}\)

The third block, related to the characteristics that make the guidance guide a relevant material, also reached beyond the stipulated goal of agreement among the judges. This fact confirms the importance of using the educational manual, in order to contribute to the promotion of health education to patients undergoing chemotherapy and to reinforce the guidelines provided during the nursing consultation.

In this way, the booklet would be a tool available in the nursing consultation to better understand about chemotherapy treatment, with this, the information provided by the nurse would collaborate in chemotherapy treatment, as well as in preventing side effects from medications.\(^\text{17}\)

Therefore, providing information and guidance to patients and their families through printed educational materials can be an instrument for socializing knowledge, promoting health and preventing diseases.\(^\text{18}\)

**CONCLUSION**

The construction of the guidance guide was of paramount importance, as it was a material prepared through the literature and evaluated by health professionals, as well as by the target audience, patients, being a material to support information about chemotherapy treatment, helping nurses to carry out health education.

The guidance guide for patients undergoing chemotherapy treatment corroborated this idea, as it was designed to meet the needs of patients treated at the chemotherapy outpatient clinic, having helped with changes to improve the quality of information for patients undergoing chemotherapy treatment. A guidance guide can facilitate and serve as a basis for verbal guidance provided by health professionals, which allows qualifying nursing care in the health care guidance process.

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