Cogitare Enfermagem

ORIGINAL ARTICLE

CREATION AND VALIDATION OF AN INSTRUMENT ON NEOPLASTIC WOUND MANAGEMENT FOR NURSES' TRAINING*

HIGHLIGHTS

1. Nurses still have gaps in their knowledge related to neoplastic wound management.
2. Elaboration and validation of an instrument for neoplastic wound management intended for nurses.
3. The instrument will contribute to the care practice and to the teaching of Nursing in neoplastic wounds.

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ABSTRACT

Objective: to create and validate the face and content of an instrument for training nurses in neoplastic wound care. **Method:** a methodological research study with a quantitative approach, carried out in three stages: scoping review; creation of the instrument; and face and content validation. Data collection took place between October 2021 and February 2022 in Niterói - RJ - Brazil. The Content Validation Index and *Fleiss Generalized Kappa* were used. **Results:** the final instrument consists of the following phases: definition of neoplastic wound; wound classification; staging; pain and odor rating scales; Nursing care; and management of signs and symptoms. The content was validated reaching a Content Validation Index > 0.80 and an agreement level between the judges > 75%, as established. **Conclusion:** validation of the instrument will contribute to reducing the gap indicated in the literature on Nursing care in relation to neoplastic wounds, in addition to its application to Nursing teaching and services.

DESCRIPTORS: Oncology; Nursing; Wounds and Injuries; Professional Training; Methodological Research in Nursing.

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INTRODUCTION

Wounds, especially chronic ones, affect five percent (5%) of the adult population in the western world, representing causes of morbidity and mortality resulting in impaired quality of life and economic burdens for health services – thus becoming a public health problem[1]. Neoplastic wounds belong to this context of chronic wounds. They originate from the infiltration of malignant tumor cells into the skin structures, resulting from uncontrolled cell proliferation caused by the oncogenesis process, with an exophytic character and leading to disruption of their integrity[2].

These wounds do not have well-consolidated incidence; however, a number of studies report that nearly 5% of the patients with advanced cancer and 10% of those with metastases, with a life expectancy of between six and 12 months, will develop neoplastic wounds[3]. Thus, management of these injuries is primarily through palliative care.

The most common symptoms are odor, exudate, pain, bleeding, itching, and local or systemic infection[4]. In addition to that, these wounds are characterized by healing impossibility. This is a sign of disease progression with poor prognosis and limited treatment options, causing distress in patients, family members and caregivers[4]. Quality of life is also affected in patients with these wounds due to the signs and symptoms already described, in addition to generating a reduction in functional capacity, social isolation and alteration in the emotional state[5].

The treatment for neoplastic wounds is complex. It requires evaluation of the injury oncological etiology, characteristics and staging and of the patient's physical, emotional, social and spiritual condition, as well as specific products and dressings to control signs and symptoms[6]. Nurses should be able to provide care for this type of wound. Studies carried out with nurses, in hospital institutions that offered care to patients with neoplastic wounds, showed that these professionals have gaps in their knowledge related to the care for this type of injury, mainly regarding wound assessment, indication of dressings and interventions to control bleeding and odor[6-7].

The limitations of wound assessment, indications of dressings and interventions to control bleeding and odor are related to the absence of permanent education in health services and of continuing education in related areas such as stomatherapy and palliative care[8]. In addition to that, the weakness of Nursing care directed to these patients contributes to this situation due to lack of knowledge about neoplastic wound management, increased workload resulting from managerial activities, and poor planning in terms of staffing[6].

Another aspect that exerts an impact on Nursing care for cancer patients with neoplastic wounds is nurses' training during undergraduate studies. One study[9] clarified that the teaching of Oncology in undergraduate Nursing curricula in the country fell short of what it should correspond to, considering the epidemiological reality of cancer in that country; in addition to Oncology being considered a specialized area, leading Higher Education institutions to not include specific academic disciplines on Oncology in their curriculum[9].

The literature also reinforces the need to develop research studies on this topic, in order to validate specific protocols to achieve better symptom management, thus improving care and reducing the stress experienced by patients, family members and health professionals[10]. Thus, the complexity of the care to be provided to patients with neoplastic wounds and the nurses' knowledge gap in this area are evidenced. Therefore, the study objective was to create and validate the face and content of an instrument for training nurses in the care of neoplastic wounds.

METHOD

This is a methodological study with a quantitative approach. The study was developed remotely from October 2021 to February 2022 in the city of Niterói-Rio de Janeiro, at the Fluminense Federal University.

The study was structured in three stages: scoping review; creation of the quick guide for training nurses in neoplastic wound management; and face and content validation.

First stage: Scoping review

A literature search was carried out for a scoping review, in order to identify nurses' needs in neoplastic wound management. The PCC strategy was used, where P = Nursing, C = Nursing knowledge and C = Neoplastic wound care. Thus, the guiding question was as follows: Which is the Nursing knowledge to care for neoplastic wounds?

Second stage: Creation of the quick guide for training nurses in neoplastic wound management

After analyzing the scoping review results, an instrument was created to train nurses in neoplastic wound management. The guide consists of the following items: pathophysiology of the lesion; classification and staging; main signs and symptoms; pain scale; odor scale; management of signs and symptoms; and general Nursing care.

Third stage: Face and content validation

The Content Validity Index (CVI) was used for content validation. It consists in using a Likert scale with scores from one to four, where one (1) = Inadequate; two (2) = Partially adequate; three (3) = Suitable; and four (4) = Totally adequate[11].

The acceptable agreement index must be at least 0.80 and, preferably, greater than 0.90[11]. The content validation process was repeated until adequate scores were achieved. For the one (1) and two (2) options, reasons were requested and were later reviewed by the researcher, for the decision to keep them or not in the instrument prepared.

As for face validation, the percentage of scores obtained in the instrument was calculated. This calculation was performed by means of the total sum of the scores, divided by the total number of items in the assessment instrument, that is, an arithmetic mean. In data analysis, the items with a minimum agreement level of 75% in positive answers were considered validated[12].

To assess agreement between the judges, the *Fleiss Generalized Kappa* index was calculated, which is suitable for ordinal variables, the Likert scale items in this case[13]. The Kappa (*k*) value can vary from zero to one, where $k < 0.4$ is poor, $0.4 \leq k < 0.75$ is satisfactory to good, and $k \geq 0.75$ is excellent[13]. The researcher tabulated the data and subsequently performed the statistical analysis using *Microsoft Excel* and the free version of *IBM SPSS Statistic*.

Sample size was defined by means of the following formula: $n=Z\alpha2.P(1-P)/e2$, where "Zα" refers to the confidence level adopted, "P" represents the expected proportion of judges, indicating adequacy of each item, and "e" represents the acceptable proportionate difference from what would be expected[14]. For Zα, the value of 1.96 was determined by the normal distribution standard; for P, 85% agreement of the proportion of specialists in

classifying the item as adequate and 15% error difference were defined, establishing an interval between 70% and 100% in the 95% confidence interval[14]. Thus, sample calculation was as follows: $n=1.96^2.0.85,015/0.15^2=22$ expert judges.

After expressing interest in participating in the study through the invitation letter, the Free and Informed Consent Form (FICF) was emailed to the subjects. The study sample consisted of expert judges who met the inclusion criteria, namely: having a graduate degree in Oncology Nursing (*lato sensu* or an MSc and/or PhD degree in the Oncology area), Stomatherapy and/or Dermatology Nursing; having practical experience in the Oncology Nursing area; and having experience in the area of neoplastic wounds.

For recruitment, the judges were selected through *Curriculum Lattes*, searching potential candidates who met the established inclusion criteria through the "production" keyword available in the search part of the *Curriculum Lattes* website, subsequently sending email messages inviting them to participate in the study. The judges were also recruited using the snowball technique, when disseminating the study, through the invitation letter prepared in the *Google Forms* online tool, through the *WhatsApp* message app, for nurses who worked in the Oncology area, who replicated the invitation to other peers in their contact network.

A total of 38 potential expert judges were recruited to voluntarily participate in the validation process, of which 25 signed the FICF. After the judges' characterization instrument was returned, it was necessary to exclude three volunteers for not meeting the "experience time in Oncology" and "graduate degree in Oncology, Stomatherapy or Dermatology" inclusion criteria, totaling 22 expert judges included in the study, as expected.

The evaluation of the instrument on neoplastic wound management consisted of the following topics: scientific accuracy; content; textual presentation and layout; illustrations; and the understanding of the instrument item.

This study was approved by the Research Ethics Committee of the Medical School at the Fluminense Federal University (*Faculdade de Medicina da Universidade Federal Fluminense*, FMUFF), under opinion number 4,994,300. This project also followed the recommendations set forth in Circular Letter No. 1/2021-CONEP/SECNS/MS of March 3rd, 2021. The FICF signing process took place remotely via email, where the researcher sent the volunteers her field signed and the volunteers returned their own field signed to the researcher.

RESULTS

The scoping review carried out by the authors clarified that nurses have weaknesses in their knowledge related to neoplastic wounds and Nursing care, regarding management of pain, odor, bleeding and guidance to patients and caregivers[15]. Based on this review, a quick guide for neoplastic wound management intended for nurses was prepared.

As for the judges' characterization, 20 of them were female, with a mean of 12 years of training in Nursing and six years of specialization in Oncology. Of these, 11 (50%) had some *lato sensu* graduate degree in Oncology, nine had MSc degrees (41%) and two were PhDs (9%). All judges reported having experience in Oncology and neoplastic wounds.

The quick guide for neoplastic wound management intended for nurses was evaluated in five categories, namely: scientific accuracy; content; textual presentation and layout; illustrations; and understanding. In the scientific accuracy topic, all reached CVI values < 0.80, requiring revision. In the content topic, only the "The objectives of the information are clear" item presented CVI > 0.80; the others needed revision. In textual presentation and layout, the "Explanatory language and easily understood and appropriate

language for the target audience" items presented CVI values > 0.80; the others required revision.

In illustrations, only the "The images are suitable according to neoplastic wound staging" presented an adequate CVI value. Finally, in the "Understanding of the instrument" topic, all items had a CVI value of 80, showing adequacy. The assessment of the agreement between the judges presented $k < 0.4$ (poor) in the items they evaluated, showing low agreement between them. However, the "illustrations" topic obtained $k = 0.523$ (satisfactory).

In the first version of the quick guide, the judges suggested format adjustments, such as improving the subtitle position; removing abbreviations/acronyms; adjusting/removing the text referring to the epidemiology of neoplastic wounds; adjusting the text font size; increasing the number of pages in the instrument; specifying the instrument print size; and explaining the references used to prepare the instrument, as they were sent to the judges in a separate file.

In relation to Nursing care, it was suggested to address myiasis management; as well as to improve general Nursing care and put the actions in sequential order; optimize the information on signs and symptoms with staging; add the use of metronidazole in odor management; and group the diverse information on the management of signs and symptoms in charts. After the judges' suggestions, the instrument was restructured and sent for a new evaluation.

In the second evaluation, all categories and topics presented CVI values > 0.80. The scientific accuracy, content, textual presentation and layout, illustrations and understanding of the instrument items presented k values between $0.4 \leq k < 0.75$, with satisfactory correspondence among the judges, according to Tables 1 and 2. Thus, the content of the instrument is validated and suitable for use.

Table 1 - Content validation index and agreement level among the judges for versions 01 and 02 of the instrument, Niterói, RJ, Brazil, 2022

| | Version 01 | | Version 02 | |
Scientific Accuracy	CVI	Fleiss Generalized Kappa (k)	CVI	Fleiss Generalized Kappa (k)
The contents addressed agree with current knowledge	0.72		0.95	
The guidelines presented are necessary and were addressed correctly	0.68	0.391	1.0	0.681
The technical terms are properly defined	0.72		0.95	
Content				
The objectives of the information are clear	0.86		0.95	
The information is satisfactory regarding the desired behavior	0.59		0.95	
There is no unnecessary information	0.72	0.387	1.0	0.597
There is a review of the most important points	0.68		0.90	
All the information is updated	0.72		0.86	
Textual presentation and layout				

|			
Explanatory and easy-to-understand language	0.81		1.0
Language suitable for the target audience	0.86		1.0
The text enables a logical neoplastic wound management chain	0.77		0.90
The size of the material is adequate	0.68	0.290	1.0	0.643
The material eases the definition of a course of action	0.77		1.0
The font size is adequate	0.72		0.95
The format of the instrument is suitable	0.72		1.0

Source: The authors (2022).

Table 2 - Content validation index and agreement level among the judges for versions 01 and 02 of the instrument, Niterói, RJ, Brazil, 2022

		Version 01		Version 02
Illustrations	CVI	**Fleiss Generalized Kappa (k)**	CVI	**Fleiss Generalized Kappa (k)**
The images are suitable according to neoplastic wound staging	0.86		0.90	
Neoplastic wound management is adequate with the staging image	0.77	0.523	0.81	0.716
The title and subtitle are suitable according to the images	0.77		0.90	
Understanding of the instrument				
The instrument adds knowledge to neoplastic wound management	0.86		1.0	
The instrument is suitable for the target audience	0.81	0.415	1.0	0.718
The instrument provides benefits to neoplastic wound management	0.81		0.95	

Source: The authors (2022).

Graph 1 shows the face validation process corresponding to the instrument. The agreement level among the expert judges was high, varying from 92% to 98%, representing percentages above the established minimum of 75%, which also validates the instrument in terms of appearance.
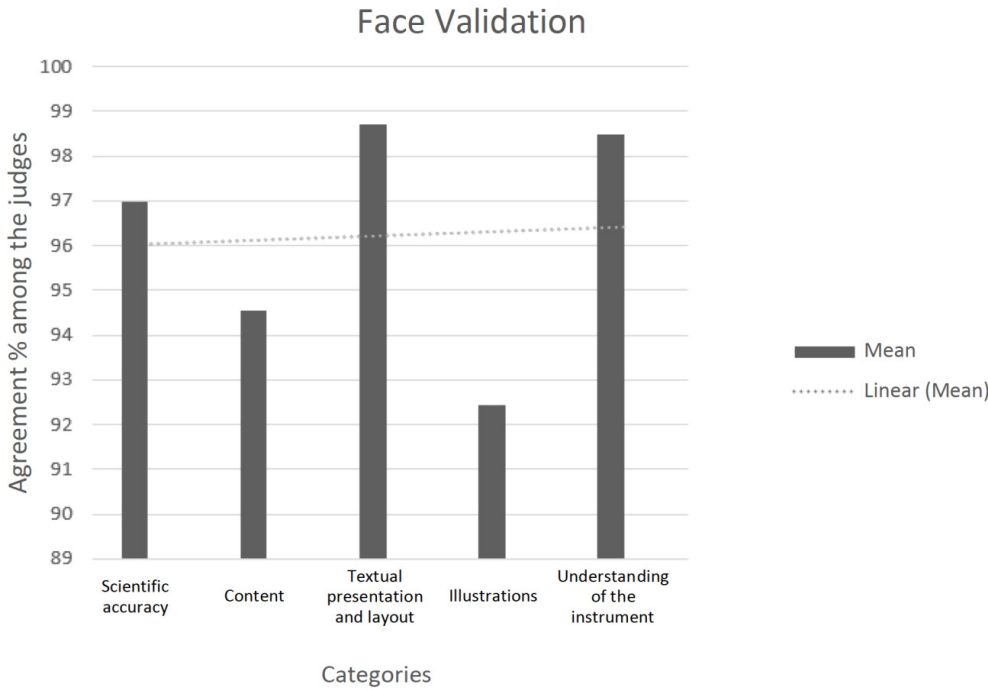
Graph 1 - Agreement level for face validation among the judges, Niterói, RJ, Brazil, 2022.

Source: The authors (2022).

The final version of the quick guide for neoplastic wound management intended for nurses consists of seven pages, to be printed in A4 format. Figure 1 shows the result of the instrument.

Figure 1 - Final version of the guide after face and content validation, Niterói, RJ, Brazil, 2022

Source: The authors (2022)

DISCUSSION

In its Resolution No. 567/2018, the Federal Nursing Council (*Conselho Federal de Enfermagem*, COFEN) attributes to nurses the participation in evaluation and elaboration of protocols, as well as in selection and indication of new technologies in prevention and treatment of people with wounds. In this way, nurses become the professionals responsible for the management of wounds, including neoplastic ones.

However, Resolution No. 573 of January 31st, 2018, approves Technical Opinion No. 28/2018, which contains the recommendations of the National Health Council for the proposal of National Curriculum Guidelines for the Bachelor of Nursing undergraduate course, solidifying general education to carry out Nursing activities at different health care and assistance levels. In addition to that, training is targeted at promotion, prevention, recovery, harm reduction and rehabilitation as a health care and assistance strategy.

Due to nurses' general training, the care to be provided to cancer patients and those with neoplastic wounds becomes a challenge. The literature shows that, in undergraduate Nursing courses, the approach to Oncology is superficial and that it has a brief period of practical activity and little theoretical basis, in addition to emphasizing the need to migrate the optional academic discipline focused on Oncology as mandatory in the curriculum[16–18].

Additionally, insufficient knowledge makes it difficult for nurses, still in training, to be able to identify with the Oncology area, where there is a social need for competent performance by the various professionals in the health area[19]. Considering the current incidence of the disease of around 704,000 new cases from 2023 to 2025, this means that, in the coming decades, the public health system will lack sufficient financial and human resources to meet the oncological demand in the country[19-21]. Thus, complying with the commitment outlined by the National Cancer Prevention and Control Policy requires full adherence to the permanent health education strategy, incorporated into the very structure of the oncological care network and the training of human resources for the network[17].

To overcome this deficiency in nurses' training in Oncology, one of the strategies used by health services is permanent education. It comprises learning at work, based on the problems faced and guided by the health needs of people and populations, where learning and teaching are incorporated into the routine of organizations and to work[22]. However, a study on permanent education carried out in an Oncology hospital also showed that there are challenges to develop and administer in-service teaching to the professionals due to the significant demand for care activities, in addition to the reduced Nursing staff, leading professionals to seek other specialized institutions, in order to supply professional development regarding the necessary competence for their performance[19].

In this context, the creation of an instrument for training nurses on neoplastic wound management becomes fundamental to assist in the training process of these professionals, as well as to serve as an aid in the care of patients with neoplastic wounds. Among the most common educational technologies in the literature are educational booklets, printed materials, manuals and educational albums[23-24].

The use of this type of instrument is related to practicality and ease of access, in addition to the fact that these educational materials are facilitators in the teaching-learning process, allowing for knowledge transfer through people's involvement and participation and enabling the exchange of experiences leading to improvements in skills[23-24]. It is noted that, in relation to these instruments that are submitted to the validation procedure, it is not actually the instruments themselves that are validated, but the purpose for which they are used, in view of the each researcher's responsibility to take information correctly[23]. In addition, the relevance of face validation is a way to validate an instrument regarding clarity and understanding of an educational material and, according to the figures, it can ease understanding of the messages[25-26].

It is noted that neoplastic wound care still presents non-consensual clinical interventions in the literature[27]. Care for these wounds involves managing signs and symptoms such as exudate, odor, bleeding and pain, in addition to the professional's understanding that the purpose of care is rarely curative, but rather palliative, accompanied by a holistic assessment[28]. Thus, the instrument validated in this study compiled the main Nursing care measures regarding the care of patients with neoplastic wounds, in order to assist in nurses' training.

As a study limitation, there is non-application of the instrument during a training process, to assess its usability in the care practice, as the study was carried out during the COVID-19 pandemic.

CONCLUSION

In this study, the gap in knowledge about patient care with neoplastic wounds and the need to complement Oncology education for nurses and future nurses were identified based on the scoping review carried out. The instrument was created to meet this need indicated in the literature and subsequently validated by expert judges in terms of face and content.

The care of patients with neoplastic wounds is also multifactorial and presents a challenge to nurses due to the physical, psychological and social dimensions inherent to neoplastic wounds. Thus, the instrument will contribute to the Nursing care practice in health services in Oncology and Generalist care, by gathering the most recent evidence on management of the main signs and symptoms, general Nursing care, staging, use of pain scales, odor and wound pathophysiology.

In addition to that, it will serve as a subsidy for teaching nurses and recently graduated nurses about neoplastic wounds, as it meets the goals of the National Cancer Prevention and Control Policy and the Permanent Education Policy.

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Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work - **Faria RP, Fuly P dos SC**; Drafting the work or revising it critically for important intellectual content - **Faria RP, Fuly P dos SC**; Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved - **Faria RP, Fuly P dos SC**. All authors approved the final version of the text.