ESTIMA
Brazilian Journal of Enterostomal Therapy

ORIGINAL ARTICLE
https://doi.org/10.30886/estima.v23.1567_IN

Validation of a guide for peristomal skin care in adults with elimination ostomy

Angela Bruna Luchese Sari[1,*], Edlamar Kátia Adamy[1], Rafael Gué Martini[1]

ABSTRACT

Objective: To validate the content, appearance, and semantics of a guide for peristomal skin care in adults with elimination ostomies. **Method:** A methodological study structured in four phases: 1) Exploratory phase, 2) Development, 3) Validation phase, and 4) Publication. This research presented the validation phase, which includes a) content validation by stomal therapy nurses; b) appearance validation by graphic designers; and c) semantic validation with the target audience (individuals with ostomies and nurses). Data were analyzed using the Content Validation Index (CVI), Appearance Validity Index (AVI), and Semantic Agreement Index (SAI). **Results:** The final guide comprised 32 pages, divided into pre-textual, textual, and post-textual elements. The global CVI was 88.6%, total AVI was 83.3% and global SAI was 98.2%. **Conclusion:** The guide was validated as an educational and assistance technology in three stages, presenting clinical applicability in Nursing Consultations, support groups, and self-care for individuals with ostomies and their families. The material has high replicability potential, as it will be available in both digital and print versions.

DESCRIPTORS: Nursing. Office nursing. Ostomy. Educational technology. Enterostomal therapy. Validation study.

Validação de guia para cuidados da pele periestoma em adultos com estomia de eliminação

RESUMO

Objetivo: Validar conteúdo, aparência e semântica de um guia destinado aos cuidados com a pele periestoma de adultos com estomias de eliminação. **Método:** Estudo metodológico estruturado em quatro fases: 1) Fase Eexploratória, 2) Desenvolvimento, 3) Fase de validação e 4) Publicização. Será exposto neste artigo a fase de validação: a) de conteúdo, por enfermeiras estomaterapeutas; b) de aparência, por *designers* gráficos; c) semântica, com o público-alvo (pessoas com estomia e enfermeiras). Para tratamento dos dados, foram utilizados: Índice de Validação de Conteúdo (IVC), Índice de Validade de Aparência (IVA) e Índice de Concordância Semântica (ICS). **Resultados:** O guia foi finalizado com 32 páginas, dividido em elementos pré-textuais, textuais e pós-textuais. IVC global de 88,6%, IVA total de 83,3% e ICS global de 98,2%. **Conclusão:** O guia foi considerado uma tecnologia educacional e assistencial validada em três etapas, apresentando aplicabilidade clínica na Consulta do Enfermeiro, em grupos de apoio e para o autocuidado de pessoas com estomias e seus familiares. O material tem alto potencial de replicabilidade, pois será publicizado nas versões digitais e impressa.

DESCRITORES: Enfermagem. Enfermagem ambulatorial. Estomia. Tecnologia educacional. Estomaterapia. Estudo de validação.

[1]Universidade do Estado de Santa Catarina – Chapecó (SC), Brasil.
*Corresponding author: angelasary_135@yahoo.com.br

Section Editor: Manuela de Mendonça F. Coelho
Received on: Aug. 02, 2024 | Accepted on: Jan. 19, 2025
How to cite: Sari ABL, Adamy EK, Martini RG. Validation of a guide for peristomal skin care in adults with elimination ostomy. ESTIMA, Braz J Enterostomal Ther. 2025;23:e1567. https://doi.org/10.30886/estima.v23.1567_IN

Validación de una guía para el cuidado de la piel de periestomal en adultos con ostomía de eliminación

RESUMEN

Objetivo: Validar el contenido, la apariencia y la semántica de una guía destinada al cuidado de la piel periestomal en adultos con ostomías de eliminación. **Método:** Estudio metodológico estructurado en cuatro fases: 1) Fase exploratoria, 2) Desarrollo, 3) Fase de validación y 4) Publicación. En esta investigación se expone la fase de validación: a) del contenido, por enfermeros estomaterapeutas; b) de la apariencia, por diseñadores gráficos; c) semántica, con el público objetivo (personas con ostomía y enfermeras). Para el análisis de los datos, se utilizaron los siguientes índices: Índice de Validación de Contenido (IVC), Índice de Validez de Apariencia (IVA) e Índice de Concordancia Semántica (ICS). **Resultados:** La guía se finalizó con 32 páginas, divididas en elementos pretextuales, textuales y postextuales. Se obtuvo un IVC global del 88,6%, un IVA total del 83,3% y un ICS global del 98,2%. **Conclusión:** La guía fue considerada una tecnología educativa y asistencial validada en tres etapas, con aplicabilidad clínica en la consultas de enfermería, en grupos de apoyo y para el autocuidado de las personas con ostomías y sus familias. El material tiene un alto potencial de replicabilidad, ya que se difundirá en versiones digital e impresa.

DESCRIPTORES: Enfermería. Enfermería de consulta. Estomía. Tecnología educacional. Estomaterapia. Estudio de validación.

INTRODUCTION

The person with intestinal or urinary ostomy faces numerous challenges, the main one being to preserve the totality of the peristomal skin to allow the adherence of the collector equipment[1]. The skin has three layers: the epidermis, the dermis, and the subcutaneous tissue. When exposed to excessive moisture, they increase the chances of hyper hydration and maceration, compromising its protective and barrier function[2].

Individuals undergoing an ostomy surgery may suffer complications, such as dermatitis, folliculitis, pyoderma gangrenosum, psoriasis, etc.[3]. According to estimates, between 70% and 80% of people who have an ostomy have had problems with their peristomal skin[1,4]. In addition to this negative effect, these people are also prone to other psychological disorders, which may impair their lifestyle[5].

This situation shows the need to think about the perspective of humanization, as they are patients who need systematic care based on physical evaluation and adequate anamnesis, with the valorization of non-verbal language[5]. In this sense, the role of nurses is vital in the planning of care to prevent complications, especially in communicating appropriate guidelines and helping the rehabilitation and well-being of individuals who live with elimination ostomies[6].

According to the theorist Dorothea Elizabeth Orem, it is up to the nurse to identify the patient's self-care deficits to guide and stimulate the learning of skills that favor self-care[7]. In this sense, Orem's theory is the foundation of this research, considering the role of nurses in guiding and stimulating people with ostomies to become independent daily, managing their own stoma.

In order for nurses to promote health education practices, such as the management of ostomies, currently, professionals can benefit from educational technologies (ET). ETs are a resource for health education, as they allow nursing professionals to establish standardization and assist in the guidance provided during the health education. Thus, this type of technology contributes to the safety of care and to its more adequate offer[8].

Within the scope of Primary Care, ETs aim to contribute to the exercise of health education and to the mediation of educational practices in specific communities or groups [9]. As an example of ET, didactic guides are fundamental to learn several topics, especially in the health area. These topics can contribute to the construction of knowledge through clear language, visual references, and a pleasant approach[10].

The guide, whose validation will be described below, was the ET defined to assist nurses in the health education process for this public. The guide was the result of a professional master's degree in Nursing in 2014, in Belém do Pará. At the time, the author was in contact with people with ostomies who participated in a support group. This fact contributed to the production of the material, and as the guide was not validated or published, it was kept aside until 2022. After having identified that the guide is a material that supports the practice of nurses, the author was asked to continue the research, adapting it to the needs identified for the care of people with ostomies in the South region, and started to update it through a Narrative Review.

Given the above, the objective was to validate the content, appearance, and semantics of a guide for the peristomal skin care of adults with elimination ostomies.

This research was funded by the CAPES/COFEN agreement, through public notice No. 08/2021, to support graduate programs — professional master's modality — in the Nursing area.

OBJECTIVES

To validate the content, appearance, and semantics of a guide for the peristomal skin care of adults with elimination ostomies.

METHODS

Methodological research, characterized by developing methods or procedures of a scientific nature, with implication in the study of paradigms, crises of science, methods and techniques of research[11], organized into four stages:

1. Exploratory phase
2. Development
3. Content, appearance, and semantic validation, and
4. Publication.

This article specifically focuses on the third step, validation.

It is noteworthy that the research was based on the STROBE (Strengthening the Reporting of Observational Studies in Epidemiology) checklist since this type of checklist contains information to design observational studies[12].

The validation step was divided into two stages. At first, content and appearance validations were carried out simultaneously. Subsequently, after making the adjustments suggested by the experts, the semantic validation was carried out.

The content validation was carried out by stomatherapists in August 2023, in accordance with the inclusion parameters: training in Nursing, with a doctorate and/or master's degree in Health; in addition to professional experience (clinical, teaching or research) of 5 years or more in Stomatherapy.

To identify these professionals, a search was carried out on the website of the Brazilian Association of Stomatherapy (SOBEST), through the list of associated stomatherapists. A search for the term "stomatherapist" was also carried out in the "subject" field of the Lattes Platform. The snowball technique was also used, in which the first participants indicated the other people until the determined quantity of minimum participation of six was reached[13].

The judges are the experts who must analyze each item listed and their real connection with the purpose of the instrument[13]. After identifying the contacts of the experts on the SOBEST website, an invitation letter emailed or texted to 38 stomatherapists. Those who confirmed their participation in the research received an electronic copy of the Informed Consent Form (ICF) and the link to the Google Forms, with the Content Validation Instrument and the revised guide version.

Six experts agreed to participate in the research, and they had given 30 days to answer the questionnaire. The content validation instrument was adapted[14], consisting of 19 questions and 3 segments: information about the expert, instructions to complete the instrument, and content validation.

This validation method uses a Likert scale, which assesses the relevance or representativeness of the responses, with scores ranging from 1 to 4. Scores close to 1 indicate less clear or irrelevant answers, and the higher the numerical score, the greater the clarity and relevance:

1. Inadequate
2. Partially adequate
3. Adequate
4. Fully adequate.

The number of items scored with 3 and 4 was divided by the total number of items[15]. Items with CVI greater than 80% (0.8) were approved. Items that did not meet the minimum CVI were adequate.

The appearance validity, processed in August 2023, assumes that the illustrations can facilitate the reader's understanding. Theorists in the area explain that figures can be useful to capture the individual's attention to reading, facilitate concentration, stimulate emotions, avoid distractions, and make the reader focus on the purpose of the subject[16].

Thirteen professionals trained in the areas of Design and Content Publishing were invited to participate in this stage, of which six expressed interest in participating in the study. As inclusion criteria, experts who had at least 5 years of experience in the area were selected. Because there is no consensus in the literature about the minimum and maximum number of experts to perform the appearance validation, we included at least six experts, to make the number equivalent to the content experts[10].

The snowball technique was used, and, after acceptance, the ICF and the Health Educational Technology Appearance Validation tool (IVATES) were emailed with a link to the Google Forms application to answer the questionnaire, accompanied by the digital version of the guide.

The IVATES uses a five-point Likert scale, according to the level of agreement of the experts (1. Totally disagree, 2. Disagree, 3. Somewhat disagree, 4. Agree, 5. Totally agree), and 12 questions, with a defined Appearance Validity Index (AVI) with a cutoff point of ≥ 0.80[16].

The AVI calculation for each item, known as (AVI-I), was carried out given the number of experts who answered 4 or 5, divided by the total number of experts. To obtain the total AVI (AVI-T), the AVI-I values were added and divided by the total of items. The experts had up to 30 days to answer the survey. Items that did not meet AVI-I ≥0.80 were adjusted as suggested by the experts.

Semantic validation occurred with two audiences: people with elimination ostomies and registered nurses. With people living with ostomy, the validation was carried out during the monthly meeting that took place on October 20, 2023, at the University Medical Outpatient Clinic (AMU) of a municipality in the midwest of Santa Catarina. Individuals over 18 years old, who were literate, and those who had some kind of physical difficulty or who were illiterate, were chosen to interact with the help of an accompanying person.

Twelve people participated in this stage, and the individuals who were absent on the day the instrument was applied were excluded. The guidelines for answering the research questionnaire were communicated collectively, when the objective of the work was also explained. After the members signed the two copies of the ICF, they received a hard copy of the guide, the validation questionnaire, and a blue ink pen.

Participants were also able to follow the visualization of the guide through the use of the video projector. The evaluation questions were read by the author of the research and the questions about each one were answered at that time. Two organizers of the group helped to apply the validation instrument.

Subsequently, in December 2023, the semantic validation stage was carried out with the nurses. To identify these professionals, contact was made with the health secretariats of the 20 municipalities that are part of the 7th Regional Health of the state of Santa Catarina, and, from this contact, the e-mail or telephone contact of the nurse in charge of the units was requested.

Twenty-three registered nurses were contacted, including those responsible for the Primary Care units and nurses from the following sectors of public hospitals: emergency room, medical clinic, surgical clinic, surgery rooms, and

oncology. The leading nurses were asked to forward the research to their nursing collaborators who agreed to answer the questionnaire. Thus, the Google Forms link was sent, together with the invitation letter, the ICF, in addition to a copy of the guide and the Semantic Validation Instrument. The nurses had 15 days to answer the instrument; at the end, 11 questionnaires were answered.

The Semantic Validation Instrument was adapted[14] and contains a Likert scale with 14 items divided into 3 blocks: characterization, tutorial for completing the questionnaire, and semantic validation. The instrument has some answer options (1. Inadequate, 2. Partially adequate; 3. Adequate and 4. Totally adequate) according to the level of agreement of the evaluator.

The calculation of the items (I-SAI) was carried out by the sum of the answers classified as 3 and 4, and then this value was divided by the total answers for the item. The calculation of the global semantic agreement index, known as Global S-SAI, was performed by averaging the items I-SAI for all validation criteria used[17].

Data were tabulated and analyzed using the Semantic Agreement Index (SAI). In this analysis, the items with SAI ≥0.80 (80%) were approved. Items that received a score lower than 0.8 should be adjusted as indicated by the participants[17].

This research sought to ensure the anonymity of the participants; thus, the content validation experts were identified by the letters CE (CE1, CE2, CE3, etc.), while the experts who validated the appearance were identified by the letters AE (AE1, AE2, AE3, and so on). The audience that validated the semantics was identified by the letter P, followed by a number (P1, P2, P23, etc.).

The research is part of the macroproject "Desenvolvimento de Tecnologias para a Consulta do Enfermeiro na Atenção Primária à Saúde", whose acceptance by the Research Ethics Committee took place under opinion Nº. 5.047.628, CAAENo. 50165621.2.0000.0118.

RESULTS

In content validation, six experts answered. Of these, five (83.3%) are female and one (16.6%) is male. With regard to age, there was a variation from 40 to 63 years, with a mean of 55.1 years.

The highest level of education of stomatherapy nurses was a Master's degree. As for the time of training, it ranged from 13 to 40 years, with a mean of 30.6 years. In relation to the experience with the area of Stomatherapy, the time was from 8 to 33 years, with a mean of 17.1 years.

Table 1 shows a detailed description of the items evaluated and the CVI values provided by the experts.

As noted in Table 1, the three blocks of the questionnaire ("Objectives"; "Structure and presentation"; and "Relevance") reached CVI above 80%. Only items 6, 7, 9, and 11 received CVI below 80%, and suggestions for improvement were indicated by the experts.

The suggestions made by the content specialists were set out in Chart 1 below, as well as acceptance or not.

Regarding the evaluation of appearance, the experts are characterized by two female (33.3%) and four (66.7%) male professionals, aged between 31 and 60 years, and an average of 45.3 years. All are training designers, and four (66.7%) professionals work as graphic designers. As for the time of experience in the profession, the minimum time was 11 and the maximum was 42 years, a mean of 23.5 years.

Table 2 shows the results related to the application of the IVATES questionnaire.

The appearance designers made some suggestions about the guide, listed in Chart 2.

As for the semantic validation, 11 nurses who work at Health Care centers of the 7th Regional Health of Santa Catarina and 12 adults who live with elimination ostomies participated in the Support Group for People with Ostomies. Of the total, 16 (69.6%) are female and 7 (30.54%) are male.

In turn, the age group of the public involved ranged from 23 to 79 years, with a mean of 43.7 years. Among the participants, four (17.4%) had complete/incomplete elementary school, four (17.4%) had high school level, three members (13.1%) held a Nursing degree and one (4.3%) had a degree in Administration. In addition, 10 (43.5%) reported having a Continuing Education degree in the Health area and one participant (4.3%) had a master's degree.

The public's opinion on the guide can be seen in Table 3.

Table 1. Expert evaluation (n=6) through the Content Validation Instrument. Chapecó (SC), Brazil, 2023.

Items	I	P	A	T	CVI (%)
Objectives					
1. The content facilitates the teaching-learning process on the topic.	0	0	2	4	100.0
2. The content allows the understanding of the topic.	0	0	3	3	100.0
3. The content contributes to clarify possible questions about the topic addressed.	0	0	3	3	100.0
4. The content encourages the use of this technology in practice/performance.	0	0	2	4	100.0
5. The content provides reflection on the topic.	0	0	3	3	100.0
CVI of the objectives category					100.0
Structure and presentation					
6. The content is presented in language appropriate to the target audience.	0	2	2	2	66.6
7. The content presents interactive language, allowing active involvement in the educational process.	0	2	2	2	66.6
8. The content obeys a logical sequence.	0	1	2	3	83.3
9. Language is interactive, allowing active involvement in the educational process, capable of holding attention.	0	2	1	3	66.6
10. The information presented is scientific.	0	0	2	4	100.0
11. The information is well structured in terms of agreement and spelling.	0	2	2	2	66.6
12. The information is objective and clear.	0	1	4	1	83.3
13. The information is clarifying.	0	0	4	2	100.0
14. The information is necessary and pertinent.	0	1	2	3	83.3
15. The topic is current and relevant.	0	0	3	3	100.0
16. The size and font of the text are adequate.	0	0	4	2	100.0
CVI of the structure and presentation category					83.3
Relevance					
17. The content stimulates learning.	0	1	2	3	83.3
18. The content contributes to knowledge in the area.	0	0	4	2	100.0
19. The content arouses interest in the topic.	0	1	2	3	83.3
CVI of the relevance category					88.8
Global CVI					**88.6**

I: Inadequate; P: Partially Adequate; A: Adequate; T: Totally Adequate; CVI: Content Validation Index.
Source: Research data, 2023.

All items of the semantic validation instrument had an SAI result greater than or equal to 95%, which means that the material is suitable for the audience that will access the content in the guide.

Most of the comments about the guide were positive. When asked if the content of the guide was attractive, the following answers were obtained:

- Participant P1: "I found everything cool; this material is extremely appealing."
- Participant P2: "It is very important to guide the professional, who often does not have the knowledge, in addition to assisting the caregiver and the patient who is in poor health."
- Participant P3: "The content is of great value, as it is a very common condition, and that most patients and professionals are unaware of."
- In another question, the purpose was to check if the size of the title of the topics was appropriate. We obtained the following answers:
- Participant P2: "The language is objective and easy to understand."
- Participant P3: "In my perception, the topics are adequate and easy to understand, in addition to being didactic and attractive."
- Participant P4: "The font size could be larger…"

Chart 1. Suggestions for modifications indicated by the content specialists.

Suggestion	Consideration
(CE1) To review the spelling of the document after completion of validation.	Suggestion accepted, the guide was reviewed in Portuguese after the end of the three validations.
(CE1) Make spelling corrections.	The suggestion was accepted, and the spelling was corrected, as suggested by the expert.
(CE1) In the following sentence, set the period: If using a barrier cream, let it act for a few minutes and then remove the excess to fix the adhesive base on the skin.	The suggestion was denied, as no evidence was found at the moment of action of the skin protector.
(CE1) Modify the text: Attention – do not use anything to heat, such as a hair dryer, etc.	The suggestion was accepted. The text was modified to: Attention – do not use a hair dryer or other hot material to activate the heat in the adhesive base.
(EC1) Improve the following sentence: If it is two-piece equipment, fit the bag on the adhesive base. If it is a piece, remove the air and close the clip.	The suggestion was accepted. The sentence was modified to: If the equipment has two pieces, first, fix the adhesive base and then the bag. If it is a piece, fix it on the skin, remove the air and, if it is drainable, close the bottom of the bag with a clip or velcro tape.
(CE1) In the following sentence, remove the words warm and fasting. "Whenever removing the adhesive base from the skin, do it gently with warm water, preferably while in the shower, and fasting, which facilitates its removal."	The suggestion was not accepted because evidence reinforces this practice.
(CE1) Correct: Wash the stoma and peristomal skin with water, without rubbing excessively. It may be necessary to use liquid soap to remove adhesive residues, preferrably those with neutral pH."	The suggestion was accepted. The text was changed to: Wash the stoma and peristomal skin with water and neutral soap, without rubbing, and you can use your hand or cotton, to remove possible residues left by the adhesive base.
(CE1) Correct: Dry the stoma and peristomal skin well with very soft tissue, with gentle movements.	The suggestion was accepted. The text was changed to: Dry the peristomal skin well with a towel or soft tissue, with gentle movements.
(CE1) All items in title 13 should be placed within item 12.	The suggestion was not accepted as titles have different approaches.
(CE1) Review the images for visibility.	The suggestion was accepted. The images were improved.
(CE2) In the types of collectors, one and two pieces were not specified, in addition to the drainable and closed type.	The suggestion was accepted. The images of this equipment were included.
(CE2) Trauma dermatitis: the photos do not match trauma dermatitis.	The suggestion was not accepted. The photo was portrayed by one of the authors with a patient.
(CE2) In figure 30, put in order: 1st measure the stoma, then mark on the meter and lastly cut it.	The suggestion was accepted, and the change was made.
(CE2) As for the photos of the products, I think it would be better to make drawings of the materials, because one can recognize the products even hiding their names.	The suggestion was not accepted. The photos of the products were kept, as they are for illustration only. We decided to hide the brand to not have conflict of interest.
(CE2) As for liquid ingested, review the statement that the urostomate should ingest 2.5 to 3 liters. The best would be to ingest the amount of liquids that was guided by the professional.	The suggestion was accepted, and the change was made.
(CE2) Format the references. They are not uniform and must follow the ABNT standards.	The suggestion was accepted, and the references were formatted following ABNT standards.
(CE4) I suggest checking the feasibility of adding succinct content that refers to the right of ostomates, as some patients may be unaware.	The suggestion was accepted, the address of a web page on the rights of people with ostomies was made available.

Source: Prepared by the author, 2023.

In the topic of illustrations, the evaluator P2 said: "Some images are blurred, it would be nice to improve them." Other comments were: "They are amazing" and "totally appropriate". P3 answered that the illustrations were incredible. P4 and P5 mentioned that they could be well understood.

Finally, the practical guide of guidelines entitled *Estomias sem mistérios: cuidados com pele periestoma de adultos com estomia intestinal e urinária (Ostomies without mysteries: peristomal skin care of adults with intestinal and urinary* ostomy) was completed with 32 pages, divided into the elements that precede the text (cover, technical data sheet, catalog sheet, summary, presentation), the textual elements and the post-textual elements (references).

Table 2. Expert evaluation (n=6) through the Appearance Validation Instrument. Chapecó (SC), Brazil, 2023.

Items	TD	D	SD	A	TA	AVI (%)
1. The illustrations are suitable for the target audience.	0	0	1	2	3	83.3
2. The illustrations are clear and easy to understand.	0	0	2	0	4	66.6
3. The illustrations are relevant for understanding the content by the target audience.	0	0	0	1	5	100.0
4. The colors of the illustrations are suitable for the type of material.	0	0	1	2	3	83.3
5. The shapes of the illustrations are suitable for the type of material.	0	0	3	1	2	50.0
6. The illustrations depict the daily life of the target audience of the intervention.	0	0	0	3	3	100.0
7. The arrangement of the figures is in harmony with the text.	0	1	2	3	0	50.0
8. The figures elucidate the content of the educational material.	0	0	0	1	5	100.0
9. The illustrations help in exposing the theme and are in a logical sequence.	0	0	0	2	4	100.0
10. The illustrations are in adequate quantity in the educational material.	0	0	0	4	2	100.0
11. The illustrations are in adequate sizes in the educational material.	0	1	1	3	1	66.6
12. The illustrations help in changing the behaviors and attitudes of the target audience.	0	0	0	4	2	100.0
General						**83.3**

TD: Totally disagree; D: Disagree; SD: Somewhat disagree; A: Agree; TA: Totally agree; AVI: Appearance Validity Index.
Source: Research data, 2023.

Chart 2. Suggestions made by the appearance specialists.

Suggestions	Considerations
Comments on the illustrations: (AE1) The quality of the images should be improved. (AE2) Some illustrations appear blurry and/or dark. Some appear out of pattern, such as with rounded or pointed corners or shaded. (AE3) In the guide, shapes and dimensions are not standardized. It is better to use only 1 or 2 types, or whatever is more harmonious, with the understanding that photo X is important enough for that special use.	The suggestions were accepted. Low-quality photos were replaced, and the format was standardized.
Comments on colors and contrast: (AE1) Colors are an essential element for illustrations. Tip: Consider using an app to assist in this regard. (AE2) Some texts, tables, or content excerpts appear in colors that do not meet the minimum contrast for good reading in virtual environments. (AE2) Check color contrast in the technical sheet and in the diet table where a very light green background and white text and red background and white text appear.	The suggestion was passed on to the job *designer*, who made the requested changes.
(AE2) Will this material be available online or printed? If it is a printed copy, I think it is important to test printing to check the printed colors. If it is digital copy only, there are elements that do not follow the contrast standards.	The suggestion was accepted. We tested the printing to check the colors of the illustrations, tables, etc.
(AE1) Think about the inclusion of people with visual impairments.	The suggestion was not accepted as this change was not foreseen.
(AE1) It is possible to explore the *layout* better. Good *layout* planning can bring significant benefits.	The suggestion was accepted, the *layout* was reviewed, and updates were made.
(AE2) Check margins starting from the summary. A grid must be respected for all pages in order to maintain a visual standard. (AE2) Align Title 10, according to the others.	The suggestions were accepted, the margins and title 10 were aligned.
(EA2) I suggest putting a QR code to access the video, without the need to enter the URL of the video on your phone or computer.	The suggestion was accepted, a QR code was inserted to access the video.
(AE3) Photos and overlapping figures should also be avoided. See Figure 11, for example.	The suggestion was not accepted, as figure 11 is clear.
(AE3) It is a long guide, instructions could be offered more at the beginning of the material. Many users will get tired before the end.	The suggestion was not accepted, since the illustrations exemplify the subject being addressed along with the text.
(AE3) Something that can be evaluated, but that takes time, is an organization into columns, such as a magazine or newspaper. A grid in 2 columns could be used, with photos/illustrations in different sizes and blank spaces so that the guide is more inviting to read and holds a little more attention.	The suggestion was not accepted, since the author decided to leave the layout as it was.

Source: Prepared by the author, 2023.

Table 3. Semantic evaluation of the target audience (n=23) with the aid of the Semantic Validation Instrument. Chapecó (SC), Brazil, 2023.

Items	I	P	A	TA	N	SAI (%)
1. The content is attractive.	0	1	4	18	0	95.0
2. The size of the title and topics is adequate.	0	1	8	14	0	95.0
3. The duration of the topics is adequate.	0	0	8	14	1	100.0
4. The illustrations are suitable.	0	0	5	18	0	100.0
5. Other teaching tools (videos, texts, links, games) are clear and make it easier to understand the content.	0	0	8	12	3	100.0
6. The texts are clear and make it easier to understand the content.	0	0	6	17	0	100.0
7. The extent of the technology (it is suggested to name) is appropriate.	0	1	7	15	0	95.0
8. The colors of the illustrations are suitable for the guide.	0	0	8	15	0	100.0
9. The shapes of the illustrations are suitable for the type of technology (the suggestion is to name them). Reason/suggestion:	0	0	6	17	0	100.0
9. The illustrations help in exposing the topic and are in a logical sequence.	0	0	6	17	0	100.0
11. The illustrations are in suitable quantity.	0	0	5	18	0	100.0
12. The illustrations are in suitable sizes.	0	1	4	18	0	95.0
13. The teaching tools (illustrations, videos, texts, links, games) motivate the change of behaviors and attitudes.	0	1	5	16	1	95.0
14. Technology is presented in a logical way to stimulate interest in the subject and learning.	0	0	8	14	1	100.0
General						**98.2**

I: Inadequate; P: Partially Adequate; A: Adequate; TA: Totally Adequate; N: Did not answer; SAI: Semantic Agreement Index.
Source: Research data, 2023.

The sunflower stands out in the cover. This flower was chosen by the members of the support group of Belém do Pará. According to them, the sunflower is like people living with ostomy, it is always facing the sun, just like the stomas. The guide is available at: http://surl.li/wmixlr.

DISCUSSION

Educational materials are presented as products that aim to support the communication process in health teaching practices, providing greater understanding to the intended public and better adherence to self-care[18].

For Nursing, this guide represents the technological advancement that ET has made available to the health area over the years, strengthening the relationship of trust between nurses and patients. The care provided by nursing to people with ostomies needs to be continuously improved and renewed, and the use of educational materials such as this, duly validated, is essential when guiding these people.

The validated guide offers clear, evidence-based information for nurses in peristomal skin care, which can improve the quality of services provided to patients. By following the recommendations of the guide, nursing can help prevent common complications associated with peristomal skin, such as irritation, dermatitis, lesions and infections, favoring the well-being of patients and reducing costs arising from complications.

In this study, the guide was under three forms of validation, and, therefore, can be considered a valid tool and able to enhance health education. In this context, the evaluation of ET by specialists is relevant, as it considers the specialized knowledge of these professionals and ensures that the materials are not incomplete or with inappropriate language for the intended population[19].

In this process, the participation of stomatherapists for content validation stands out. Only nurses have training in stomatherapy, and, in this sense, their contribution to the improvement of educational technologies, such as guides, is of great value, since these professionals spend time with these patients and know their needs[20].

It is important to emphasize that ET are an important means of information and, to ensure their reliability in a specific reality, content validation is an essential step to assess the accuracy of the instrument in measuring the fact studied [21].

Validation studies suggest that research with a high degree of agreement aims to ensure the reliability of the results presented. In searching for accuracy, this work was also designed to reach the academic community, especially nurses, pioneers in care, who increasingly need educational content produced with high methodological rigor.

At the time of content validation, the CVI was higher than 0.88 in most items, and only questions 6, 7, 9, and 11 received a score below 0.80. Among the corrections accepted, textual and illustration changes were made, and care and feeding guidelines were reviewed. Considering that the total CVI was greater than 0.80, it was not necessary to resubmit the guide for a new round of evaluation.

All these modifications were made to provide greater understanding to the reader. Thus, it is understood that educational materials, when prepared clearly and attractively, constitute an alternative to sensitize patients to their self-care[22].

The designers analyzed the appearance of the material and revealed their concern to understand the topic based on the aesthetic organization. Thus, the educational material must contain adequate elements such as layout, colors, figures, and titles, an adapted language, and a correct selection of the type of material for printing[23].

The illustrations provided in the guide were photographs of patients who attended a support group, and through them we intended to portray the reality of what happens to these people. Thus, images help understanding the text and attract the reader's attention, in addition to arousing and maintaining interest in reading[18].

As for the recommendations mentioned by the public, the images were improved, as already requested by the content and design experts. The relevance of disseminating the educational material to patients in the preoperative period is also observed, so that the information can be grasped early, and subsequent complications be avoided.

Therefore, the validated guide, as an educational technology, has the potential to contribute to health education practices for people who have some type of elimination ostomy, as it is a light technology that favors the teaching-learning process.

The guide represents a fundamental educational resource for nurses in their clinical practice and it is presented as a didactic technology that can be used in printed and digital formats, with innovative potential and low cost. This will allow it to be used widely in services offered to the public with ostomies.

The limitations of this study are the low involvement of the target population in the different validations of the guide, which led to reaching the minimum number of participants. In addition, it is possible to say that the research design in a single scenario was a limiting factor.

CONCLUSION

The guide for the peristomal skin care of people with elimination ostomies can be considered valid and will thus be used for registration and publication in digital and printed formats.

The guide will help to answer questions of the nurses, who often face clinical cases of skin lesions and need some guidance, strengthening knowledge for accurate decision-making in the provision of care to individuals and their caregivers.

It also has the potential to contribute to patients in the pre- and postoperative periods, and can serve as consultation and support material for self-care actions.

By its simple language, the guide can be replicated and adapted for different health care contexts, leading to greater dissemination and use of best practices in peristomal skin care throughout the country. The use of this material in clinical nursing practice may positively influence the quality of care, professional education, and comfort of people living with elimination ostomies.

In incorporating Dorothea Elizabeth Orem's theory of self-care, this guide emphasizes the importance of empowering individuals with ostomies to manage their own care effectively. According to Orem, promoting self-care is essential to improve clinical outcomes and quality of life. Through the education and support contained in this guide, nurses can facilitate the process by which patients learn to take responsibility for their own care, aligning care practices with the individual needs and self-care capacities of each patient, thus reinforcing the principles of autonomy and self-efficacy.

Acknowledgements: To the State University of Santa Catarina and the public notice of the Brazilian Federal Agency for Support and Evaluation of Graduate Education and the Federal Council of Nursing.

Contributions of the authors: ABLS: writing – first draft, writing – review and editing, research, methodology, validation. EKA: formal analysis, writing – review and editing, obtaining funding, supervision, validation. RGM: project management, writing – review and editing, validation.

Data availability statement: All data were generated or analyzed in the present study.

Funding: This work received funding from public notice Nº. 08/2021 of the CAPES/COFEN agreement.

Conflict of interest: Nothing on record.

REFERENCES

1. Burch J, Boyles A, Maltby E, Marsden J, Martin N, McDermott B, et al. Keep it simple: peristomal skin health, quality of life and wellbeing. Br J Nurs. 2021 Mar;30(Sup 6):5-24. https://doi.org/10.12968/bjon.2021.30.Sup6.1
2. Lacey V. Importance of peristomal skin protection. JCN. 2022;36(2):44-50.
3. Bernardino PA, Eduardo LS, Santos NV, Cavalcanti RV, Silva SMS, Barbosa MAS, et al. Aspectos clínicos e epidemiológicos das complicações da pele periestoma em pacientes estomizados. REAS. 2023;23(5):e12630. https://doi.org/10.25248/reas.e12630.2023
4. Voegeli D, Karlsmark T, Edds EH, Hansen HD, Zeeberg R, Håkan-Bloch J, et al. Factors influencing the incidence of peristomal skin complications: evidence from a multinational survey on living with a stoma. Gastrointestinal Nurs. 2020 May;18(-Sup4):S31-S38. https://doi.org/10.12968/gasn.2020.18.Sup4.S31
5. Le Ber F. Novel stoma appliances to minimise complications and improve patient outcomes. Br J Nurs. 2021 Sep;30(16):S4-S10. https://doi.org/10.12968/bjon.2021.30.16.S4
6. Paczek RS, Engelmann AI, Perini GP, Aguiar GPS, Duarte ERM. Profile of users and reasons for nursing consultation in stomatherapy. J Nurs UFPE. 2020;14:e245710. https://doi.org/10.5205/1981-8963.2020.245710
7. Leone DRR, Neves ADOJ, Prado RT, Castro EAB. Assistência de enfermagem em diálise peritoneal: aplicabilidade da teoria de orem - estudo de método misto. Esc Anna Nery. 2021;25(3):e20200334. https://doi.org/10.1590/2177-9465-EAN-2020-0334
8. Pontes AF, Rodrigues NA, Souza JHS, Valença MP. Uso de tecnologias educacionais na prevenção de complicações de feridas operatórias. REAEnf. 2023;23(2):e14175. https://doi.org/10.25248/reaenf.e14175.2023
9. Rostirolla LM, Adamy EK, Vendruscolo C. Tecnologias educacionais para a consulta do enfermero. Saberes Plurais: Educ Saúde. 2022;6(1):81-98. https://doi.org/10.54909/sp.v6i1.125286
10. Teixeira E. Materiais didáticos para mediar processo educacionais em saúde: produção e tipologias. Porto Alegre: Moriá; 2022.
11. Polit DF, Beck CT, Hungler BP. Fundamentos de pesquisa em enfermagem: avaliação de evidências para a prática da enfermagem. 9ª edição. Porto Alegre: Artmed; 2019.
12. Malta M, Cardoso LO, Bastos FI, Magnanini MM, Silva CMFP. Iniciativa STROBE: subsídeos para a comunicação de estudos observacionais. Rev Saúde Pública. 2010 Jun;44(3):559-65. https://doi.org/10.1590/S0034-89102010000300021
13. Pasquali L. Instrumentação psicológica: fundamentos e práticas. Porto Alegre: Artmed; 2010.
14. Zanatta EA, Adamy EK, Argenta K, Siega CK, Hanzen IP, Schneider AC, et al. Instrumentos de validação e conteúdo e semântica para subsidiar a consulta do enfermeiro. In: Zanatta EA, org. Mestrado profissional em Enfermagem em Atenção Primária à Saúde. Impacto e transformação profissional. Ponta Grossa: Atena; 2021. p. 36-48.
15. Alexandre NMC, Coluci MZO. Validade de conteúdo nos processos de construção e adaptação de instrumentos de medidas. Ciênc Saúde Coletiva. 2011 Jul;16(7):3061-8. https://doi.org/10.1590/S1413-81232011000800006
16. Souza ACC, Moreira TMM, Borges JWP. Development of appearance validity instrument for educatinal technology in health. Rev Bras Enferm. 2020 Dec;73(suppl 6):e20190559. https://doi.org/10.1590/0034-7167-2019-0559
17. Siqueira AF, Ferreira DS, Monteiro WF, Teixeira E, Barbosa IPB. Validation of a handbook on suicide prevention among students: talking is the best solution. Rev Rene. 2020;21:e42241. https://doi.org/10.15253/2175-6783.20202142241

18. Alves SAA, Silva KN, Machado MFAS, Cavalcante EGR, Albuquerque GA, Bezerra IMP, et al. Cartilha digital sobre práticas sustentáveis para a promoção da saúde do adolescente. Ciênc Saúde Coletiva. 2023 Ago;28(8):2215-26. https://doi.org/10.1590/1413-81232023288.07222023

19. Fontenele NAO, Ximenes MAM, Brandão MGSA, Fernandes CS, Galindo Neto NM, Carvalho REFL, et al. Creation and validation of a serial album for the prevention of Pressure Ulcer: a methodological study. Rev Bras Enferm. 2021;74(3):e20201060. https://doi.org/10.1590/0034-7167-2020-1060

20. Sena JF, Silva IP, Lucena SKP, Oliveira ACS, Costa IKF. Validation of educational material for the care of people with intestinal stoma. Rev Lat Am Enfermagem. 2020;28:e3269. https://doi.org/10.1590/1518-8345.3179.3269

21. Brasil GB, Rodrigues ILA, Nogueira LMV, Palmeira IP. Educational technology for people living with HIV: validation study. Rev Bras Enferm. 2018;71(suppl 4):1657-62. https://doi.org/10.1590/0034-7167-2017-0824

22. Cunha MBS, Frota KC, Ponte KMA, Felix TA. Construção e validação de cartilha educativa para prestação de cuidados às vítimas de ofidismo. Rev Gaúcha Enferm. 2020;41:e20190467. https://doi.org/10.1590/1983-1447.2020.20190467

23. Abreu ACS, Marinho DF, Cardoso IBP. Tecnologia educativa para os cuidadores de pacientes submetidos a traqueostomia: estudo de validação. Rev Aten Saúde. 2019 jan./mar;17(59):19-32. https://doi.org/10.13037/ras.vol17n59.5730