








CONSTRUCTION AND VALIDATION OF AN EDUCATIONAL VIDEO FOR NURSES ON THE MANAGEMENT OF NEUROPATHIC ULCER ASSOCIATED WITH LEPROSY

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ABSTRACT

Objectives: To build and validate an educational video for nurses on the management of neuropathic ulcers. **Method:** Methodological study carried out in four stages: script/storyboard production; content and face validation of the script/storyboard with judges in a virtual environment judges in July 2018; video editing; and semantic validation with representatives of the target audience. The video script was validated by nine specialists in the subject and eight technical judges. For semantic validation, a focus group was used with nine nurses, in August 2018, in an outpatient clinic of a higher education institution in Minas Gerais, Brazil. **Results:** The video was entitled “Evaluation for the management of neuropathic ulcer associated with leprosy” and lasted 18 minutes and 32 seconds. For all questions, a content validity index of more than 78% was obtained, in a single round. The suggestions issued by the judges promoted changes in the scenes, with the inclusion of images, photos, and more accessible language. **Conclusion:** The video was considered valid by judges and the target audience and may contribute to nurses’ updating on the subject, with positive effects on care for people with leprosy.

DESCRIPTORS: Validation study. Education, nursing. Audiovisual aids. Leprosy. Enterostomal therapy.

CONSTRUÇÃO E VALIDAÇÃO DE VÍDEO EDUCATIVO PARA ENFERMEIROS SOBRE MANEJO DA ÚLCERA NEUROPÁTICA ASSOCIADA À HANSENÍASE

RESUMO

Objetivos: Construir e validar vídeo educativo para enfermeiros sobre o manejo da úlcera neuropática. **Método:** Estudo metodológico realizado em quatro etapas: produção do roteiro/*storyboard*; validação de conteúdo e face do roteiro/*storyboard* com juízes, em formato eletrônico; edição do vídeo; e validação semântica com representantes do público-alvo. O roteiro do vídeo foi validado por nove especialistas na temática e oito juízes técnicos. Para validação semântica, utilizou-se grupo focal com nove enfermeiros, em um ambulatório de instituição de ensino superior de Minas Gerais. **Resultados:** O vídeo foi intitulado “Avaliação para manejo da úlcera neuropática associada à hanseníase” e teve duração de 18 minutos e 32 segundos. Para todos os quesitos, obteve-se índice de validade de conteúdo superior a 78%, em rodada única. As sugestões emitidas pelos juízes promoveram modificações nas cenas, com inclusão de imagens, fotos e linguagem mais acessível. **Conclusão:** O vídeo foi considerado válido por juízes e público-alvo e poderá contribuir com a atualização dos enfermeiros acerca da temática, com reflexos positivos na assistência à pessoa com hanseníase.

DESCRIPTORES: Estudo de validação. Educação em enfermagem. Recursos audiovisuais. Hanseníase. Estomaterapia.

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CONSTRUCCIÓN Y VALIDACIÓN DE UN VIDEO EDUCATIVO PARA ENFERMEROS SOBRE EL MANEJO DE LA ÚLCERA NEUROPÁTICA ASOCIADA A LA LEPROA

RESUMEN

Objetivo: Construir y validar un video educativo para enfermeros sobre el manejo de las úlceras neuropáticas.

Método: Estudio metodológico realizado en cuatro etapas: 1: elaboración del guión/storyboard; 2: validación de contenido y presencial del guión/storyboard con jueces en entorno virtual jueces en julio de 2018; 3: edición de video y 4: validación semántica con representantes del público objetivo. El guión del video fue validado por nueve especialistas en el tema y ocho jueces técnicos. Para la validación semántica, se utilizó un grupo focal con nueve enfermeros, en agosto de 2018, en un Ambulatorio de una Institución de Enseñanza Superior en Minas Gerais.

Resultados: El video se tituló "Evaluación para el manejo de la úlcera neuropática asociada a la lepra", y tuvo una duración de 18 minutos y 32 segundos. Para todas las preguntas se obtuvo un Índice de Validez de Contenido superior al 78%, en una sola ronda. Las sugerencias emitidas por los jueces promovieron cambios en las escenas, con la inclusión de imágenes, fotos y un lenguaje más accesible. **Conclusión:** El video fue considerado válido por los jueces y el público objetivo, y puede contribuir a la actualización de los enfermeros sobre el tema, con efectos positivos en la atención a las personas con lepra.

DESCRIPTORES: Estudio de validación. Educación en enfermería. Recursos audiovisuales. Lepra. Estomaterapia.

INTRODUCTION

Leprosy is an infectious disease caused by *Mycobacterium leprae*, which promotes poor cellular immune response and high bacillary multiplication¹, skin lesions, and changes in sensitivity, in addition to affecting the peripheral nerve trunks of the face, neck and upper and lower limbs².

Despite collective efforts, the disease is still a global health problem in several countries². From 2010 to 2019, 301,638 cases of leprosy were diagnosed in Brazil. The detection rate of new cases was 13.2% per 100,000 inhabitants in 2019. Even with a reduction in the detection rate of new cases of leprosy in recent years, the country remains within the parameter of high endemicity³.

The reduction in prevalence may be related to the efforts of health institutions for early detection of the disease and polychemotherapy treatment. However, due to long-term multidrug therapy and proprioceptive changes resulting from the bacillus, high rates of neuropathic ulcers are observed⁴.

Neuropathic ulcers are one of the leading causes of disability in people with leprosy. Because of sensory loss and changes in the shape of the foot, there is a greater propensity for trauma, pressure, calluses and ulcers. Cases are more frequent in men in more advanced stages of the disease, affecting mainly the first toe and more than one plantar region. About 90% of cases have ulcer recurrence after one year⁵.

Sensory and anatomical alterations and the presence of neuropathic ulcers must be identified in the clinical examination and the nursing consultation⁴, given that the nurse is a professional who acts in the execution of policies for the control and treatment of patients with leprosy, that is, diagnosis, treatment and post-discharge⁶.

In this context, the systematized and continuous evaluation of neuropathic ulcers must be carried out coherently to qualify care through adequate treatment, and the Federal Nursing Council⁷ supports this practice. Notably, among cutaneous ulcers, the occurrence of neuropathic ulcers without prior clinical resolution in the health services network through nursing consultations is expected since the therapy for this type of injury is still restricted to topical treatment⁸.

Nurses' low rate of training and knowledge is a worrying factor concerning care for people with neuropathic ulcers associated with leprosy⁸. Many Primary Health Care nurses experience difficulties in caring for patients with leprosy⁹, culminating in the increase of physical disabilities in patients and the reduction of quality of life.

Therefore, it is essential to provide training on the subject so that health professionals, especially nurses, can have knowledge and place greater emphasis on preventing disabilities due to leprosy since there are still gaps in knowledge and skills to perform the clinical examination^{10,11}.

Thus, the study's relevance reverberates in the assumption that nurses must be prepared for clinical practice based on scientific evidence regarding caring for people with neuropathic ulcers associated with leprosy.

In this scenario of health training and educational interventions, educational videos have proven to be an innovative, easy-to-use tool, capable of promoting rich details on various health topics, which facilitates the retention of knowledge and the improvement of practical skills of the professionals, bearing in mind that information and communication technologies, in general, are already present in people's routine, whether in personal activities or professional activities¹².

Notably, most nurses who assist people with leprosy work 40 hours a week, which often restricts their time dedicated to studying books and updating manuals. Thus, a video with summarized and practical information in electronic format, which can be accessed for free on websites or video platforms, such as YouTube, or downloaded on cell phones, can facilitate the visualization of information and the retention of knowledge.

In addition to contributions in terms of technology and usability, the content of the educational video is capable of contributing to the teaching-learning process of adults, not only nurses but also undergraduates in the health area.

This study aimed to construct and validate an educational video for nurses on managing neuropathic ulcers associated with leprosy.

METHOD

A methodological study constructed a video on managing neuropathic ulcers associated with leprosy, validated by expert judges on the subject and videomaking and evaluated by nurses representing the target audience. The validation by the judges took place electronically, by email, and the nurses assessed the footage in an outpatient clinic of a higher education institution in Minas Gerais. The construction and validation process of the video took place in the second half of 2018. The study followed the recommendations of the Consolidated Criteria for Reporting Qualitative Research.

The sample of participants for validation of the face and content of the script/storyboard of the video was composed based on the inclusion criteria: expert judges in the theme of care for people with leprosy or treatment of neuropathic ulcers due to leprosy; teaching and assistance; with at least five years of experience in the specialty; considered specialist those with at least five points¹³.

Nineteen professionals were invited to the study, and nine agreed to participate. The number of judges considered sufficient for the judgment was at least six judges, according to Pasquali's recommendations¹⁴, with intentional sampling. Technical judges and video experts with experience equal to or greater than two years in digital information and communication technologies, with an emphasis on video, also participated. Eight technical judges were invited, and all agreed to participate in the research.

For semantic validation, the following inclusion criteria were considered: nurses with at least six months of professional experience in care services for people with leprosy (Family Health Strategy, stomatherapy or leprosy outpatient clinics). Nurses who were exclusively in leadership positions were excluded.

Fifteen nurses were invited through a snowball, starting with a key informant (nurse) from primary care with experience evaluating people with leprosy and of the 15 invited, nine accepted to participate in the study, intentionally selected. Semantic validation aims to control the understanding of items by members of the population to which the technology is intended. It is inferred that there was only one round of evaluations for expert judges on the subject and technical judges.

Study protocol

The construction and validation of the video followed four stages: production of the script/storyboard, validation of the script/storyboard, video editing and semantic validation¹⁵, as seen in Fig. 1.

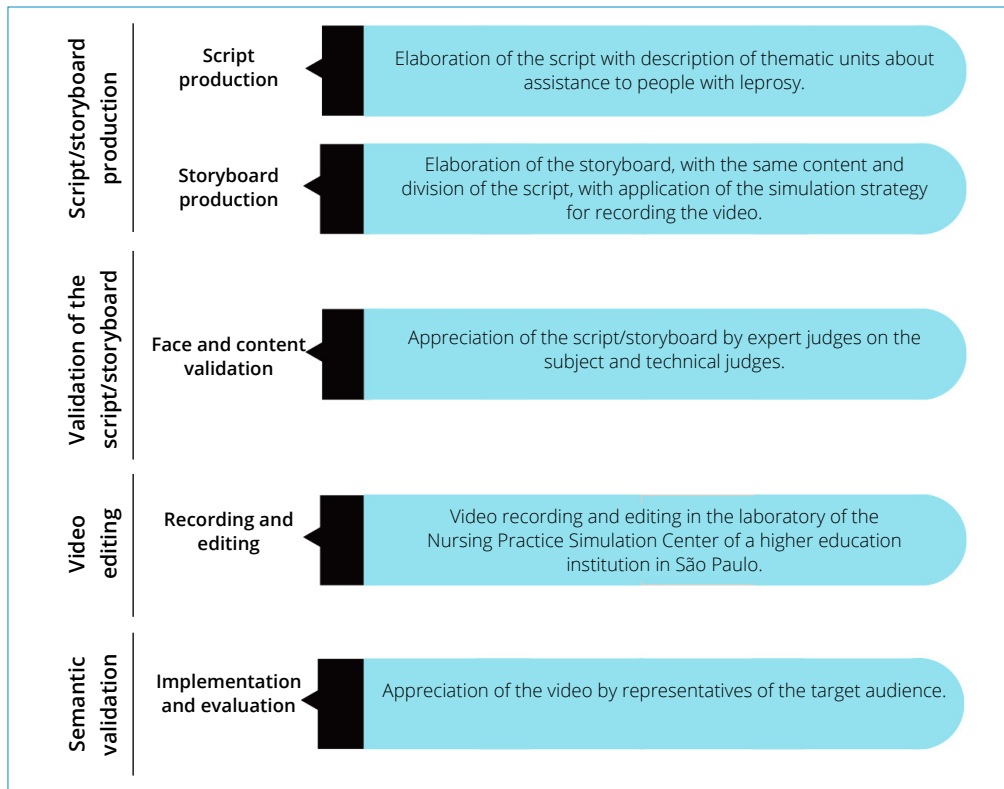


Figure 1. Stages of construction and validation of the educational video. Ribeirão Preto, São Paulo, Brasil, 2018.

In the first stage, a script was prepared with a description of six thematic units (Presentation, Welcoming and data collection of the person with leprosy, Assessment of the lower limbs, Assessment of the wound, Closing, References and Credits), following recommendations from the Ministry of Health on the management of neuropathic ulcers in leprosy, disability prevention manuals and notebooks and the Wound, Ostomy and Continence Nurses Society guidelines and directives^{16,17}.

After the script's production, the storyboard was produced, following the same content and the division of the script. In the descriptions of the storyboard scenes, the simulation strategy for recording the video was highlighted, in which dramatization scripts replaced the classic simulation scenarios.

After building the storyboard, the judges validated the face and content of the script/storyboard. The selection of specialists on the subject was carried out using the Lattes Platform of the National Council for Scientific and Technological Development, using the "curriculum search" tool, in "advanced search", using the specifiers: Hanseníase; Úlcera Neuropática; Brasileiros; Enfermeiros. (Leprosy; Neuropathic Ulcer; Brazilians; Nurses)

For data collection, contact with specialists in the subject and expert judges in video making was carried out via email through an invitation letter with clarifications about the research and its objectives. After acceptance, the judges received by email:

- Term of Free and Informed Consent;
- Script;
- Storyboard;
- Guidelines for validation;
- Access link to the structured instrument adapted for validation of educational material^{15,18}.

The instrument was composed of two parts:

- Sociodemographic and educational characterization (gender, age, current professional activity, academic title and participation in a scientific event);

- Questions for validation of the educational video.

For expert judges on the subject, the second part of the instrument was divided into four items:

- Objective: It was assessed whether the objectives were adequate and in accordance with nursing practices (two questions);
- Content: verification of understanding and ability to disseminate knowledge about neuropathic ulcer management (seven questions);
- Relevance: assessment of the quality of images and scenes for transferring theoretical/practical knowledge (three questions);
- Environment: verification of the suitability of the video production scenario (two questions).

For video specialists, the second part was intended for the evaluation of three items:

- Functionality: referring to the assessment of the understanding of the theme in the video script (two questions);
- Usability: about the applicability and ability of the video to produce knowledge without being tiring (three questions);
- Efficiency: regarding the number of scenes, time, description of the materials used in the video, characterization and total number of characters (five questions).

The levels of agreement established in the questions of the instrument were “disagree”, “partially disagree”, “indifferent (neither agree nor disagree)”, “partially agree,” and “agree”, on a Likert scale from 1 to 5, with space for justification/comment for questions marked with the options “disagree” and “partially disagree”.

After validation by experts, the video was recorded in a laboratory at the Center for Simulating Nursing Practices at a higher education institution located in the interior of the state of São Paulo and pre-edited. Afterward, the video was submitted to nurses representing the target audience in Minas Gerais for semantic validation.

A focus group meeting lasted for 55 minutes, and the video was shown on a 42-inch television. At the end of the video exhibition, the semantic evaluation began through the triggering question: What is your perception/opinion about the importance of this video for clinical nursing practice in approaching people with neuropathic ulcers associated with leprosy?

The researcher allowed free speech and, at the same time, maintained the outline of the conversation to keep the group aligned with the scope of the research. The meeting was audio-recorded on a digital device, with prior authorization from the nurses.

The collected data were coded, double-entered into Excel spreadsheets and analyzed using the Statistical Package for the Social Sciences, International Business Machines, version 25. Descriptive statistical analysis used absolute and relative frequencies for qualitative and value variables: Minimum and maximum, and mean and standard deviation for quantitative variables.

The degree of agreement between the judges was calculated by the content validity index (CVI) for each item of the instrument, which corresponds to the proportion (in %) of judges who expressed an opinion “I agree” or “I partially agree” concerning the total number of judges. For surveys with more than six judges, an agreement rate greater than 0.78 or 78%¹⁴, adopted in this study, should be considered. The CVI of each item was calculated by the simple arithmetic mean of the CVI of the questions that make up the item, and the general CVI was calculated by the simple arithmetic mean of the CVI of all the items that make up the form.

The reports of the participating nurses in the face of the guiding questions about the educational video were submitted to content analysis¹⁹, subdivided into three stages:

- Pre-analysis: exhaustive reading of the material;
- Exploration of the material: excerpts, phrases and fragments of the text;
- Elaboration of an interpretative synthesis of the selected material based on the concepts that support clinical nursing practice in the care of people with neuropathic ulcers associated with leprosy.

Through the completion of these three sequential steps, three categories emerged:

- Discuss the proposed objectives;
- Identify the applicability of the video in the nurse’s clinical practice;
- Valuing the nursing consultation in evaluating people with neuropathic ulcers associated with leprosy.

These stages were illustrated by the speeches of the group participants, identified with the letter E (*enfermeiro/nurse*), followed by a number according to the order of participation in the discussion.

The study was approved by the Research Ethics Committee of the School of Nursing of Ribeirão Preto, University of São Paulo, under the Certificate of Presentation of Ethical Appreciation 81048217.6.0000.5393 and opinion nº 2.541.863/2018.

RESULTS

All expert judges on the subject were nurses. Of these, 88.9% were professors, with an average professional experience of 14.9 years (± 8.2). Among the technicians, 50% worked in the area of communication and audiovisual technologies; the others were nurses (25%) and professors (25%) with experience in video production, with an average time of work of 10.8 years (± 7.3). In the semantic validation, women were predominant (88.9%), with a mean age of 36.1 years (± 6.5), 55.6% worked in Primary Health Care (PHC), and 66.7% were masters, with an average of 10.2 years of experience (± 5.9).

Of the 14 items evaluated by experts, 11 had a CVI above the recommended percentage (78%) (Table 1).

Table 1. Agreement of expert judges on the subject regarding the items of the script/storyboard validation instrument of the educational video. Ribeirão Preto, São Paulo, Brasil, 2018.

Question	D	PD	I	PA	A	CVI (%)
Objectives						
1. The objectives are consistent with nursing practice	1	-	-	1	7	88.9
2. The objectives are adequate to be achieved	-	1	-	2	6	88.9
Content						
3. The content presented in the script/script corresponds to the proposed objectives	-	1	-	3	5	88.9
4. The content facilitates the teaching-learning process on assessment for the management of neuropathic ulcers in leprosy	-	1	1	2	5	77.8
5. The content allows an understanding of the assessment for the management of neuropathic ulcers in leprosy	-	1	2	1	5	66.7
6. The content follows a logical sequence	-	1	1	-	7	77.8
7. The content incorporates the necessary steps to assess the management of neuropathic ulcers in leprosy	-	1	-	1	7	88.9
8. The content has the necessary materials to demonstrate the evaluation for the management of neuropathic ulcers in leprosy	-	-	1	2	6	88.9
9. The screenplay/script information is correct	1	-	-	2	6	88.9
Relevance						
10. The images and scenes illustrate essential aspects of the practice of evaluating neuropathic ulcers in leprosy	-	1	-	3	5	88.9
11. The images and scenes are relevant so that the nurse in the video can assess the neuropathic ulcer in leprosy	-	-	1	3	5	88.9
12. Images and scenes allow nurses to transfer and use theoretical/practical knowledge in different contexts	-	-	1	1	7	88.9
Ambience						
13. Is the setting suitable for video production	-	-	1	1	7	88.9
14. The setting is suitable for teaching and learning about assessment for the management of neuropathic ulcers in leprosy	-	-	1	1	7	88.9

CVI: content validity index; D: disagree; PD: partially disagree; I: indifferent; PA: partially agree; A: agree.

Only one judge marked the answers “totally disagree” concerning the coherence of the objectives with the nursing practice and the item adequacy of the information in the script/storyboard. He also partially disagreed with the questions referring to the objectives, content and relevance of the images and scenes that illustrated the clinical evaluation of the neuropathic ulcer in leprosy and marked the item’s relevance and environment as indifferent, pointing out as justification for the difficulty of analyzing the questions for not having had access to the video in its recorded and edited version.

The suggestions promoted changes in the scenes, including images, photos and more accessible language. Sets were created to make the explanation and evaluation of neuropathic ulcers more didactic, the order of ulcer evaluation was changed, and images of tissues, quantity and types of exudate were added.

In the expert judges’ evaluation of the subject, all items of the educational material obtained an average CVI above the minimum recommended percentage of 78% (Fig. 2).

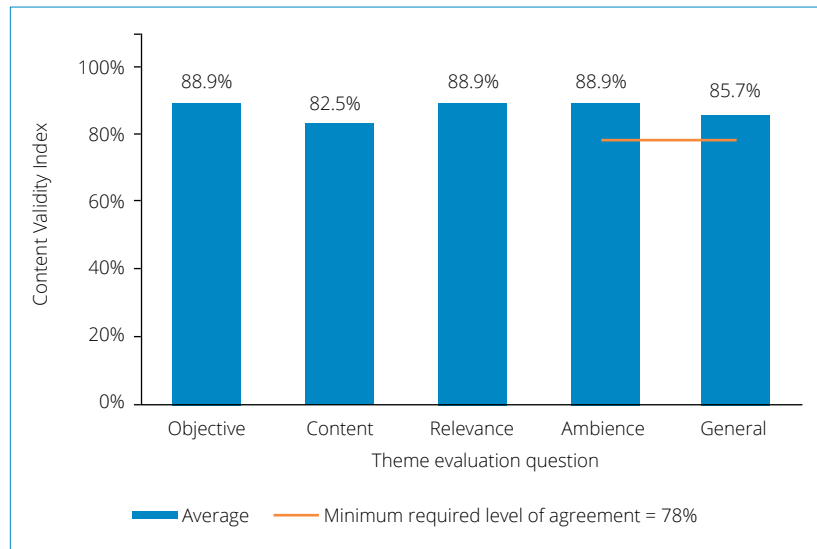


Figure 2. Average content validity indexes obtained in the evaluation of the script/storyboard of the educational video by expert judges on the subject. Ribeirão Preto, São Paulo, Brasil, 2018.

In the evaluation made by the video specialists, of the ten items evaluated, eight reached a CVI above the recommended percentage (78%). The options “disagree” and “partially disagree” were not flagged in the assessment instrument (Table 2).

In Fig. 3, it can be seen that, in the assessment by the video specialists, all items of the educational material also had an average CVI above the recommended percentage.

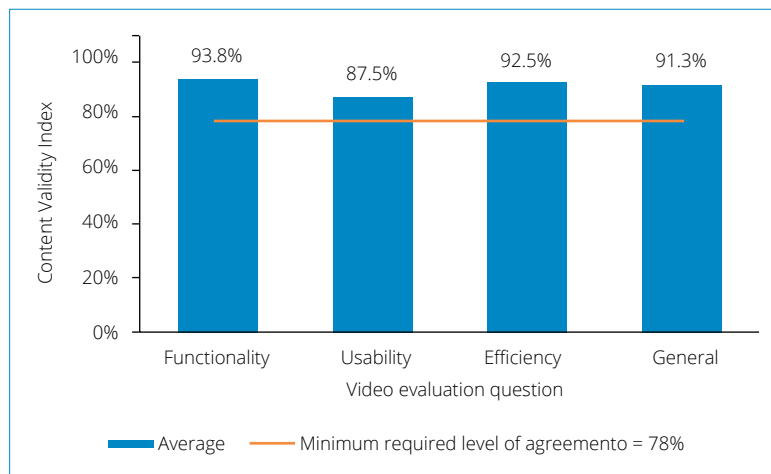


Figure 3. Average of the content validity indexes obtained through the evaluation of the script/storyboard of the educational video by the expert judges in the video. Ribeirão Preto, São Paulo, Brasil, 2018.

Table 2. Agreement of video expert judges regarding the items of the script/storyboard validation instrument of the educational video. Ribeirão Preto, São Paulo, Brasil, 2018.

Question	D	PD	I	PA	A	CVI (%)
Functionality						
1. The video script proposes understandable nursing interventions for assessing the management of neuropathic ulcers in leprosy	-	-	1	-	7	87.5
2. The video script has the potential to generate positive results	-	-	-	2	6	100
Usability						
3. It's easy to learn the concepts used in the video and their applications	-	-	1	1	6	87.5
4. The video allows the nurse to learn the assessment interventions for the management of neuropathic ulcers in leprosy, making it easy to apply them	-	-	-	1	7	100
5. The video helps the nurse clearly and efficiently, not being tiring	-	-	2	1	5	75
Efficiency						
6. The proposed time is adequate for the nurse to learn the content	-	-	2	-	6	75
7. The number of scenes is consistent with the time proposed for the video	-	-	1	-	7	87.5
8. The number and characterization of the characters meet the proposed objective	-	-	-	-	8	100
9. Communication between characters is efficient and understandable	-	-	-	2	6	100
10. The description of the materials used is clear	-	-	-	1	7	100

CVI: content validity index; D: disagree; PD: partially disagree; I: indifferent; PA: partially agree; A: agree.

The average and general CVI of the evaluation of the script/storyboard questions by the specialists in the subject and videomaking was above the percentage recommended for this study (78%). Thus, the recording of the video “Evaluation for the management of neuropathic ulcer associated with leprosy” (*Avaliação para manejo da úlcera neuropática associada à hanseníase*) continued, which lasted 18 minutes and 32 seconds, with presentation, reception and data collection of the person with leprosy, evaluation of the lower limbs, wound assessment, closure, references, and credits.

For the recording of the video, “Scenario One” was set up, a fictitious nursing office containing an office table, chairs, stretcher, dressing table, Semmes Weinstein monofilaments, pens, simulated user chart, makeup kit for simulation dressing, dressing kit, procedure gloves, surgical mask, protective eyewear and information materials on leprosy. In it, the nurse assisted the actor/person with leprosy based on a clinical history (Fig. 4).

On the day of the recording, the nurse/actress wore a long-sleeved lab coat, personal protective equipment, hair tied back, closed shoes and no adornments. The actor/person with a neuropathic ulcer associated with leprosy was wearing a short-sleeved shirt, shorts and slippers, and a simulated wound on the right foot.

An EOS 7D camera, two HXR-MC2500 digital cameras (HXRMC2500) and two Mattedi tripods were used to record the photos and footage. The audio recording was performed in “Scenario Two”, with the participation of the announcer responsible for the narration, the leading researcher and a technical operator.

It took two days for rehearsals, recording of scenes and voice-overs in August 2018. Subsequently, pre-editing of the audio and video began with the support of an audiovisual operator. A DELL computer with Adobe Flash, Adobe Premiere and Adobe Photoshop was used to create animations, image processing, and sound and video editing.

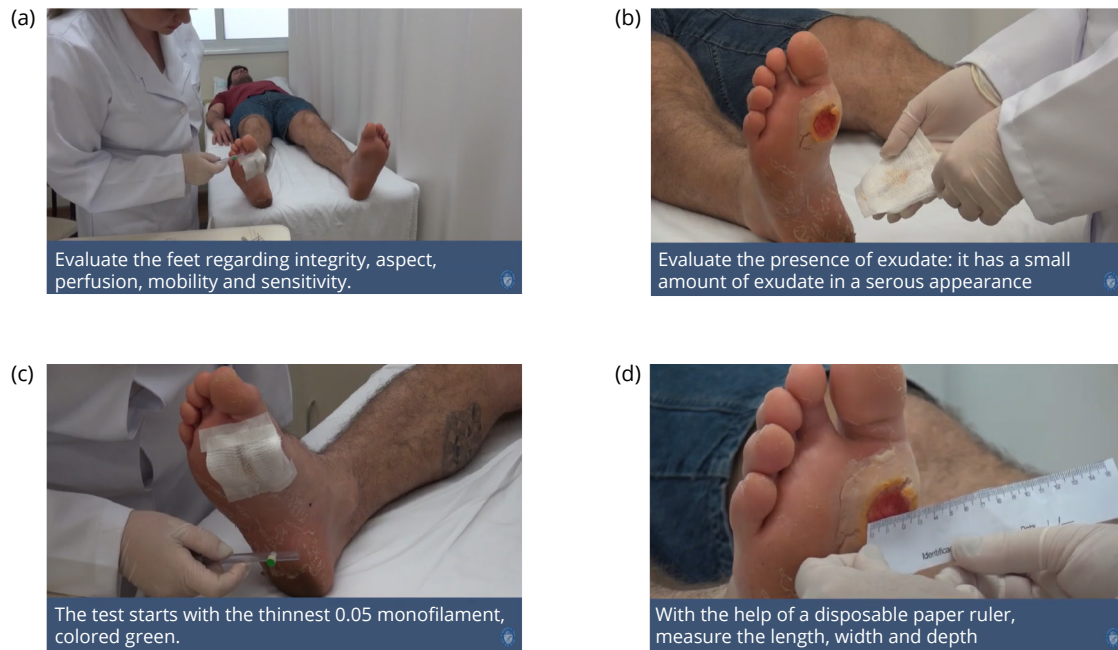


Figure 4. Scenes from the educational video “Evaluation for the management of neuropathic ulcer associated with leprosy”. Ribeirão Preto, São Paulo, Brasil, 2018.

The thematic units were directed to contemplate the stages of the nursing consultation, based on the Systematization of Nursing Assistance, being organized into six divisions: Presentation, Reception and nursing consultation, Clinical nursing assessment, Wound assessment, Closing, and References and Credits.

During the nursing consultation, the actress/nurse sought to systematically assess the person with leprosy, emphasizing the neurological assessment of the lower limbs and the wound and guidance on self-care. It should be noted that this care model through nursing consultation, in the context of PHC, constitutes a legitimized practice of professional nurses with the potential to improve the effectiveness and resolution of health care.

After recording the video, the semantic validation was carried out. The participants’ discourse indicated the validation of the video, as explained in the three categories below.

Discuss the proposed objectives.

The focus group participants stated that language, clarity, interaction between nurse/user and video length were sufficient to guide professionals in assisting people with neuropathic leprosy ulcers, according to the statements: “For nurses, it is excellent” (E1); “The language used was clear and managed to guide the care of nurses to patients with wounds and leprosy” (E2); “As the nurse is going to see it, it was clear and it helps a lot in the routine care for this type of patient” (E3); “For the nurse it is very useful and able to help with patient care, as it even simulates the environment of the health service where we work” (E4).

Identify the applicability of the video in the clinical practice of nurses

During the discussion, the nurses made suggestions to improve the understanding of the video, such as the need to include an explanation of the esthesiometer application technique. For professionals, there are still difficulties in the practice of nurses in assessing people with leprosy through the use of an esthesiometer: “Perhaps it would be interesting to narrate the part about monofilaments because professionals sometimes have difficulty knowing where to write down according to the thickness” (E5); “The use of monofilament still raises doubts, it might be interesting to

mention how to use it and places. It will help a lot in the care routine” (E4); “I find it interesting to put a photo of the monofilament caption” (E6).

When approaching the wound assessment, some participants reported the follow-up of similar clinical cases in the PHC and emphasized that the images and photos used in the video portrayed the aspects to be evaluated in a wound: “To really close the diagnosis of the lesion, if you have the parameters to evaluate, you can determine if it is an ulcer due to leprosy, or if it is a venous ulcer or another. The photos used will guide to close the nursing diagnosis” (E1); “The images that are shown throughout the video, such as the evaluation of the exudate, for example, are very useful since not all professionals are able to identify the types of wounds easily” (E4); “Wound assessment was very didactic and useful for us in the daily life of the health unit” (E6).

Valuing the nursing consultation in the evaluation of people with neuropathic ulcers associated with leprosy

The simulation of a nursing consultation shown in the video showed the group participants the perception of the importance of systematic nursing assessment for people with leprosy, intending to improve their health condition and quality of life: “The contribution to the community of nursing is what values the nursing consultation” (E2); “It’s like recycling. Access to such a video is incredible” (E2); “We, health professionals, have to empower ourselves about wound care. We are supported by law and have complete autonomy for this. The video helps us understand how important and valued we are in caring for patients with wounds” (E3); “The assessment of the patient with leprosy and wounds goes beyond clinical issues. It is a disease that still raises a lot of prejudice, and the wound still lowers the person’s self-esteem. Therefore, we have to be able to assess the clinical aspects of our patient, but also the social and psychological issues. The video helps us understand our role as nurses in evaluating patients with leprosy ulcers (E5).

DISCUSSION

In the present study, an educational video was produced and validated through a fictitious clinical case related to the researchers’ professional experience and the observation of knowledge gaps in nursing care for people with neuropathic consultations, which may contribute to the realization a qualified nursing consultation and prevent disabilities and other complications, such as amputations.

Studies have shown the applicability of using videos in the context of nursing, with the prior production of a script and storyboard²⁰⁻²⁴, similar to the production carried out in this study, with the support of clinical cases experienced in health services, based on scientific knowledge for the creation of educational materials²⁵.

Silva et al.²², in a methodological design study, also validated the content and appearance of the script and storyboard of an educational video associated with nursing care in the prevention and management of syphilis.

Another similar methodological study was developed by Dantas et al.²³ to produce and validate an educational video aimed at families to encourage breastfeeding. Authors developed and validated educational technology in video format aimed at health professionals on preventing falls in hospitalized children²⁴, following similar steps concerning the construction and validation of the educational material developed in this research.

All the authors described used the CVI and obtained a value greater than 78% in the evaluated items to consider the validity of the studies²²⁻²⁴. The IVC comprises a method widely used in the health field^{26,27} since it measures the proportion or percentage of judges who agree on certain aspects of the instrument and its items. Thus, it initially allows analyzing each item individually and then the instrument as a whole. With the participation of five or fewer subjects, all must agree to be representative. For six or more, a rate greater than 0.78 is recommended^{14,26,27}.

Notably, the semantic validation with professionals who work in the care of people with leprosy was explored to identify points to be improved in the educational video to achieve the proposed objectives. The use of the focus group was

the method of choice, as it is a technique that allows for the exchange of experiences and a greater understanding of what is intended to be achieved in clinical practice.

Studies have used semantic validation through focus groups in educational materials. Using this technique, the authors carried out the semantic validation of images and text of educational material on food and lifestyle for different pregnancy stages in overweight women. The educational material was adapted semantically and imagistically, being considered an easily accessible didactic tool for primary and secondary health care, supporting pregnant women and health professionals on nutrition and lifestyle²⁸.

Other authors, seeking to evaluate the construction and validation process of an educational video to prevent sexual violence in school-age adolescents, held focus group sessions with adolescents from a state school in Recife (PE) and obtained satisfactory results in the semantic validation²⁹.

The present study addressed the nursing consultation for a person with a neuropathic ulcer associated with leprosy. The importance of nursing consultation to the person with leprosy has been highlighted for decades since the introduction of the treatment in the public health network and no longer in specialized hospitals. Studies show that nurses play an essential role in building knowledge about preventing disabilities, health promotion, search for diagnoses, treatment, monitoring, guidance for self-care and family members, control and epidemiological surveillance in leprosy, with the objective of comprehensive care^{6,30}.

Within the scope of the PHC, the nurse must be responsible for the nursing consultation, which includes the physical examination and the simplified dermato-neurological assessment, in addition to guiding and supervising the treatment and prevention of physical disabilities, such as neuropathic ulcers, in people with leprosy³⁰, as demonstrated in the video.

In this sense, the simulation of nursing consultation in the educational video becomes a way of qualifying the assistance by demonstrating the care that should be offered to the person with leprosy, as verified in the literature³¹.

Research has shown the need to train nurses to care for people with leprosy, especially preventing and managing physical disabilities, such as neuropathic ulcers^{31,32}. Research carried out in Recife to evaluate the practice of nurses related to leprosy control actions in PHC showed that more than 90% of respondents had already treated people with leprosy and reported feeling insecure regarding the care³³ above.

In this context, offering training to health professionals has the power to transform the epidemiological situation concerning the complications of leprosy, such as neuropathic ulcers, as it encourages a different look to carry out actions to control and prevent complications of the disease³¹⁻³³.

Given the above, care was taken to produce validated educational material to ensure its practical applicability in the training of nurses, as well as to thoroughly evaluate the judges' recommendations and make the relevant changes to the video to offer material that is valid and capable of transforming care and promoting improvements in nursing care for people with leprosy and neuropathic ulcer. A validation study of the consulted video confirms that to adapt the educational video, the expertise of the judges and the objective of obtaining the highest possible level of material adequacy must be considered¹³.

During the construction of health education materials for nursing professionals, it is crucial to value strategies that favor the specific teaching-learning process of this public. Therefore, the production of these instruments includes, in addition to the logical organization of the content associated with the theme, the scenario analysis and materials to specify the details of the narration, photos, figures and scenes involved in video editing²¹.

In this study, the photos, images and scenes were detailed in the storyboard to facilitate the preview of the video by the judges. The audiovisual language was used to ease the target audience's understanding of care. Learning based on audiovisual resources contributes to the quality of care and is a means of disseminating advances in health care.

In this perspective, it is observed the importance of the simulated experience through educational material in the training of nurses to assist people with leprosy, focusing on the evaluation for the management of neuropathic ulcer, available through the link <https://www.youtube.com/watch?v=IqZktIveAqY>. The material can be used in the training of PHC nurses in Brazil and undergraduate nursing schools.

CONCLUSION

The educational video for nurses about care for people with leprosy-associated neuropathic ulcers was created and considered valid in terms of content by expert judges on the subject and video specialists and assessed as comprehensible by nurses representing the target audience. The final version consisted of real animation with standardized actors and audio narration, 18 minutes and 32 seconds. It addressed presentation, reception and data collection of the person with leprosy, evaluation of the lower limbs, wound evaluation, closure, references and credits.

As a limitation of the study, it should be noted that the semantic validation with the target audience was carried out with professionals from one municipality, which restricts generalizations. Even so, the educational video favors the advancement of scientific knowledge since this educational technology contributes to the dissemination of information based on scientific evidence related to care for people with leprosy and the training of nurses. Furthermore, the educational material can be used in a virtual learning environment in nursing education.

In this sense, making the video available on digital platforms helps reach the target audience in different geographic regions and times, enabling the updating of nurses, with positive effects on assisting people with leprosy.

AUTHORS' CONTRIBUTION

Substantive scientific and intellectual contributions to the study: Souza CBL and Rabeh SAN; **Conception and design:** Souza CBL and Rabeh SAN; **Collection, analysis and interpretation of data:** Souza CBL, Silva PG, Borges AA, Terçariol CAS and Rabeh SAN; **Article writing:** Souza CBL, Brandao MGSA, Silva PG, Borges AA, Terçariol CAS, Nogueira PC and Rabeh SAN; **Critical review:** Souza CBL, Brandao MGSA, Silva PG, Borges AA, Terçariol CAS, Nogueira PC and Rabeh SAN; **Final approval:** Souza CBL, Brandao MGSA, Silva PG, Borges AA, Terçariol CAS, Nogueira PC and Rabeh SAN.

DATA STATEMENT AVAILABILITY

All research data are available at the Dissertation and Theses Library (Biblioteca de Dissertações e Teses) of the University of São Paulo. (<https://doi.org/10.11606/D.22.2019.tde-20032019-152149>).

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REFERENCES

1. Dorilêo GB, Cavalcante LRS, Lopes JC, Damazo AS. Report of two cases of lepromatous leprosy at an early age. *Int J Infect Dis.* 2020;101:46-8. <https://doi.org/10.1016/j.ijid.2020.09.1448>
2. Sarode G, Sarode S, Anand R, Patil S, Jafer M, Baeshen H, Awan KH. Epidemiological aspects of leprosy. *Dis Mon.* 2020;66(7):100899. <https://doi.org/10.1016/j.disamonth.2019.100899>
3. Brasil. Ministério da Saúde. Secretaria de Vigilância em Saúde. Departamento de Vigilância em Epidemiologia. Hanseníase 2021. *Boletim Epidemiológico.* Brasil: Ministério da Saúde; 2021 [acessado em 10 abr. 2021]. Available at: https://www.gov.br/saude/pt-br/centrais-de-conteudo/publicacoes/boletins/epidemiologicos/especiais/2021/boletim-hanseníase_-_25-01.pdf

4. Guimarães HC, Pena SB, Lopes JL, Guandalini LS, Gamba MA, Barros AL. Scientific evidence on leg ulcers as leprosy sequel. *Acta Paul Enferm.* 2019;32(5):564-70. <https://doi.org/10.1590/1982-0194201900078>
5. Batista KT, Monteiro GB, y-Schwartzman UP, Roberti AFSA, Rosa AG, Correia CZ, Silva CFP. Treatment of leprosy-induced plantar ulcers. *Braz J Plast Surg.* 2019;34(4):497-503. <https://doi.org/10.5935/2177-1235.2019rbcp0229>
6. Mascarenhas JMF, Alves SP, Souza MS, Costa Neto AM. A importância das ações realizadas pelo enfermeiro no controle da hanseníase: revisão integrativa. *Rev Casos Consultoria [Internet].* 2021 [acessado em 2 fev. 2023];12(1):e25619. Available at: <https://periodicos.ufrn.br/casoseconsultoria/article/view/25619>
7. Paula VAA, Souza ID, Almeida RLM, Santos KB. O conhecimento dos enfermeiros assistenciais no tratamento de feridas. *HU Rev.* 2019;45(1):295-303. <https://doi.org/10.34019/1982-8047.2019.v45.28666>
8. Barbosa KPM, Silva TF, Vasconcelos EMR, Albuquerque MIN, Francisco MM, Figueiredo YMBF. Atenção à saúde das pessoas com hanseníase: atuação do enfermeiro em unidades básicas de saúde. *REAS.* 2021;13(6):e7457. <https://doi.org/10.25248/reas.e7457.2021>
9. Souza ACM, Souza AC, Zukowsky-Tavares C. Formação e prática de enfermeiros na assistência à pessoa com hanseníase. *Rev Recien.* 2022;12(40):63-76. <https://doi.org/10.24276/rrecien2022.12.40.63-76>
10. Santos CMMF dos, Tavares CM, Santos MIF, Silva JPM da, França CA de, Santos TF dos. Conhecimento e vivências sobre hanseníase: enfermeiros na atenção terciária. *Revista JRG.* 2023;6(12):389-401. <https://doi.org/10.55892/jrg.v6i12.513>
11. Santana EMF, Brito KKG, Nóbrega MM, Antas EMV, Sousa ATO, Oliveira SHS. Knowledge and attitude about disabilities in leprosy: Effects of an intervention grounded on the Meaningful Learning Theory. *Rev Esc Enferm USP.* 2022;56:e20210474. <https://doi.org/10.1590/1980-220X-REEUSP-2021-0474>
12. Campos DC, Silva LF, Reis AT, Góes FGB, Moraes JRMM, Aguiar RCB. Elaboração e validação de vídeo educativo para prevenção de queda em criança hospitalizada. *Texto Contexto Enferm.* 2021;30:e20190238. <https://doi.org/10.1590/1980-265X-TCE-2019-0238>
13. Fehring JR. Methods to validate nursing diagnoses. *Heart Lung [Internet].* 1987 [acessado em 15 jan. 2022];16(6 Pt 1):625-9. <https://core.ac.uk/download/pdf/213076462.pdf>
14. Pasquali L. Teoria e métodos de medida em ciências do comportamento. Brasília: Laboratório de Pesquisa em Avaliação e Medida da Universidade de Brasília; 1996. 560 p.
15. Campoy LT, Rabe SAN, Castro FFS, Nogueira PC, Terçariol CAS. Bowel rehabilitation of individuals with spinal cord injury: video production. *Rev Bras Enferm.* 2018;71(5):2376-82. <https://doi.org/10.1590/0034-7167-2017-0283>
16. Brasil. Ministério da Saúde. Manual de condutas para úlceras neurotróficas e traumáticas [Internet]. Brasil: Ministério da Saúde; 2002 [acessado em 2 abr. 2021]. Available at: https://bvsmms.saude.gov.br/bvs/publicacoes/manual_feridas_final.pdf
17. Brasil. Ministério da Saúde. Manual de condutas para tratamento de úlceras em hanseníase e diabetes [Internet]. Brasil: Ministério da Saúde; 2008 [acessado em 2 abr. 2021]. Available at: https://bvsmms.saude.gov.br/bvs/publicacoes/manual_condutas_ulcera_hanseníase.pdf
18. Rabe SAN, Gonçalves MBB, Caliri MHL, Nogueira PC, Miyazaki MY. Construção e validação de um módulo educativo virtual para terapia tópica em feridas crônicas. *Rev Enferm UERJ [Internet].* 2012 [acessado em 12 jan. 2022];20(5):603-8. Available at: <https://www.e-publicacoes.uerj.br/index.php/enfermagemuerj/article/view/5819/4229>
19. Santos FM. Análise de conteúdo: a visão de Laurence Bardin. *Rev Educ.* 2012;6(1):383-7. <https://doi.org/10.14244/2519827199291>
20. Lund KS, Volkert DS, Christensen KB, Waldorff FB, Brodersen J. Measuring bothersome menopausal symptoms: development and validation of the menoscores questionnaire. *Health Qual Life Outcomes.* 2018;16(1):97. <https://doi.org/10.1186/s12955-018-0927-6>
21. Sá GGM, Santos AMR, Galindo Neto NM, Carvalho KM, Feitosa CDA, Mendes PN. Building and validating an educational video for elderly individuals about fall risks. *Rev Bras Enferm.* 2020;73(Supl. 3):e20200010. <https://doi.org/10.1590/0034-7167-2020-0010>
22. Silva PG, Araújo LMS, Terçariol CAS, Souza CBL, Andrade RD, Reis RK, et al. Production and validation of educational technology on nursing care for syphilis prevention. *Rev Bras Enferm.* 2021;74(Supl. 5):e20190694. <https://doi.org/10.1590/0034-7167-2019-0694>
23. Dantas DC, Góes FGB, Santos AST, Silva ACSS, Silva MA, Silva LF. Produção e validação de vídeo educativo para o incentivo ao aleitamento materno. *Rev Gaúcha Enferm.* 2022;43:e20210247. <https://doi.org/10.1590/1983-1447.2022.20210247.pt>
24. Campos DC, Silva LF, Reis AT, Góes FGB, Moraes JRMM, Aguiar RCB. Elaboração e validação de vídeo educativo para prevenção de queda em criança hospitalizada. *Texto Contexto Enferm.* 2021;30:e20190238. <https://doi.org/10.1590/1980-265X-TCE-2019-0238>

25. Boeckmann LMM, Rodrigues MCS. Adaptation and validation of a surgical safety checklist in the cesarean delivery. *Texto Contexto Enferm.* 2018;27(3):e2780017. <https://doi.org/10.1590/0104-070720180002780017>
26. Hyrkäs K, Appelqvist-Schmidlechner K, Oksa L. Validating an instrument for clinical supervision using an expert panel. *Int J Nurs Stud.* 2003;40(6):619-25. [https://doi.org/10.1016/s0020-7489\(03\)00036-1](https://doi.org/10.1016/s0020-7489(03)00036-1)
27. McGilton K. Development and psychometric evaluation of supportive leadership scales. *Can J Nurs Res.* 2003;35(4):72-86.
28. Manochio-Pina MG, Crivellenti LC, Sartorelli DS, Diez-Garcia RW. Instrumento educativo de intervenção no estilo de vida para gestantes com sobrepeso. *Rev Bras Saúde Mater Infant.* 2022;22(2):399-413. <https://doi.org/10.1590/1806-9304202200020011>
29. Souza VP, Perrelli JGA, Brandão Neto W, Pereira MBFLO, Guedes TG, Monteiro EMLM. Construção e validação de vídeo educacional para prevenção da violência sexual de adolescentes. *Texto Contexto Enferm.* 2022;31:e20210171. <https://doi.org/10.1590/1980-265X-TCE-2021-0171pt>
30. Vieira NF, Lanza FM, Martínez-Riera JR, Nolasco N, Lana FCF. Orientación de la atención primaria en las acciones contra la lepra: factores relacionados con los profesionales. *Rev Diário da Saúde.* 2020;34(2):120-6. <https://doi.org/10.1016/j.gaceta.2019.02.011>
31. Vieira NF, Martínez-Riera JR, Lana FCF. Primary care quality and its effects on leprosy monitoring indicators. *Rev Bras Enferm.* 2020;73(4):e20190038. <https://doi.org/10.1590/0034-7167-2019-0038>
32. Lima MCV, Barbosa FR, Santos DCM, Nascimento RD, D'Azevedo SSP. Práticas de autocuidado em hanseníase: face, mãos e pés. *Rev Gaúcha Enferm.* 2018;39:e20180045. <https://doi.org/10.1590/1983-1447.2018.20180045>
33. Barbosa KPM, Silva TF, Vasconcelos EMR, Albuquerque MIN, Francisco MM. Atenção à saúde das pessoas com hanseníase: atuação do enfermeiro em unidades básicas de saúde. *Rev Eletr Acervo Saúde.* 2021;13(6):e7457. <https://doi.org/10.25248/REAS.e7457.2021>