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Production and validation of a booklet on intestinal ostomy care for colorectal cancer patients

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ABSTRACT

Objective: To produce and validate an educational booklet on intestinal ostomy care for patients with colorectal cancer. **Method:** A methodological study conducted in three stages: literature review, production of the booklet, and content and appearance validation by experts using the Content Validity Index (CVI). A convenience sample was utilized. Contact was made electronically, where the booklet and an assessment instrument containing 21 questions were sent, covering: objective, content, relevance, figures, writing style, and organization. The specialists evaluated whether items were: highly adequate, adequate, partially adequate, or totally inadequate. The study was approved by the Ethics Committee. **Results:** The booklet titled "Intestinal Ostomy Care" consists of 22 pages and 37 illustrations. The content addressed: colorectal cancer; care of the collection equipment; oncological treatment; social rights; psychological aspects; nutritional aspects; and physical activity. Twelve specialists responded. All 21 items were considered valid (CVI > 0.70); of these, 16 had a CVI = 1, 3 had a CVI = 0.9167, and 1 had a CVI = 0.75. **Conclusion:** The booklet was considered valid. The validation process provided the material with the methodological rigor necessary for its use in scientific environments and patient guidance. However, clinical validation with the target audience is suggested.

DESCRIPTORS: Colorectal cancer. Intestinal ostomy. Health technology.

Produção e validação de cartilha sobre cuidados com estomias intestinais para pacientes com câncer colorretal

RESUMO

Objetivo: Produzir e validar uma cartilha sobre cuidados com estomias intestinais para pacientes com câncer colorretal. **Método:** Estudo metodológico realizado em três etapas: revisão de literatura, produção da cartilha, e validação de conteúdo e aparência com juízes especialistas pelo Índice de Validade de Conteúdo (IVC). A amostra deu-se por conveniência. O contato foi por meio eletrônico, sendo enviados a cartilha e o instrumento de avaliação contendo 21 perguntas sobre: objetivo, conteúdo, relevância, figuras, estilo da escrita e organização. Os juízes avaliaram se os itens eram: muito adequados, adequados, parcialmente adequados ou totalmente inadequados. O estudo possui aprovação do Comitê de Ética. **Resultados:** A cartilha intitulada "Cuidados com

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a estomia intestinal" possui 22 páginas e 37 ilustrações. Os conteúdos abordados foram: câncer colorretal; cuidados com o equipamento coletor; tratamento oncológico; direitos sociais; aspectos psicológicos; aspectos nutricionais; e atividade física. Responderam 12 juízes. Todos os 21 itens foram considerados válidos (IVC>0,70); desses, 16 com IVC=1, 3 com IVC=0,9167 e 1 com IVC=0,75. **Conclusão:** A cartilha produzida foi considerada válida. O processo de validação conferiu ao material rigor metodológico para sua utilização no meio científico e nas orientações ao paciente. Contudo, sugere-se a realização de validação clínica com o público-alvo.

DESCRITORES: Câncer colorretal. Estomia intestinal. Tecnologia em saúde.

Elaboración y validación de un folleto sobre el cuidado del estoma intestinal en pacientes con cáncer colorrectal

RESUMEN

Objetivo: Elaborar y validar un folleto sobre cuidados de ostomías intestinales para pacientes con cáncer colorrectal. **Método:** Estudio metodológico realizado en tres etapas: revisión de la literatura, producción de folletos y validación de contenido y apariencia con jueces expertos mediante el Índice de Validez de Contenido (IVC). La muestra se utilizó por conveniencia. El contacto se realizó vía electrónica y se envió el cuadernillo junto con el instrumento de evaluación que contiene 21 preguntas sobre: objetivo, contenido, relevancia, cifras, estilo de redacción y organización. Los jueces evaluaron si los ítems eran: muy adecuados, adecuados, parcialmente adecuados o totalmente inadecuados. El estudio es aprobado por el Comité de Ética. **Resultados:** El folleto titulado "Cuidados de la ostomía intestinal" tiene 22 páginas y 37 ilustraciones. Los contenidos tratados fueron: Cáncer colorrectal; Cuidado de la bolsa recolectora; Tratamiento oncológico; Derechos sociales; Aspectos psicológicos; Aspectos nutricionales; Actividad física. Respondieron 12 jueces. Se consideraron válidos los 21 ítems (IVC>0,70), de los cuales 16 tenían IVC=1, tres tenían IVC=0,9167 y uno tenía IVC=0,75. **Conclusión:** El folleto elaborado se consideró válido. El proceso de validación otorgó al material rigor metodológico para su uso en el entorno científico y en la orientación al paciente. Sin embargo, se sugiere que la validación clínica se realice con el público objetivo.

DESCRIPTORES: Cáncer colorrectal. Ostomía intestinal. Tecnología sanitária.

INTRODUCTION

Cancer is one of the leading causes of death worldwide, and its global incidence is estimated to reach 27 million new cases by 2030[1]. With the demographic and epidemiological transition evidenced by population aging, coupled with advances in healthcare through early detection and improved treatments, the number of people diagnosed with cancer has increased considerably. According to data published by the International Agency for Research on Cancer, 28.4 million new cases are expected in 2040, an increase of nearly 47%[2].

In Brazil, estimates for the 2023-2025 triennium indicate that 704,000 new cancer cases will occur—483,000 if non-melanoma skin cancer cases are excluded. Among the most common cancers, malignant intestinal tumors, also known as colon and rectal or colorectal cancer, represent the primary neoplasm of the gastrointestinal tract. Furthermore, estimates from the National Cancer Institute (INCA) show that, for both men and women, this corresponds to the second most incident cancer and the third in mortality in the country[3].

The treatment of colorectal cancer can be performed through surgery, antineoplastic chemotherapy, and radiotherapy, often requiring a combination of more than one modality. In the surgical approach, the creation of an intestinal stoma is common, whether due to intestinal obstruction caused by tumor size, to facilitate concomitant treatment with radiotherapy, or even as part of curative treatment[4].

This intestinal stoma consists of a surgical procedure for the exteriorization of any part of the intestine for the continuity of flow and elimination of feces, receiving a specific denomination according to the exteriorized segment. When the opening is in the small intestine, it is called an ileostomy; in the large intestine, it is called a colostomy. It is a procedure that can be temporary or permanent, depending on the characteristics, the extent of the disease, and the therapeutic objective[5].

The complexity of discovering a cancer diagnosis, associated with the possibility of living, temporarily or permanently, with an ostomy, can generate impacts on the biopsychosocial dimensions of the lives of patients and their families. In this context, the nurse plays an important role in this process of change in the life of the person with an ostomy from diagnosis, through the perioperative period, hospital discharge, and remaining in the continuity of care through the development of health education strategies and the promotion of self-care[6,7].

The anxieties, questions, and fears experienced by a person undergoing an oncological ostomy are numerous and encompass two major issues: the cancer and the ostomy. The illness and treatment impose changes that demand acceptance, adaptation, and rehabilitation; thus, it is necessary for the nursing team, along with the multidisciplinary team, to be prepared to meet the demands of patients with ostomies due to colorectal cancer[8].

In this professional context, the enterostomal therapist nurse is specialized in the care of people with ostomies, possessing the knowledge, specific training, and skills for the proper management of these patients, from stoma site marking—necessary to avoid complications—to postoperative care: the correct handling of the collection equipment, care for the peristomal skin, and, above all, health education, encouraging patients toward autonomy and self-care[9].

In the process of health education, the use of "hard technologies," such as printed educational materials, has gained increasing space in nursing professional practice, serving as fundamental instruments for quality care, especially in the continuity of care. These resources are considered innovations in the health field, as they constitute didactic health guidance strategies that positively impact the development of self-care[10,11].

Cancer and ostomies are conditions that especially affect more vulnerable populations due to greater exposure to risk factors or restricted access to information and health services. The lack of knowledge regarding the proper management required during oncological treatment and after the creation of the stoma favors the development of complications and poor quality of life[6].

Thus, the use of health technologies, such as the booklet, can assist patients and their families in better understanding ostomy and peristomal skin care, in addition to preventing and detecting complications, as these tools provide information and guidance, empowering patients with oncological ostomies to lead autonomous and independent lives[11].

Furthermore, it is necessary for these materials to be validated, as the validation process of health technologies is crucial for providing increasingly scientific and safe care. The use of these scientifically validated materials contributes to maximizing the effectiveness of healthcare and aids in the understanding of appropriate preventive care that adapts to the cultural and social realities of specific populations[11].

Given the context described above, this work is also justified by the researcher's proximity to themes involving enterostomal therapy and oncology, due to experiences during undergraduate and postgraduate studies, which sparked interest in researching and delving deeper into the subject.

Given the above, the work is relevant as it may contribute to patient care not only within a hospital institution but also in the continuity of care after discharge. Establishing strategies for complication prevention and social rehabilitation for the person with an ostomy is essential, as it is evident that the lack of knowledge about having an ostomy after surgery can lead to emotional destabilization, and that the health education of these patients, caregivers, and families favors autonomy, self-care, and minimizes insecurities and uncertainties regarding living with a stoma[10].

Faced with the presented context, the following research question arose: What is the evidence of validity for an educational technology on intestinal ostomies for use in the clinical practice of caring for patients with colorectal cancer?

OBJECTIVE

To produce and validate a booklet on intestinal ostomy care for patients with colorectal cancer.

METHODS

This is a methodological study focusing on the construction and validation of educational material in the form of a booklet. Methodological research involves the development, validation, and evaluation of research tools and methods, aiming to create a reliable and precise instrument for use by other researchers and the specific target audience[12].

The study, conducted between June and December 2023, was carried out in three stages. The first stage consisted of a literature review on the subject by searching for scientific articles using descriptors indexed in the Health Sciences Descriptors (DeCS): colorectal neoplasms; intestinal neoplasms; rectal neoplasms; ostomy; nursing care; health technology. In addition to articles, theses, dissertations, books, manuals, and guidelines were consulted to consolidate knowledge on the subject and provide a foundation for the content produced in the booklet.

For the material review and information extraction, primary and secondary, empirical, quantitative, and qualitative research of any design or methodology available in full text and addressing intestinal ostomy care and colorectal cancer were considered. Texts selected by title and abstract were read in full and analyzed by two independent reviewers. The construction of the booklet's content was carried out by a nurse, a nutritionist, a psychologist, and a social worker—all specialists in oncology in training—and an enterostomal therapist nurse.

Subsequently, the production of the booklet began, utilizing text and illustrations adapted for the target audience, focusing on intestinal ostomies resulting from colorectal cancer. The layout was created using the Canva platform via the free desktop version available online. The site offers various presentation templates but also allows users to develop their own models. The illustrations for the booklet were produced by a graphic designer using the Sketchbook application (free smartphone version), which enables the creation of digital drawings.

The third stage consisted of content and appearance validation by specialists in the fields of oncological nursing and enterostomal therapy, based on the Content Validity Index (CVI), conducted between September and November 2023[13]. The validation of the material was performed by specialists who are expert nurses in oncology and enterostomal therapy.

The Fehring model was used as the selection criterion for the specialists, establishing scores according to the following parameters: Master's degree in nursing (4 points); Master's degree in nursing with a dissertation in the area of interest (1 point); published research on the topic or relevant content (2 points); Doctoral degree in the area of study (2 points); recent clinical practice of at least one year in the subject area (2 points); specialized training (specialization) in the clinical area of enterostomal therapy or oncology (2 points). A professional with a score equal to or greater than 5 points was considered an expert. Specialists were selected based on the Lattes Platform and organized in a spreadsheet according to their achieved scores[14].

The sample was obtained by convenience. Contact to participate in the study was made via email (provided on the Lattes platform), telephone (WhatsApp), and/or social media (Instagram); a text message was sent explaining the research objective and participation criteria, as well as requesting sharing with other professionals. To those interested, the developed material was sent in Portable Document Format (PDF) along with an electronic form created via Google Docs containing the Informed Consent Form (ICF) and the evaluation instrument.

More than 40 invitations were sent to professionals who met the inclusion criteria; however, only 12 specialists accepted the invitation to participate and completed the validation form.

The instrument used to evaluate the booklet contained 21 questions based on six aspects: objective, content, relevance, figures, writing style, and organization. The specialists assessed whether the items within these aspects were highly adequate, adequate, partially adequate, or totally inadequate, according to the Likert scale for validating educational technologies[13-15].

Data analysis from the evaluation was performed using the CVI, an index that measures the level of agreement among specialists regarding the representation of items and the study content. The number of specialists who classified items as "highly adequate" or "adequate" was calculated against the total number of evaluators who responded to the form and the ICF[15,16].

The overall CVI was measured by the following calculation: the ratio between the sum of all individual CVIs evaluated as "totally adequate" and "adequate," divided by the total number of responses for that item. The total CVI was also calculated

by taking the CVI value of each item divided by the total number of items evaluated. For this research, an index equal to or greater than 0.70 was considered valid for both individual item judgment and the global judgment of the technology[13,14].

The project was approved by the Research Ethics Committee of Plataforma Brasil, under opinion no. 4.026.647. It is emphasized that ethical and legal aspects were respected in accordance with Resolution no. 466/12 of the National Health Council, which regulates guidelines and norms involving research with human beings[16].

The ICF was sent to participants via the electronic form with an option to accept or decline participation in the research. It contained information regarding objectives, procedures to be developed, risks and benefits, a guarantee of clarification, the freedom to refuse participation or withdraw at any time, and a guarantee of confidentiality, with data used solely for research purposes. Contact information for the researcher and the CEP was provided so that participants could communicate whenever necessary to resolve doubts or report their withdrawal from the study.

RESULTS

The guidance booklet for patients with ostomies due to colorectal cancer, titled "Intestinal Ostomy Care", consists of 22 pages, including a front cover, back cover, table of contents, introduction, content sections, notes, and references. A total of 37 illustrations were produced to exemplify the concepts within the text.

The content is organized into topics. Initially, issues related to the disease and the intestinal ostomy were discussed, presenting the following subjects: colorectal cancer (definition and treatment modalities); intestinal ostomy (definition, rationale for the procedure, duration, stoma characteristics, and red flags for complications); care of the collection equipment (when and how to empty, replacement intervals, replacement procedures, and step-by-step guidance); and oncological treatment (ostomy care during antineoplastic chemotherapy and radiotherapy).

In addition to these topics, multidisciplinary aspects involving the care of oncological patients with intestinal ostomies were included: social rights (specific rights for cancer and ostomy patients); psychological aspects (living with a stoma, recognizing adaptation difficulties, and the need for psychological support); nutritional aspects (allowed foods and a list of foods that may minimize or exacerbate intestinal symptoms); and, finally, recommendations for physical activity.

The language used in the booklet was simple and objective, featuring heavily illustrated information. Furthermore, subjects were framed as questions to align the material with the common inquiries experienced by the target audience before and/or after cancer diagnosis and stoma creation. Although it was not possible to delve deeply into every subject, the booklet provides guidance on which professionals the patient should seek based on their specific needs.

Data regarding the characterization of the experts are presented below in Table 1.

All specialists held a degree in nursing. There was a prevalence of females (91.7%), the average age of participants was 39 years, and the average time since graduation was 11.5 years. Regarding specialties, 8 (66.7%) were specialists in oncology and 4 (33.3%) in enterostomal therapy, with 2 (16.7%) specialists holding both specialties. Regarding the area of expertise, 4 (33.3%) worked in wound and ostomy care, 4 (33.3%) in chemotherapy, 2 (16.7%) in oncological emergencies, 1 (8.3%) in oncology, and 1 (8.3%) in oncological surgery. Concerning the field of activity, 8 (66.7%) reported working exclusively in clinical care; 2 (16.7%) in education and clinical care; 1 (8.3%) in research and clinical care; and 1 (8.3%) in education and research.

The six aspects evaluated and their respective items, along with the CVI values for the validation of the educational material, are presented in Table 2.

All 21 items evaluated obtained a CVI score above 0.70, thus being considered valid. Of these, 16 received the maximum score (CVI = 1), corresponding to the aspects of objective, content, relevance, and figures. Three items had a CVI of 0.9167: "Is the booklet's vocabulary accessible?" (writing style aspect), "Is the cover attractive and does it indicate the material's content?" and "Are the title and content sizes in the topics appropriate?" (both in the organization aspect). The only item that received a score of 0.75 was "Does the writing style correspond to the target audience's level of knowledge?" (writing style aspect).

Several items received comments and suggestions for improvement, as demonstrated in Chart 1.

Table 1. Characterization of the specialist nurses.

Variables	n	%	Mean
Sex			
Female	11	91.7	
Male	1	8.3	
Age Group (years)			
25–35	6	50	**39**
36–45	3	25	
>46	3	25	
Years Since Graduation			
3–9	7	58.3	**11.5**
10–20	3	25	
>20	2	16.7	
Specialty			
Enterostomal Therapy	4	33.3	
Oncology	8	66.7	
Enterostomal Therapy and Oncology	2	16.7	
Professional Area of Expertise			
Wounds and Ostomies	4	33.3	
Chemotherapy	4	33.3	
Oncological Emergencies	2	16.7	
Oncology/Cancerology	1	8.3	
Oncological Surgery	1	8.3	
Field of Activity			
Clinical Care	8	66.7	
Teaching and Clinical Care	2	16.7	
Research and Clinical Care	1	8.3	
Teaching and Research	1	8.3	

Source: Prepared by the authors.

A total of 23 comments were recorded. Many praised the booklet's production regarding content, figures, objectivity of information, and relevance; however, suggestions for modifications were also provided. Suggestions regarding the addition of information were fully incorporated, such as: "include the adhesive plate (hydrocolloid)"; "how to proceed in case of abnormalities; I suggest adding a note with this information"; and "I suggest adding more options for stool disposal, such as plastic bags, as they cannot always reach the toilet".

As previously mentioned, the item with the lowest CVI score concerned whether the writing style aligned with the target audience's level of knowledge. Consequently, there were comments regarding the audience's understanding of certain information and technical terms. Some specialists expressed doubt regarding this comprehension: "I have doubts about certain terms regarding the patients' level of understanding"; "For some information, I was unsure if the patient would know how to identify what it was".

Additionally, some specialists suggested that the booklet be applied to the target audience through a further validation process: "I suggest conducting a clinical test to finalize the booklet with the clinical validation methodological stage and ensure its circulation in the scientific community"; "As a suggestion, it should be applied to lay patients to evaluate knowledge levels and whether all information was clear to them"; "Consider conducting research on patient perception of the booklet or a before-and-after (quasi-experimental) study to evaluate the degree of knowledge increase regarding their stoma with the aid of the booklet".

Table 2. Evaluation of the educational booklet by content and appearance specialists.

Variables	Totally Adequate	Adequate	Partially Adequate	CVI
Objective				
1.1 Are the information/contents presented in the booklet consistent with the daily needs of patients with intestinal ostomies?	8	4	0	1
1.2 Can the booklet circulate in the scientific environment?	9	3	0	1
1.3 Does the content of the booklet accurately address the theme?	9	3	0	1
1.4 Is the information presented in the booklet correct?	9	3	0	1
Content				
2.1 Is the content of the booklet suitable for use with patients with intestinal ostomies due to colorectal cancer?	9	3	0	1
2.2 Is the content of the booklet arranged in a complete and comprehensive manner?	7	5	0	1
Relevance				
3.1 Do the items addressed in the booklet illustrate important aspects for the learning of oncological patients in intestinal ostomy care?	9	3	0	1
3.2 Does the booklet present key aspects that should be reinforced to patients with intestinal ostomies due to colorectal cancer?	9	3	0	1
3.3 Does the booklet propose the construction of knowledge?	9	3	0	1
Figures				
4.1 Are the figures in the booklet capable of capturing the patients' attention?	5	7	0	1
4.2 Is the information in the booklet exemplified by the figures?	8	4	0	1
4.3 Are the figures in the booklet simple?	9	3	0	1
4.5 Do the figures in the booklet complement the information in the text?	9	3	0	1
4.6 Are the figures in the booklet objective enough?	9	3	0	1
Writing Style				
5.1 Is the writing in the booklet adequate?	8	4	0	1
5.2 Is the text of the booklet interesting?	9	3	0	1
5.3 Is the tone used in the booklet friendly?	8	4	0	1
5.4 Is the vocabulary of the booklet accessible?	7	4	1	0.9167
5.5 Does the writing style correspond to the target audience's level of knowledge?	7	2	3	0.75
Organization				
6.1 Is the cover attractive and does it indicate the content of the material?	7	4	1	0.9167
6.2 Are the sizes of the title and content within the topics appropriate?	6	5	1	0.9167

CVI: Content Validity Index.
Source: Prepared by the authors.

Regarding the illustrations, the feedback was positive. It was suggested to replace the first image with an anatomical diagram of the intestine, indicating the locations of an ileostomy and a colostomy to enhance didactic value. This suggestion was accepted, not as a replacement, but as an addition. Finally, two specialists suggested adding a female figure to the cover to ensure the inclusion of a demographic that is also part of the care process. The changes suggested by the specialists are presented below in Figure 1.

Chart 1. Comments from the specialists according to the evaluated item.

Item	Specialists' Comments	Changes
1.1	• Objective language. • Presented objectively with language that is easy for patients to understand. • I would reduce the amount of information. • Demystify the anus. • Content described chronologically, easy to understand, respecting scientific literature and well-adapted for lay patients, as well as comprehensible for patients with medium/high education levels. • I suggest adding more options for stool disposal, such as plastic bags, as they cannot always reach the toilet.	- - Accepted Accepted - Accepted
1.2	I suggest conducting a clinical test to ensure the booklet completes the clinical validation methodological stage and to guarantee its circulation in the scientific community.	Accepted for future study
1.3	The soap must/can be liquid and physiological or match the skin's pH.	Accepted
2.2	• On page 7, it lists warning signs regarding the stoma; however, it does not explain how to proceed in case of abnormalities. I suggest adding a note with this information. • Multidisciplinary approach is highly necessary for the target audience's understanding. • Excessive [content] for a booklet. • Congratulations on the multidisciplinary approach!	Accepted - - -
3.3	Yes, considering the realization of patient perception research on the booklet or a before-and-after (quasi-experimental) study to evaluate the degree of knowledge increase regarding the stoma with the aid of the booklet.	Accepted for future study
4.1	• On page 6, 2nd paragraph, the intestine is described. I suggest the first image be replaced by an image of the intestinal anatomy, signaling where the ileostomy and colostomy are, to enrich the didactics. • Well-illustrated figures, appropriate color and size, and self-explanatory. • As a suggestion, it should be applied to lay patients to evaluate knowledge level and whether all information was clear to them.	Accepted - Accepted for future study
5.1	For the most part, it is adequate. In some instances, I doubted if the patient would identify what it is—for example, "hydrocolloid." Will the patient know what that is? I suggest using "adhesive plate (hydrocolloid)." Terms like "evacuate/become constipated" might not be appropriate for certain audiences due to low education levels.	Accepted
5.4	Some patients do not understand the technical terms used; perhaps a more simplified approach for these patients.	Partially accepted
5.5	As exemplified in the previous comment, I have doubts about certain terms regarding the patients' level of understanding. Some patients cannot read; the booklet would not be applicable to them. Therefore, your target audience must at least be literate, as the booklet is intended FOR the patient and NOT for their companion/family member. Not that it prevents the companion from having access, but in scientific terms, your booklet has limitations regarding education level. The figures help A LOT with understanding; I found them excellent!	Partially accepted
6.2	• Congratulations, your work is very beautiful. • I found it a bit extensive, but good. • Extremely important booklet for patients with ostomies, whether temporary or permanent. It addressed physical and psychosocial aspects, showing the importance of the multidisciplinary approach and demystifying taboos about the ostomy. Illustrations were very well chosen, easy to understand, and complement the text. Congratulations on the work!	- - -
6.1	• I suggest adding an illustration of a woman to the cover. Colorectal cancer is also very incident in the female population. Another point: your booklet is for adult patients, correct? It is also important to make it clear that your target audience consists of adult oncological patients with a minimum reading level. • Prioritized the male figure. And why a hat?	Accepted -

Source: Prepared by the authors.

DISCUSSION

Colorectal cancer and intestinal ostomy

The initiative to develop this booklet originated from the need for professionals, patients, and families to understand the relationship between colorectal cancer and intestinal ostomy. Colorectal cancer is the primary neoplasm of the gastrointestinal system, encompassing malignant tumors of the large intestine and rectum. It corresponds to malignant tumors in the final portion of the digestive tract, extending from the ascending colon, through the transverse, descending, and

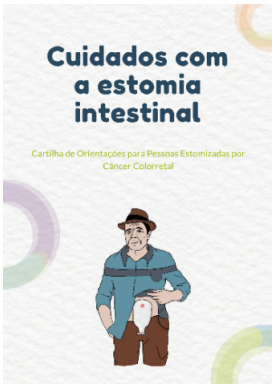
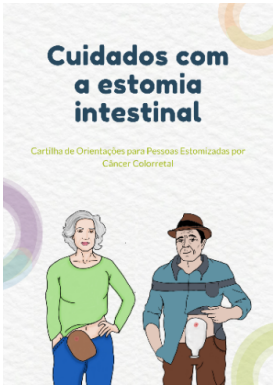
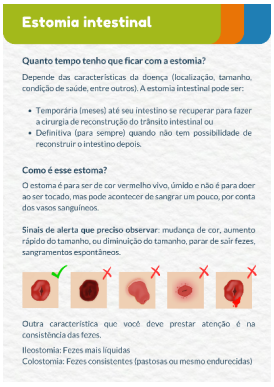
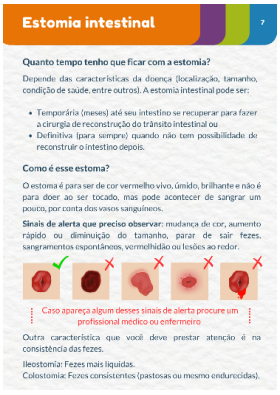
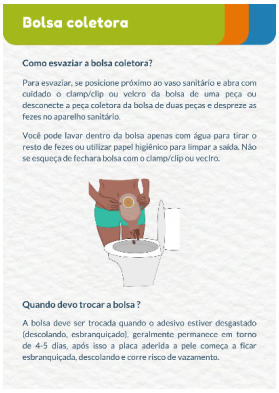
Before validation	After validation
	
	
	
	

Figure 1. Changes made to the booklet following specialists' suggestions.
Source: Prepared by the authors.

sigmoid colon, to the rectum—which is located in the pelvic cavity and connects to the anus. Knowing in which portion of the large intestine the cancer is located is useful for understanding the signs and symptoms of the disease and determining necessary therapeutic actions[17].

Due to the non-specific symptoms of colon and rectal cancer and the socioeconomic profile of affected patients—linked to low investment in prevention, screening, and early detection—diagnosis often occurs late. Consequently, patients arrive at oncological services in advanced stages of the disease (III and IV), which significantly impacts treatment strategy and prognosis[2].

In the treatment of colorectal cancer, different therapeutic combinations including surgery, antineoplastic chemotherapy, and radiotherapy can be utilized. Among these options, surgical intervention is the only curative treatment approach, involving the resection of the tumor and its margins through colectomy or rectosigmoidectomy in early cases. In advanced cases, surgical amputation of the rectum or even pelvic exenteration may be necessary when there are metastases to adjacent pelvic organs. For this reason, intestinal ostomies are very common and necessary after these surgical procedures to ensure intestinal elimination[17].

The word "stoma" or "ostoma" is of Greek origin, meaning "opening," "mouth," or "orifice," referring to an opening of an organ or hollow viscus from the digestive, urinary, or respiratory systems to the external environment, caused by traumatic or pathological conditions. Terminology is based on the exteriorized segment, which may be for elimination, feeding, or respiration purposes[5].

Although concrete data on the sociodemographic and epidemiological profile of people with ostomies in Brazil are lacking due to the fragmentation of health information systems, some research has shown equivalent results regarding colorectal cancer being the primary cause of elimination ostomies, especially intestinal ones. These may be necessary even in early cases of the pathology to protect surgical anastomoses following tumor resection, as well as in more advanced stages for palliative purposes[18,19].

Depending on the characteristics or extent of the disease and surgical objectives, intestinal ostomies can be temporary or permanent, a fact that significantly impacts the patient's life. This information must be addressed from the moment surgery is indicated, not only regarding the necessity of the procedure but also to prepare for the changes and adaptations that will occur postoperatively[4].

Most intestinal ostomies performed in colorectal cancer patients are temporary, remaining until the colon or rectum recovers from the surgical procedure. Generally, 6 to 8 weeks after healing, intestinal transit reconstruction is performed by reconnecting the ends of the colon and closing the stoma. Permanent ostomy is required more frequently for rectal cancer patients than for colon cancer patients, as the more distal the tumor location, the lower the possibility of reconstructing intestinal transit[4].

Depending on which part of the intestine is exteriorized, the stoma receives a different name: it can be an ileostomy—when located in the final part of the small intestine—or a colostomy—when located in the colon. In the latter case, each colon segment also receives a specific name: ascending, transverse, descending, and sigmoid colostomy. Anatomical location is important not only for naming the stoma but also because it influences the characteristics and volume of intestinal eliminations, which impacts proper care and management[5].

Regardless of the type of stoma and the effluent eliminated, the patient requires equipment for ostomy maintenance, such as collection devices and adjuvant products that contribute to the patient's safety, discretion, and comfort. Collection bags can vary between closed or drainable, one-piece or two-piece, transparent or opaque, and various sizes. Adjuvants may include belts, clamps, barrier creams, protective films, odor-minimizing products, and skin cleansers, among others that help stabilize the stoma and maintain healthy peristomal skin[5].

Certain complications can occur after stoma creation, such as prolapse, stenosis, necrosis, hemorrhage, retraction, and hernia, but peristomal skin dermatitis is particularly noteworthy. This complication can be caused by the lack of preoperative stoma site marking, inadequate handling of the collection equipment, the type of equipment used, allergies to barrier creams, mechanical trauma from adhesive removal, skin friction, and, above all, the lack of knowledge and skill of the person with a recent ostomy[10].

Proper management of devices to avoid complications and the entire process of adapting to the stoma are challenges faced by patients and their families/caregivers. The lack of knowledge about living with an ostomy, especially after hospital discharge, can lead to emotional destabilization, insecurities, and uncertainties regarding body care in this new condition. Thus, it is essential for the patient to be assisted holistically by trained professionals who contribute to their rehabilitation process and improvement in quality of life[20].

Nursing in the care of patients with ostomies

In this context, the nursing professional plays a fundamental role in the adaptation process of the patient with an ostomy, being essential in creating guidance and monitoring strategies, as well as planning interventions in line with the individual's uniqueness, significantly contributing to the reduction of complications[21].

Given the oncological patient with an ostomy, two nursing specialties are necessary for specialized care: the oncology nurse, who provides assistance throughout all phases of oncological treatment; and the enterostomal therapist nurse, who is trained to provide complex care to people with ostomies[9].

From the discovery of cancer and the subsequent need for an ostomy to the monitoring and rehabilitation of the patient, nursing care must be present. It is important for the nurse to integrate the complexities of care with competencies and skills, providing effective, systematized, and integral nursing care based on the Systematization of Nursing Care[22].

Nursing as a science encompasses areas such as assistance, management, and education; in this sense, health education is an intervention tool through teaching aimed at promoting self-care and disseminating knowledge about health-related issues. From this perspective, the nurse acts as a transformative health agent by teaching people with ostomies and their families to practice self-care, using educational technologies that aid in the comprehension of knowledge[21].

Among all actions performed in the health education process, achieving autonomy and independence in performing ostomy care is considered one of the most relevant for the quality of life of these individuals. In general nursing practice, the use of "hard technologies" is seen as a form of innovation in relaying guidance to achieve the goal of continued care and subsequent autonomy[22].

Some studies point to several advantages in using health technologies in nursing care: the integration and utilization of data for health care and research; continuity of care and safety; innovation of professional practice; qualification of care; promotion of bonding and reciprocity of values and emotions; ease of communication and management of the nurse's time; better direction of treatment; and the possibility of improving efficient clinical decision-making[23,24].

According to the Brazilian Consensus on Care for Adults with Ostomies, health education through technologies such as printed and digital booklets, videos, and other multimedia should be considered part of postoperative care for people with ostomies, favoring the development of knowledge and self-care skills.

Validation of health technologies

There is a growing use of health technologies to assist in teaching-learning and the development of interactions between professionals, family/caregivers, and patients. The use of validated technologies contributes to the strengthening of evidence-based interventions as well as the quality of assistance, especially regarding the continuity of care by the family/caregivers and the patient themselves[24,25].

The validation process with specialists provides the study and the material with greater methodological rigor. The participation of nursing professionals in the validation of health technologies is of great importance, as they provide direct assistance to patients, know the main care demands, and are responsible for health education guidance grounded in solid scientific knowledge and delivered in a way that is appropriate for understanding care[11].

In this research, the contribution of nurses specialized in oncology and enterostomal therapy—the two areas of nursing knowledge that provide specialized care to colorectal cancer and ostomy patients, respectively—is highlighted. A similar study that validated educational material also considered the presence of enterostomal therapist specialists in the validation

process as a positive point, noting that the contributions of these nurses are anchored in their professional training and practice, as they possess the characteristics of a health educator coupled with specific knowledge of their care approach[24,25].

It is worth noting that the validation process can favor the target audience's acceptance of and adherence to the educational material, thereby reflecting proper care. A study utilizing health technology in the form of an educational video for families and people with ostomies found that, after the nursing intervention using the material, families expanded their understanding of basic ostomy care, developed certain care skills, and felt more secure regarding the handling of the collection equipment[25].

Study limitations

The absence of clinical validation with the target audience proved to be a limiting factor in this study, a research format suggested by several specialists. Consequently, the intention is to conduct a subsequent study comparing this material with other technological resources and applying it to the target audience to assess its suitability relative to their level of knowledge.

Contributions and recommendations

Despite these limitations, the educational booklet, deemed valid by the specialists, emerges as a relevant tool for the health education of patients with ostomies due to colorectal cancer. It addresses aspects ranging from understanding the health-disease process to intestinal ostomy care, incorporating a multidisciplinary approach. Clinical validation studies with the target audience and practical application by professionals are recommended, as is the adaptation of the material for other types of ostomies. Therefore, it is believed that the construction—and subsequent validation—of this booklet will contribute to patient awareness, empowering them to become active participants in their self-care.

CONCLUSION

The booklet on ostomy care for colorectal cancer patients was considered valid by the specialists. All evaluated aspects—objectives, content, relevance, figures, writing style, and organization—achieved high CVI scores and received positive feedback.

The validation process of the educational material proved to be a relevant tool, granting the developed material the methodological rigor required for its use in scientific circles and in the clinical practice of caring for colorectal cancer patients. Furthermore, the suggestions provided by the specialists guided improvements in the development of the booklet.

In conclusion, this research may contribute to a broader understanding of the dimensions of care for patients with colorectal cancer and intestinal ostomies, thereby fostering the promotion of self-care. Thus, it is suggested that other professionals continue to improve the material and initiate clinical validation with the target audience, allowing the booklet to be widely disseminated within the academic community and among the patients and families who will benefit from its content.

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