Revista de Enfermagem
do Centro-Oeste Mineiro
2020;10:e3648
DOI:10.19175/recom.v10i0.3648
www.ufsj.edu.br/recom

RECOM
REVISTA DE ENFERMAGEM DO CENTRO-OESTE MINEIRO

Original Article

VALIDAÇÃO APARENTE E DE CONTEÚDO DE UMA CARTILHA DE AUTOCUIDADO PARA PREVENÇÃO DE LESÃO POR PRESSÃO

APPLICABLE AND CONTENT VALIDATION OF A SELF-CARE CARE BOOKLET FOR PRESSURE INJURY PREVENTION

VALIDACIÓN APARENTE Y DE CONTENIDO DE UNA CARTILLADE AUTOCUIDADO PARA LA PREVENCIÓN DE LESIONES POR PRESIÓN

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RESUMO

Objetivo: Descrever o processo de construção e validação de uma cartilha de autocuidado para prevenção de Lesão por Pressão (LP). **Método:** Trata-se de uma pesquisa metodológica, com abordagem quantitativa, que construiu uma cartilha de autocuidado para prevenção de pacientes com risco para desenvolver LP. A pesquisa foi desenvolvida em 4 etapas: levantamento bibliográfico; construção do material educativo (ilustração, layout, design e textos), cálculo do índice de Facilidade de Leitura de Flesch e validação do material por experts da área. **Resultados:** A cartilha foi validada quanto ao conteúdo e aparência por 11 experts, com o Índice de Validade de Conteúdo (IVC) de 0,93%. Os textos da cartilha foram avaliados como de leitura , razoavelmente fácil, com Índice de Facilidade de Leitura de Flesch (IFLF) de 71%. **Conclusão:** A cartilha foi validada quanto ao conteúdo e aparência, podendo ser usada como material educativo aos pacientes que apresentam risco de desenvolver LP.

Descritores: Lesão por Pressão; Autocuidado; Folheto.

ABSTRACT

Objective: To describe the process of creation and validation of a self-care booklet for the prevention of Pressure Injury (PI). **Method:** This is a methodological research with a quantitative approach, which built a self-care primer to prevent patients at risk for developing PI. The research was developed in four stages: bibliographic survey; construction of educational material (illustration, layout, design and texts), calculation of the Flesch Readability Index and validation of the material by experts in the field. **Results:** The booklet was validated for content and appearance by 11 experts, with a Content Validity Index (CVI) of 0.93%. The booklet texts were rated as reasonably readable, with a Flesch Readability Index (IFLF) of 71%. **Conclusion:** The booklet has been validated for content and appearance and can be used as educational material for patients at risk of developing PI. **Keywords:** Pressure Ulcer; Self Care; Booklets.

RESUMEN

Objetivo: Describir el proceso de construcción y validación de una cartilla de autocuidado para la prevención de lesiones por presión (LP). **Método:** Esta es una investigación metodológica, con un enfoque cuantitativo, que construyó un manual de autocuidado para prevenir a los pacientes en riesgo de desarrollar LP. La investigación se desarrolló en 4 etapas: encuesta bibliográfica; construcción de material educativo (ilustración, diseño, diseño y textos), cálculo del índice de legibilidad de Flesch y validación del material por expertos en la materia. **Resultados:** El folleto fue validado por el contenido y la apariencia por 11 expertos, con un índice de validez de contenido (CVI) del 0,93%. Los textos del folleto fueron calificados como razonablemente legibles, con un índice de legibilidad Flesch (IFLF) del 71%. **Conclusión:** El folleto ha sido validado por su contenido y apariencia y puede usarse como material educativo para pacientes con riesgo de desarrollar LP.

Descriptores: Úlcera por Presión; Autocuidado; Folletos.

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How to cite this article:
Ferreira IR, Santos LL, Moraes JT, at al. Applicable and content validation of a self-care care booklet for pressure injury prevention. Revista de Enfermagem do Centro Oeste Mineiro. 2020;10:e3648.[Access_____]. Available in :_____. DOI: http//doi.org/10.19175/recom.v10i0.3648

INTRODUCTION

The profile of the world population has changed in recent years. The increase in life expectancy and advances in the health area have changed the pattern of diseases, represented by the increase in the incidence and prevalence rates of chronic diseases. This change in the epidemiological profile has increased the number of elderly individuals in the population, malnutrition rates and rates of hospital admissions. These characteristics are presented as risk factors for comorbidities with higher prevalence among older adults, with emphasis on Pressure Injuries (PI) [1].

Due to the high incidence and prevalence of these injuries and better coverage of the term, in 2016 the National Pressure Ulcer Advisory Panel (NPUAP), an American organization dedicated to the prevention and treatment of pressure injuries, adapted the term Pressure Ulcer for Pressure Injury. According to this entity, PI generally affects the underlying skin and/or soft tissues over a bony prominence or is related to the use of a medical device or other artifact and comes from severe pressure and/or for an extended period in association with the shear and may appear on intact skin or as an open ulcer that can be painful [2].

Considered an adverse event, PI is one of the five most common causes of damage to the patient, according to the parameters of the National Patient Safety Policy, launched in 2013 in Brazil [3-5]. The prevention and treatment of PI are multidisciplinary and involve therapeutic and educational actions, as they aim to correct risk factors for the development of injuries, as well as to heal them. It is noteworthy that these actions go through solving the main causative agents: intense pressure and shear [6].

Regarding educational actions, success in the prevention and treatment of PI also involves the participation of the patient, their family members/caregivers and health professionals. [7] In this context, there are several technologies and formats of educational instruments, such as brochures, manuals, folders, booklets, serial albums and booklets that can be presented in print or virtual form for use in applications, but which have not been produced and scientifically validated yet. However, the literature is scarce for materials of this nature turned to PI. It is hoped that these materials can awaken the individual's interest, strengthen the fixation of what was verbally oriented, in addition to allowing easy access to answer questions and assist daily actions [8]. Therefore, this study aimed to describe the construction and validation of a self-care booklet for the prevention of PI.

METHODOLOGY

It is a methodological research, with a quantitative approach, which built a self-care booklet for the prevention of PI. This study was developed in 4 stages: bibliographic survey; construction of educational material (illustrations, layout, design and texts), calculation of the Flesch Ease of Reading index (IFLF) and validation of the material by experts in the field. In the first stage, a bibliographic survey was conducted on booklets and texts that addressed the theme of Pressure Injury. This was done in the Virtual Health Library and PubMed databases, using the descriptors present in the Health Science/Medical Subject Headings (DeCS/MeSH): “Pressure Injury” (“PressureUlcer”), “Self Care” (“Care Self”), “Pamphlet” (“Pamphlet”). Other descriptors were tested on the bases described, without identifying studies with Pressure Injury. The associated descriptor “Pressure Injury”(“Pressure Ulcer”) was used, for example through the Boolean operator AND to the aforementioned descriptors and OR to their respective MeSH For analysis, the works from the last 10 years, published from 2009 to 2019, were included and no studies were found that directly associated with the proposed theme.

In the second stage, the illustrations in the booklet were prepared by a designer, based on the researchers' guidelines and requirements. Concomitantly, with the creation of the illustrations, the researchers prepared the texts of the booklet about PI and prevention mode.

In the third stage, the texts of the educational material were evaluated, from the Flesch's Ease of Reading Index, such readability index is a mathematical model that assesses the structure of a text in terms of its sentences, paragraphs and number of syllables of the words (size) and is one of the most widely used legibility formulas, currently considered suitable for all types of texts [9]. IFLF evaluates the degree of legibility of texts on a percentage scale from zero to one hundred and its result classifies the according to the difficulty of reading. In this study, the texts were selected and evaluated by the Microsoft Office Word 2013 text analysis program. A text considered standard by IFLF is that with

percentages of 60 to 70%, according to the Flesch Score [10-11].

The fourth stage followed the principles of the Delphi technique, for validation by experts in the subject regarding the content and appearance of the booklet, from March to April 2019. With regard to the content validity, the Validity Index of Content (VIC) that measures the proportion of judges who agree on certain aspects of the instrument and its items, which individually analyzes each item and, subsequently, the educational material as a whole. For this, we use a Likert-type scale with a score from one to four, which guarantees a satisfactory internal consistency [12]. According to Pasquali [13], there are twelve criteria for the evaluation of instruments, which based on their characteristics, adopted the following: clarity, objectivity and relevance, both of texts and images. For the analysis of the texts, the experts were instructed to consider language as suitable for the target audience. The responses followed the following criteria for evaluation: 1 = not representative, 2 = item needs major revision to be representative, 3 = item needs little revision to be representative and 4 = representative. Items scored 1 and 2 have been revised or eliminated. Thus, the VIC was calculated by the proportion of items that received a score of 3 and 4 by the judges. The formula for evaluating each item individually is as follows: VIC = number of responses 3 and 4, divided by the total number of responses. To determine the valid agreement index, some authors suggest a minimum agreement of 0.80. However, in construction and validation of new instruments, the recommended index is 0.90 or more. The agreement index of 80% was considered as a validity parameter [14].

The agreement between the judges was calculated using the formula: % agreement = number of participants who agree, divided by the total number of participants, multiplied by 100. Professional experts were considered to have at least two of the following criteria: development of actions prevention and/or health promotion in the last 10 years, aimed at people with PI; to have published scientific papers on PI and/or on the construction and validation of educational materials; to be a stomach-therapy specialist and/or a member of the Brazilian Society of Stomach-therapy; to be a master or doctor with scientific production in the field of PI or production of educational technology. To identify the experts, the Lattes Curriculum was consulted to verify the suitability of the expert to the criteria established in the study. The changes suggested by the expert professionals were considered in the final version of the educational material. The expert professionals were invited to participate in the study, through email contact and an online E-survey platform was used to collect the evaluations of the expert judges. For participation in the research, all participants signed the Informed Consent Form (ICF).

The number of experts who participated in the research was determined by convenience, and this number could not be less than six professionals [15].

This research was approved by the Research Ethics Committee of the Federal University of São João del-Rei (UFSJ) Campus Centro Oeste Dona Lindu under opinion nº 158.505 and CAAE 07330012.8.0000.5545.

RESULTS AND DISCUSSION

In the search for studies that dealt with the construction and validation of educational instruments, 18 articles were found that could address the topic. After their complete reading, four were related to the construction and validation of educational booklets, but none referred to PI.

The booklet entitled "Self-Care Booklet for the Prevention of Pressure Injury" was composed of a cover, 5 pages and 19 images, with each page having an average of 4 images. The construction of educational materials reinforces the need for them to be interactive, attractive and have appropriate language for the target audience, providing the exchange of relevant and contextualized information [16]. The images in the booklet are very detailed so that individuals who cannot read can interpret and put into practice the care suggestions for the prevention of Pressure Injury (Figure 1).

Figure 1 - Illustrative representation of the educational booklet presented to the judges. Divinópolis, 2019.

Source: It was created by the authors.

The apparent validation of the booklet was considered adequate by the experts, who suggested minor changes in verbal agreement, addition or change of images and exchange of terminology on the five pages of the instrument. This means that, in a semantic analysis, all items are understandable to all members of the population for which they are intended [17].

The texts of the educational material were prepared by the researchers and evaluated using the IFLF.

The IFLF value obtained, after calculation, was 71%, which evaluated the reading of the text as reasonably easy [9]. Thus, people with or without education and/or reduced reading skills can enjoy the advantages of written material, because the higher the value, the greater the ease of reading the evaluated text and the lower the level of education necessary for its comprehension [18].

The booklet was validated using an online questionnaire from the E-survey. After, there was the selection of 67 judges that met at least two of the inclusion criteria. An email was sent containing the invitation letter, the Free and Informed Consent Form (ICF) and the E-survey link to access the questionnaire. After three rounds of sending the questionnaire, 11 judges answered it completely. All of these have training in nursing and *stricto sensu* post-graduation, with 8 being stomach-therapy nurses and members of the Brazilian Association of Stomach-therapy (SOBEST) and, of these, 3 have experience in the construction and validation of educational material and instrument.

Table 1 presents the synthesis of the qualitative analysis of the recommendations made by the judges. All the considerations presented by the judges were accepted for the production of the final version of the educational booklet.

Table 1 - Summary of the qualitative analysis of the recommendations made by the judges. Divinópolis 2019.

	Judges' suggestions
Page 1	To add the word ''about'' before ''some care''. To remove the word among others. To replace the word ''treated ''.
Page 2	To change "discuss'' to ''talk ''. To put a colon at the end of the speech.
Page 3	To put ''or before, if you feel uncomfortable'' for a change of position. To put a clock to anticipate the idea to be spoken on the next page. To change the word ''watch'' for ''clock''. To draw the illustration of the man with the legs flexed and place the pillow in a way that the heels are floating.
Page 4	To put illustration of eggs on a surface, frying pan for example. To draw a chicken leg to demonstrate another source of protein, fruit and a glass of water. To change ''for medical or nutritional guidance''. To enlarge the thought bubble and place the images mentioned in the previous pages, in miniature.
Page 5	To replace ''monitorize" for "observe"; ''Region'' by ''area''; ''Health service'' by ''health professional''. To draw a nurse at the door of the health unit to give an idea of bond.

Source: It was created by the authors.

The booklet was validated for content and appearance with a 0.93% VIC (Table 2). This value is higher than 80%, stipulated by the researchers to validate the booklet, thus ensuring the scientificity of the content of this material and the quality of the images and texts for interpretation by the target audience. This indicator allowed us to infer that the judges are in agreement on the aspects of the instrument and its items. It also allowed to analyze each item, individually and then the instrument as a whole [19].

Table 2 – Distribution of validity index of content (VIC), per page and total self-care educational booklet, for the prevention of Pressure Injury. Divinópolis, 2019.

	VIC (%)
Page 1	0,88
Page 2	0,88
Page 3	0,97
Page 4	1
Page 5	0,92
Total	**0,93**

Source: It was created by the authors.

In the construction of educational materials, the need for them to be interactive, attractive, and to have appropriate language to the target audience is reinforced, providing the exchange of relevant and contextualized information [20].

When developing and using the educational instrument, the professional nurse spreads his technical-scientific knowledge and working practices horizontally with the patient, who shares his experiences and popular knowledge. In addition, nurses play a fundamental role in

stimulating and helping patients and caregivers to become protagonists in the self-care process [7,21].

Specifically, with regard to the prevention of PI, the importance of implementing preventive strategies is known, since the cost is lower and the risk for the patient is practically nonexistent [22]. In this sense, the need to build validated educational instruments that deal with preventive measures for PI focusing on patients, family members/caregivers is reinforced.

It is hoped that educational instruments, such as leaflets, manuals, folders, serial albums and booklets can awaken the individual's interest, strengthen what was verbally oriented, in addition to allowing easy access to answer questions and assist daily actions, contributing thus, to reduce the incidence and prevalence of PI [6].

As a limiting factor of the study, the number of experts who completely answered the questionnaire is considered.

CONCLUSION

From this study, it was possible to build and validate, in terms of content and appearance, a self-care primer for PI prevention, through a methodology capable of supporting the development of an attractive and comprehensive educational technology. This work can guide the elaboration of other booklets on the same theme or in others in the health area. It is hoped that the material can contribute to the guidance provided by the nursing professional by reinforcing what was said to the patient and allowing him to have material that is easy to understand and access to answer his doubts.

The study offers an educational material with easy language and images that allow the understanding of individuals with less education, in order to reduce the incidence and prevalence of PI, especially in patients at greater risk of developing them as elderly people, wheelchair users and bedridden. The production of the booklet does not exclude the need for research on the reduction of PI with long-term monitoring of patients and family members/caregivers, in addition to innovative prevention practices.

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Note: extracted from the Graduation Course Conclusion Paper.

Received in: 28/01/20
Approved in: 12/04/20

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