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Construction and validation of clinical scenarios for training informal caregivers of dependent persons

Construção e validação de cenários clínicos para capacitação de cuidadores informais de pessoas dependentes Construcción y validación de escenarios clínicos para capacitación de cuidadores informales de personas dependientes

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ABSTRACT

Objective: To construct and validate three clinical scenarios for training dependent persons' informal caregivers. **Methods:** Methodological study, conducted between January and August 2021, in a municipality in the northwest of the state of Paraná. It was developed in two stages: construction of scenarios; and content validation by experts (n = 12). To estimate the degree of agreement between the experts, the content validity index was used, and 80% was considered an acceptable rate of agreement. **Results:** The simulation scenarios proved appropriate, obtaining an average value of 91.6%. However, some adjustments were made in their organization pertaining clarity in the wording of guidelines, as suggested by the expert validators. **Conclusions:** The construction and validation of the clinical scenarios proved to be adequate and relevant for use in the training of informal caregivers of dependent persons. **Descriptors:** Technology; Caregivers; Training Activities; Validation Study; Nursing.

RESUMO

Objetivo: Construir e validar três cenários clínicos para capacitação de cuidadores informais de pessoas dependentes. **Métodos:** Estudo metodológico, realizado entre janeiro e agosto de 2021, em um município no noroeste do estado do Paraná. Foi desenvolvido em duas etapas: construção dos cenários; e validação do conteúdo por experts (n = 12). Para estimar o grau de concordância entre os juízes, utilizou-se o índice de validade de conteúdo, e considerou-se o valor de 80% como uma taxa aceitável de concordância. **Resultados:** Os cenários de simulação mostraram-se apropriados, obtendo valor médio de 91,6%. No entanto, foram feitos alguns ajustes em sua organização no que tange à clareza na redação das orientações, conforme sugestão dos juízes. **Conclusões:** A construção e validação se conários clínicos mostraram-se adequadas e relevantes, de modo que eles podem ser utilizados na capacitação de cuidadores informais de pessoas dependentes.

Descritores: Tecnologia; Cuidadores; Atividades de Capacitação; Estudo de Validação; Enfermagem.

RESUMEN

Objetivo: Construir y validar tres escenarios clínicos para capacitación de cuidadores informales de personas dependientes. **Métodos:** Estudio metodológico, realizado entre enero y agosto de 2021, en un municipio en el noroeste de Paraná. Fue desarrollado en dos etapas: construcción de los escenarios; y validez de contenido por expertos (n = 12). Para estimar el grado de concordancia entre los jueces, se utilizó el índice de validez de contenido, y se consideró el valor de 80% como una tasa aceptable de concordancia. **Resultados:** Los escenarios de simulación se mostraron apropiados, obteniendo valor mediano de 91,6%. Sin embargo, fueron hechos algunos ajustes en su organización en lo que tange a la claridad en la redacción de las orientaciones, conforme sugestión de los jueces. **Conclusiones:** La construcción y validación de los escenarios clínicos se mostraron adecuadas y relevantes, de modo que pueden ser utilizados en la capacitación de cuidadores informales de personas dependientes.

Descriptores: Tecnología; Cuidadores; Enseñanza; Estudio de Validación; Enfermería.

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INTRODUCTION

Due to the insidious increase of chronic degenerative diseases in Brazil, there is a change in the profile of patients who demand health care. This change has caused great impact on society, particularly in health systems, which have a deficit in human and material resources to meet this clientele; therefore, the provision of Home Care (HC) in Brazil has been undergoing transformations in recent years⁽¹⁾.

The premise of home care considers that the care practices must consider the family in its private and domestic social space, respecting the dynamics and complexity of family relationships. Regarding the involvement of the health professional in the dynamics of people who are assisted by HC, he needs to understand the social and cultural context of the patient's family arrangement and his individual needs. The interventions carried out integrally to people dependent on care need to be comprehensive and integrate aspects that are intrinsic to the health-disease process of the patient and their families, promoting better management and organization of the health professionals' work process⁽²⁾.

Given this scenario, the family presents itself as an important ally in the care of dependent patients, proving to be an invaluable resource, especially because its members configure themselves as informal caregivers, being responsible for promoting the well-being of the ill person⁽³⁾. In most cases, dependent persons, undergoing HC, have a family member and/or people who offer care, being characterized as informal caregivers⁽²⁻³⁾. Assistance routines that demand the use of technologies require daily and continuous care, for which the informal caregivers are not always technically prepared. Sometimes they suddenly find themselves having to provide care that had only been performed in the hospital environment and by a specialized health team⁽⁴⁻⁵⁾.

A quasi-experimental study evidenced that the training of informal caregivers while still in the hospital environment and further monitoring their actions during the provision of care at home reduces inappropriate care practices. The lack of educational support and of patient intervention demonstrations contribute to the incidence of seeking emergency services and hospital readmissions due to inadequate care provided by unprepared informal caregivers⁽⁶⁻⁷⁾.

Thus, it is necessary that caregivers are well oriented and trained to provide the dependent patient adequate home care. Health professionals, especially nurses, play an important role in supporting caregivers through effective health education strategies that ensure the quality of care and the safety of dependent people in the home environment. In this perspective, considering the multifaceted and interdisciplinary needs, which are essential for actions of transitional care of people dependent both of care (from hospital to home) and approaches that require special resources for patient survival, training strategies with technological and visual materials need to be highlighted⁽⁷⁻⁹⁾.

The use of simulated scenarios as an educational tool has shown promise, with positive evidence of its use to prevent adverse events caused by potentially inadequate care. Clinical simulation enhances the development of skills related to knowledge, adaptation, and preparation, which are competencies alluding to the informal caregiver, conditioned to cognitive, psychomotor, relational, and emotional factors⁽⁸⁻⁹⁾. Moreover, these competencies are linked to the organization of health professionals' clinical practices, which require effective communication and decision-making for intervention actions, supported by critical thinking and clinical learning⁽¹⁰⁻¹²⁾.

In clinical simulation as an educational tool, the construction of the scenario with visual language according to people's needs is one of the methodological sequences of the process, one that requires creativity and objectivity. In this sense, the realism of clinical simulation derives from the structural potentiality of laboratories, which need to offer material resources for the management of highly complex actions that influence the validity and reliability of the educational interface to be promoted⁽¹²⁻¹⁴⁾.

The construction of the scenario must contain substantial elements for the timely characterization of the theme to be simulated, considering both the clinical and pedagogical context and the simulated experience, interaction, and dynamics between facilitator and participant. In this way, the individual can understand his role in the simulation tool and, subsequently, obtain the results expected from the scenarios⁽¹²⁾. Therefore, the simulation scenario needs to be assessed and validated by experts in order to be reliable in its contextualization of the topic and its contribution to the improvement of the educational intervention, considering the scientific evidence presented in the literature⁽¹³⁻¹⁴⁾.

OBJECTIVE

To construct and validate three clinical scenarios for training dependent persons' informal caregivers.

METHODS

Ethical approval

The research was approved by the Ethics Committee in Research with human beings of the Universidade Estadual de Maringá.

Study design and period

This is a descriptive study of the construction and content validation of three clinical simulation scenarios aimed at informal caregivers of dependent persons.

Methodological study, of a quantitative approach, carried out between January and August 2021 and developed in two distinct stages: construction of the scenarios; and content validation by experts.

Construction of the scenarios

The methodological path for developing the scenarios occurred in three phases - pre-production, production, and post-production - based on the study by Flemming, Reynolds, and Wallace⁽¹⁵⁾ and adapted by Braga and collaborators⁽¹⁶⁾. In the pre-production stage, the research theme was defined: orienting the family caregiver to the dependent person. Then, the educational objectives of the videos were established: to train the family caregiver on hygiene and comfort, and care with enteral tubes and oxygen therapy. The content of the videos was defined in this phase. In order to orient the content for the development of the scenarios, an integrative literature review on care of the dependent patient was performed, with the following Health Sciences Descriptors (DeCS) and Medical Subject Headings (MeSH): "health education", "educational videos", and "caregivers". The scenarios were based on scientific articles on the aforementioned care procedures and on the Ministry of Health's booklets on home care⁽¹⁷⁻¹⁸⁾.

Validation of the descriptive content of the scenarios

The experts were identified by convenience, respecting the criteria adapted from Fehring⁽¹⁹⁾. Those who reached five points or more in a total of 16 points were selected, distributed as follows: doctor's degree (4 points), master's degree (3 points), having developed a dissertation or thesis in the area of interest (3 points), specialist in the area of interest (2 points), publication in an indexed journal on the study's theme of interest (1 point), clinical practice in the area of interest for at least five years (2 points), participation in research groups/projects involving the area of interest (1 point)⁽¹⁹⁾. Training of informal caregivers and/or teaching/research with active learning technologies were considered the study's area of interest.

Experts' participation invitations were sent by e-mail. Once accepted, a link providing access to the platform was made available through Google Forms[®]. Upon opening the link, the Informed Consent Form (ICF) appeared. Only after acceptance could the participants access the clinical scenario scripts and instruments. Of the 15 experts invited, 12 agreed to participate in the study and submitted the completed instrument electronically within the stipulated deadline.

The experts were instructed to evaluate all items in each block of the instrument, noting, on a Likert-type interval scale, whether the dimensions to be addressed were covered within the instrument's set of items. The validation instrument, adapted from Souza et al.⁽²⁰⁾, assessed the relevance of the themes addressed in the simulation guide, as well as the experts' contribution pertaining the need for inclusion of content for a better contextual coverage and to maintain its authenticity. The central themes evaluated were about hygiene care and patient comfort, care with enteral tubes, and care with oxygen therapy, with a space for suggestions.

After returning the assessment, the data was typed into an Excel^{*} spreadsheet. For data treatment, the content validity index (CVI)⁽²¹⁾ was used. The items were represented by a Likert-type scale, with scores ranging from 1 to 3 (1 - completely inadequate; 2 - adequate; and 3 - completely adequate). To calculate the results, we considered the sum of the agreement of the items evaluated as "adequate" and "completely adequate" (CVI = agreement with score "2" or "3" / number of questions)⁽²¹⁾.

RESULTS

Construction of the scenarios

The construction of the scenarios followed items proposed by Braga and collaborators (2014)⁽¹³⁾. Chart 1 shows one of the validated scenarios. It describes the script with the resources, scenario preparation, development, debriefing, and evaluation.

Validation of scenarios

The participants in this research were experts in active learning technologies and/or in the care of dependent patients. Twelve experts who work in home care participated in the validation of the scenarios, including 11 nurses and one physician. Most of them are women (75%) and have a mean age of 31 years (minimum of 26 and maximum of 45 years). The time of training ranged from 7 to 17 years. Regarding academic qualifications, four (33.3%) were PhDs, four (33.3%) were masters, three (25%) were specialists, and only one (8.3%) had an undergraduate degree.

The instrument presented a mean score of agreement of 91.6%, varying among the items evaluated (Table 1).

Chart 1 – Description of the hygiene and comfort care scenario, Maringá, Paraná, Brazil, 2022

THE HYGIENE AND COMFORT SCENARIO EDUCATIONAL VIDEO

Human Resources

Actress (Patrícia Bossolani Charlo): presents the video and records the scenes in which guidance is provided by the healthcare professional on patient hygiene and comfort care - the bed bath, skin hydration, and change of lying position (decubitus). Actress (Rosely Marcão Coutinho): will play the role of the patient.

Equipment and consumables: basins; warm water; blanket and sheet; mobile sheet; soap; plenty of clean towels; gloves, if necessary; moisturizing lotion; pillows and/or cushions.

Location: internal space of the Laboratório de Simulação clínica e Habilidades [Clinical Simulation and Skills Laboratory] (SimuLab) of the Centro Universitário de Maringá (UniCesumar).

Scene 1. Video opening scene

- Hello, and welcome to the first educational video for informal caregivers of technology-dependent people. I'm Nurse Patricia, and in today's video I'm going to explain to you how the bed bath, skin hydration, and changing of the lying position are performed.

Scene 2. Patient presentation

The nurse enters the room and addresses the patient; the camera follows the actress (nurse) as she enters.

Woman lying on the hospital bed; the camera has both characters in frame.

- Hello, Rosely. My name is Patricia. I'm a nurse, and I'm going to give you a bed bath. I will guarantee your privacy by not allowing people to enter the room, okay?

At this moment, Patricia goes to the doors and windows and closes them to ensure that there are no drafts.

— I'll prepare the material and then return, okay?

To be continued

Chart 1 (concluded)

Scene 3. Preparing the bath

Camera shows Patricia gathering the material for the preparation of the bath. The materials gathered for the bed bath were: two basins, jar with warm water, washcloth, bath towel, compress, glove, soap, comb, gown or pajamas, bedclothes. The nurse fills the two basins with warm water, which was used to wash and rinse the patient. The temperature of the water is tested with the forearm (elbow) region. The water is pleasant to the touch. When choosing the soap, Patricia prefers a neutral type and avoids exfoliating and alcohol-based soaps, because they dry out the skin. She prefers to put the soap in one of the wash basins, but she can also apply it directly on the patient's skin. She reiterates that sponges or scrubs can hurt or eliminate the skin's natural barrier, so their use should be avoided. Patrícia keeps all the materials near the bed, with plenty of towels and compresses for situations in which water spills over the patient or the aforementioned materials get dirty. In order to avoid discomfort due to a wet bed, Patricia places two towels under Rosely. To place the towels under the patient, the nurse turns her on her side and places the towel under her, returns her to a horizontal decubitus position, and repeats the procedure on the patient's other side. To ensure that the patient remains warm and private, Patricia uses a sheet over Rosely's body during the entire period in which the bath was performed. The bath began with the removal of Rosely's clothes, and by folding the sheet and placing it over the patient's bottom part. Her shirt was removed and the same procedure was performed with the lower part of the patient, covering her upper part and removing her lower garment. The nurse made sure that the patient was covered as much as possible while removing her clothing. She followed the technique of using the same cleansing and rinsing method for Rosely's whole body, applying the soap to her skin. Patrícia used a washcloth wet with water and soap to clean and remove dirt, then used another washcloth with clean water from the second basin to rinse. After, she dried her. The nurse used material resources very gently so as not to be uncomfortable with the patient's skin. The same process was performed all over Rosely's body, and the water in the basins was changed whenever Patricia thought it was necessary. The whole process was presented in a detailed manner in "Scene 4".

Scene 4. Performing the bed bath

Camera points to Patrícia, who approaches Rosely with the goal of reaching the bedpan. Soon after, Patricia lowers the bed's headboard and removes the pillow. Face - Gently, Patricia starts the bath by washing her face, ears, and neck area with soap and water. She then rinses and dries the cleaned area with separate towels for the two processes. Hair - The nurse lifts the patient's head carefully and places it on top of the basin, pouring water over the head to wash the scalp with shampoo, while taking care that the water doesn't reach Rosely's eves or ears. Patricia proceeds by rinsing the hair with clean water and drying it with a dry towel. Left shoulder and arm - The nurse folds the sheet covering Rosely's body up to the hip. She then places a towel under the arm to expose the region and begins the process of washing it with soap, rinsing with clean water, and drying, these three processes with different towels. Patricia is extra careful when bathing the armpit area to avoid skin irritation and proliferation of infectious microorganisms, keeping Rosely covered and warm whenever possible. Right shoulder and arm - The same process performed on the left side was performed on Rosely's right side. Thorax, abdomen, and sides - To wash this anatomical region, Patrícia folds a sheet up to Rosely's waist and, with gentle movements, washes and rinses the thorax, being careful with the breast region, belly, and sides of Rosely's body, as these are regions where we may find microorganisms. Legs - Patricia uncovers Rosely's right leg up to the waist and starts the bath with the sequence of washing, rinsing, and drying techniques, from the upper leg region to the foot. The same procedure is performed on the left leg. At this moment, the nurse notices the need to change the water in the basins, considering that the patient has already had half of her body cleaned. Patricia asks Rosely to turn her body sideways; she presents difficulty in doing so. The nurse checks to see if the patient is close to the edge of the bed to prevent her from falling and starts to help her turn on her side. Patricia approaches the bedpan and places it under Rosely. Attention must be paid to the handling of Rosely's probes, drains, and catheters, which can be accidentally moved and even removed during the procedure. When moving the patient in bed, Patricia is careful not to drag her on the mattress. Avoiding friction is very important as the skin is more susceptible to injury. Back and buttocks – To expose and wash the back, Patrícia folds the sheet. She then washes, rinses, and dries Rosely's back from the ventral part of the neck, going along the back and reaching the buttocks area. Genital area and anus - Patricia puts on disposable latex gloves and offers the patient the compress with the soap to proceed with intimate hygiene. Rosely finds it difficult to do this, so Patricia lifts the patient's leg to wash it using a front to back movement, and then rinses and dries it with different towels. The nurse makes sure to dry the hard-to-reach areas, such as the folds, to make sure they are clean and dry. When finished, Patricia dresses Rosely in clean clothes and begins the skin moisturizing procedure. Keeping clothes clean, dry, and taut is important in decubitus ulcer prophylaxis. ATTENTION: During the bath, Patricia observes the conditions of the skin and bony protrusions to prevent injuries. She also makes sure that there are no wound dressings to be performed, because if there were, she should protect them and then change them^[21-22].

Scene 5. Skin hydration after the bath

After the bed bath, Patrícia informs Rosely that she will hydrate her skin, because this helps in the activation of blood circulation and to maintain skin elasticity, thus avoiding lesions and dryness. With the help of moisturizers or essential fatty acids (EFA), better known as sunflower oil, Patrícia applies a minimal amount of the product, spreads it on her hands, and massages Rosely's entire body with soft, firm movements. **ATTEN-TION:** Moisturizers after bathing should be encouraged; and talc (preferred by many elderly people) should be avoided because they increase dryness and contribute to obstructing pores, which will impair the skin's perspiration function⁽²¹⁻²²⁾.

Scene 6. Change in decubitus

Patricia, lastly, changes Rosely's decubitus, who, due to being bedridden, has altered/reduced vascular permeability. While inspecting the skin during bathing, the nurse notices pressure points on the skin, which can result in lesions, possibly leading to new infections. Patricia carefully evaluates regions of bony prominence, such as the sacral region, trochanters, heels, and/or ankles to verify the positions of least pressure in which Rosely feels most comfortable. Decubitus changes are tools used to prevent pressure ulcers (PUs), especially in people with reduced mobility or who are in the same situation as Rosely. In bedridden situations, postural changes should be scheduled, which was Rosely's case. **Right/left lateral decubitus** – Patricia chose to position Rosely to the right side and use a pillow or blanket wrapped around her dorsal region, repositioning her head on the pillow. Patricia used pillows between the regions of bony prominence contact, such as the knees, to avoid friction and shear and to give Rosely more comfort.

Dorsal decubitus: After a few hours, which on average is two to three hours, Patricia performed decubitus change, keeping Rosely with her abdomen facing upward. The nurse used a pillow to reposition the head and shoulders and to keep the legs and knees elevated. **ATTENTION:** Patricia avoids movements that promote friction, which can compromise the integrity of Rosely's fragile skin. In addition, the nurse performs decubitus changes according to the position in which the patient feels most **comfortable in bed, which reduces the incidence of skin cracks that lead to pressure injury.**

Note: Adapted from Smith⁽²²⁾ and Timby⁽²³⁾.

Table 1 – Per item percentage of the content validity index of the educationalvideos' clinical scenarios, Maringá, Paraná, Brazil, 2022

Items Evaluated	1	2	3	CVI
As for the content of the script presented, the topics covered are pertinent to the care of dependent patients.	1	2	9	91.6
As to the content presented referring to the bed bath	1	1	10	91.6
As to the content presented referring to skin hydration	1	1	10	91.6
As to the content presented referring to the change of decubitus	1	2	9	91.6
As for the content presented referring to feeding tube	1	4	7	91.6
As for the content presented referring to oxygen therapy	1	2	9	91.6

To validate the content of the script, the professionals evaluated: the relevance of the themes addressed in the script and the need to include new themes; the authenticity of the content related to the themes: hygiene care and patient comfort; care with enteral tubes and care with oxygen therapy.

The experts highlighted important elements of professional practice, which contributed to the construction of the clinical scenarios, allowing them to come closer to reality and for the result to achieve the proposed study objectives. Based on scientific knowledge, the script was validated by the professionals, whose purpose was to seek solutions to the problems experienced in the home environment.

DISCUSSION

With the increase in the number of people dependent on care in the home environment, health services are faced with the challenge of providing assistance to individuals whose profile is marked by functional limitations that negatively influence their quality of life. The HC is a strategic program with complex care actions that aim to ensure quality of life and patient safety according to their health needs and considering their social and family context⁽²⁾.

The evidence available in the literature points out that when dependent patients and their caregivers receive training to face the limitations intrinsic to the ill person's health condition, the abilities and care practices become adequate, accurate, and resolutive, culminating in the reduction of the burden and stressful events related to care⁽²⁴⁻²⁵⁾. As a tool in this context, due to its capacity of communication and transmission of information, the Internet is useful, since it is a technology that has been used in a promising way in health services, especially as an educational tool for prevention of health problems and interaction between patients, family members and/or informal caregivers, and health professionals⁽²⁶⁾.

In this aspect, digital media have a high pedagogical impact and are present in the daily lives of people who continuously consume information. The insertion of methodologies through information technology, using educational videos with pertinent information regarding changes or teachings on self-care and caring for dependent people, are strategies that can have a direct impact on the quality of life of the population and reduce the demand in health services by people with morbidities and who lack information resulting from inadequate professional monitoring⁽²⁷⁻²⁹⁾.

The literature advances on this theme; and studies conducted in different countries reinforce the use of this strategy as promising in the dissemination of health education, considering the specific needs of the population and the main difficulties that people, especially with low educational level, have in obtaining, processing, and understanding information⁽³⁰⁻³²⁾. The video, by its nature, provides simple and useful instructions within clinical scenarios, reinforcing the role of family caregivers in the task of caring and in complementing the assistance of health professionals. Furthermore, its informative and inclusive nature enhances the guidance on aspects of care and doubts of the family caregivers, in order to make them more proficient and less anxious, reducing complications and the need for recurrence to the health services⁽³³⁾.

Public domain teaching, learning, and research resources, such as educational materials available on the internet, are currently used worldwide. Known as open educational resources, they represent the possibility of access to education. Through technologies such as the Internet and virtual learning environments, it is possible to make educational resources available on the Web that are necessary for their pedagogical use⁽³⁴⁾.

Harvard University and the Massachusetts Institute of Technology (MIT) are advancing in methodological matters and teaching technology⁽³⁴⁾. Brazil has also progressed in the area of educational technologies, using specific platforms for the development of content for continuing and permanent education of health professionals, available through the Acervo de Recursos Educacionais em Saúde (ARES) [Collection of Educational Resources in Health], produced by institutions linked to the UNA-SUS network⁽³⁵⁾.

It is noteworthy that the development of teaching environments supported by technology constitutes a field of permanent innovation, seeking to favor the teaching and learning process, characterized by dynamism and interaction⁽³²⁾. Therefore, these environments have been adopted as one of the strategies to allow access to knowledge by a larger number of people in various sectors of society, including health. In view of this, the adoption of computerized instruments can become an important tool to support the planning of caregivers in the healthcare field, as it allows different actions to be implemented and made available to the caregivers in their own environment, aiming to facilitate the educational process of these people⁽³⁴⁻³⁶⁾.

In this study, the construction of scenarios is directed to caregivers to assist in health decision making, in order to reduce anxiety about performing procedures, to provide means to deal with unexpected situations, and to train them for safe and resolutive care practices. The realistic simulation scenario, when well designed, has the potential to develop quick clinical reasoning, optimization of care practices, and technical skills, which provide decision making. Simulation-based education plays an increasingly important role in health education worldwide, because, besides protecting the patient from possible risks, it is capable of creating conditions that optimize learning⁽³⁷⁾.

In this sense, it is considered of utmost importance that health professionals, especially nurses, are focused on the development

and usability of new technologies according to their area of expertise and level of health care. The advancement in the theme addressed by scientific studies that emphasize videos as an educational strategy in health is extremely important for its direct impact on changing lifestyle habits and encouraging prevention practices based on self-care⁽¹²⁾.

The clinical scenarios were evaluated by the experts with a high value of reliability, especially regarding patient promotion and safety, corroborating studies with similar results⁽³⁷⁻³⁹⁾. The validation results were very positive, and the experts' suggestions added more quality to the scenario (technical and non-technical skills); that is, it is important that the scenario involves the participant in a broad context of clinical reasoning and decision making⁽¹²⁾.

In this context, the evaluation of the proposed clinical scenarios was performed by means of an instrument that observed different aspects related to care at home, reaching satisfactory levels of validity. In the CVI evaluation, the evaluated items presented values higher than those established by the methodology, related to the reliability and representativeness of the developed scenarios. In research on technology evaluation, other researchers also found CVI similar to that obtained in this study, which demonstrates agreement to the experts' answers^(12,19,40).

The validation of the content is an essential process in the construction of realistic scenarios for educational videos, considering their contextual issue regarding the target audience, design, and time of the content presented, in order to ensure their reliability and clarity in the assimilation of the idealized content^(14,41-42). Thus, it is essential to know the main needs of the patients' clinical condition, as well as to point out the potential adjustments of educational interventions, especially in the understanding of the peculiarities that involve the patients' comfort care decision. In this sense, the use of videos makes health education more interactive, instructive, seen as a facilitator of the actions to be taken in the care process of people with chronic morbidities in advanced stage⁽⁴²⁻⁴³⁾.

Study limitations

The study used only three scenarios, so it was limited by the impossibility of including other important themes in the script. The insertion of new themes, allusive to the practices of bed bath for dependent people at home, would make the video significantly longer, which could harm the main objective and cause the target audience to have a lower assimilation. Another limiting issue refers to the need for evaluation by the target audience to make the material more cohesive and applicable, in order to configure the necessary realism for the video to have a positive impact on educational matters.

Contributions to the field of nursing, health, or public policies

The contributions of the study are based on the possibility of reducing inadequate assistance by informal caregivers to people dependent on care at home. Educational videos, mediated by specialized health professionals and disseminated through social media, can increase appropriate behaviors, better technical care skills, and reduce the need for emergency visits and hospitalizations for adverse events. Educational strategies mediated by videos directed to informal caregivers have shown to be efficient in providing information for care implementation through realistic simulation of cases that coincide with the reality of certain patients and informal caregivers^(33,44).

CONCLUSIONS

The validation of the clinical scenarios had good evaluation and reliability, presenting a general value above 0.90 among the experts. Therefore, they can be used in realistic simulations with educational purposes and directed to the training of informal caregivers. The experts' collaboration in validating the scenarios brought the simulation closer to home care reality. The study provided an opportunity for the experts to present new insights, which were evaluated and accepted when pertinent to the objective of the study.

The realistic simulation of clinical scenarios for the education and training of informal caregivers represent an important contribution, being a tool capable of helping people who provide care at home. The search for the inclusion of differentiated methods aimed at informal caregivers emerges as a necessity, since many caregivers are unaware of the care requirements of dependent patients.

Caring in a home environment is complex and requires technical skills and competences from the informal caregiver. Based on pedagogical teaching practices, mediated by educational videos, cognitive, emotional, psychomotor, and relational issues can improve care practices and prevent new health actions and readmissions due to inadequate care. This improves the quality of life of dependent persons at home and of their family members/ informal caregivers and improves the delivery and organization of health professionals' work process.

REFERENCES

- 1. Castro O, Lima RS, Sanches RS, Dázio EMR, Gomes RG, Fava SMCL. Meaning of being a care-giver of a person with home oxygen therapy: grounded theory. Rev Enferm Cent-Oeste Mineiro. 2020;10:e3607. http://doi.org/10.19175/recom.v10i0.3607
- Ministério da Saúde (BR). Portaria nº 825, de 25 de abril de 2016. Redefine a Atenção Domici-liar no âmbito do Sistema Único de Saúde e atualiza as equipes habilitadas [Internet]. 2016[cited 2021 Feb 20]. Available from: https://bvsms.saude.gov.br/bvs/saudelegis/gm/2016/ prt0825_25_04_2016.html
- 3. Nouguchi M, Tachimori H, Naganuma Y, Zhao X, Kono T, Horii S, et al. Families' opinions about caring for patients with psychiatric disorders after involuntary hospitalization in Japan. Int J Soc Psychiatr. 2016;62(2):167-75. https://doi.org/10.1177/0020764015614595

- 4. Silveira MPR, Silva MRS, Farias FLR, Moniz ASB, Ventura J. Autonomia e reinserção social: percepção de familiares e profissionais que trabalham com redução de danos. Cienc Cuid Sau-de. 2017;16(3):1-7. https://doi.org/10.4025/ciencuidsaude.v16i3.34299
- 5. Schwertfeger JL, Thuente L, Hung P, Larson SL. Post-discharge interventions to enhance cop-ing skills for survivors of stroke and their caregivers: a scoping review protocol. JBI Evid Synth. 2019:18(2):332-40. https://doi.org/10.11124/JBISRIR-D-18-00024
- 6. Ministério da Saúde (BR). Secretaria de Atenção Especializada à Saúde. Departamento de Atenção Hospitalar, Domiciliar e de Urgência. Atenção Domiciliar na Atenção Primária à Saúde. Brasília: Ministério da Saúde. 2020. 98 p.: il.
- Rodrigues TFCS, Cardoso LCB, Rêgo AS, Silva ES, Elias MFAL, Radovanovic CAT. Educational intervention to increase the skill of informal caregivers: a quasi-experimental pilot study. Texto Contexto Enferm. 2021;30:e20200152. https://doi.org/10.1590/1980-265x-tce-2020-0152
- 8. Santos FGT, Harmuch C, Paiano M, Radovanovic CAT, Rêgo AS, Carreira L. Competence of el-derly informal caregivers of people in home care. Esc Anna Nery. 2022;26:e20210288. https://doi.org/10.1590/2177-9465-ean-2021-0288
- 9. Santos FGT, Zulin A, Cardoso LCB, Sanches RCN, Rêgo AS, Girardon-Perlini NMO, et al. Factors associated with the skills of informal caregivers in home care. Rev Bras Enferm. 2022;75:e20210744. https://doi.org/10.1590/0034-7167-2021-0744
- 10. Silva APM, Pina JC, Rocha PK, Anders JC, Souza AIJ, Okido ACC. Training of caregivers of children with special health care needs: simulation contributions. Texto Contexto Enferm. 2020;29:e20180448. https://doi.org/10.1590/1980-265X-TCE-2018-0448
- 11. Bellaguarda MLR, Knihs NS, Canever BP, Tholl AD, Alvarez AG, Teixeira GC. Realistic simu-lation as a teaching tool in critical situation communication in palliative care. Esc Anna Nery. 2020;24(3):e20190271. https://doi.org/10.1590/2177-9465-EAN-2019-0271
- 12. Carvalho LR, Zem-Mascarenhas SH. Construction and validation of a sepsis simulation scenario: a methodological study. Rev Esc Enferm USP. 2020;54:e03638. https://doi.org/10.1590/s1980-220x2019021603638
- 13. Negri EC, Pereira Júnior GA, Cotta Filho CK, Franzon JC, Mazzo A. Construction and validation of simulated scenario for nursing care to colostomy patients. Texto Contexto Enferm 2019;28:e20180199. https://doi.org/10.1590/1980-265x-tce-2018-0199
- 14. Neves FF, Pazin-Filho A. Construindo cenários de simulação: pérolas e armadilhas. Sci Med. 2018;28(1):ID28579. https://doi. org/10.15448/1980-6108.2018.1.28579
- 15. Fleming SE, Reynolds J, Wallace B. Lights...camera...action! a guide for creating a DVD/Vídeo. Nurse Educator. 2009;34(3):118-21. https:// doi.org/10.1097/NNE.0b013e3181a0270e
- 16. Braga FTMM, Garbin LM, Marmol MT, Khouri VY, Vasques CI, Carvalho EC. Oral hygiene in chemo therapy patients: construction and validation of an education video. Rev Enferm UFPE. 2014;8(10):3331-9. https://doi.org/10.5205/reuol.6039-55477-1-ED.0810201411
- 17. Ministério da Saúde (BR). Secretaria de Atenção à Saúde. Departamento de Atenção Básica. Ca-derno de atenção domiciliar. Brasília, DF: Ministério da Saúde; 2012.
- 18. Ministério da Saúde (BR). Secretaria de Atenção à Saúde. Departamento de Atenção Básica. Ca-derno de atenção domiciliar. Brasília: Ministério da Saúde; 2013. 2 v.: il.
- 19. Fehring RJ. Symposium on validation models: the Fehring model. In: Carroll Johnson RM, Paquette M. Classification of nursing diagnoses: proceedings of the tenth conference. Philadelphia, EUA: Lippincott Company; 1994. p. 55- 62
- 20. Souza VEC. Desenvolvimento e validação de software para apoio ao ensino-aprendizagem sobre diagnósticos de enfermagem[Tese]. Fortaleza. Universidade Federal do Ceará; 2005.
- 21. Polit DF, Beck CT. Fundamentos de Pesquisa em enfermagem: avaliação de evidências para as práticas da enfermagem. 9ª ed. Porto Alegre (RS): Artmed; 2019.
- 22. Smith SF, Duell DJ, Martin BC, Gonzalez L, Aebersold M. Bathing, bed making, and maintaining skin integrity. In: Clinical Nursing Skills: Basic to Advanced Skills. 9th ed. New York, NY: Pear-son; 2017.
- 23. Timby BK. Assisting with basic needs. In: Fundamentals of nursing skills and concepts. 11th ed. Philadelphia, PA: Wolters Kluwer Health: Lippincott Williams & Wilkens; 2017: unit 5.
- 24. Smith TO, Pearson M, Pfeiffer K, Crotty M, Lamb SE. Caregiver interventions for adults dis-charged from the hospital: systematic review and meta-analysis. J Am Geriatr Soc. 2019;67:1960-9. https://doi.org/10.1111/jgs.16048
- 25. McDonald J, McKinlay E, Keeling S, Levack W. The 'wayfinding' experience of family carers who learn to manage technical health procedures at home: a grounded theory study. Scand J Car-ing Sci 2017;31:850–8. https://doi.org/10.1111/scs.12406
- 26. Weiss MC. Sociedade sensoriada: a sociedade da transformação digital. Estud Av. 2019;33(95). https://doi.org/10.1590/ S0103-4014.2019.3395.0013
- 27. Rosaasen N, Mainra R, Kukha-Bryson A, Nhin V, Trivedi P, Shoker A, et al. Development of a patient-centered video series to improve education before kidney transplantation. Patient Educ Couns 2018;101(9):1624–9. https://doi.org/10.0.3.248/j.pec.2018.04.014
- 28. Galindo-Neto NM, Alexandre ACS, Barros LM. Creation and validation of an educational vid-eo for deaf people about cardiopulmonary resuscitation. Rev Latino-Am Enfermagem. 2019;27(1):e3130. https://doi.org/10.1590/1518-8345.2765.3130
- 29. Sinha S, Dillon J, Dargar SK, Archambault A, Martin P, Frankel BA, et al. What to expect that you're not expecting: a pilot video education intervention to improve patient self-efficacy sur-rounding discharge medication barriers. Health Informatics J. 2019;25(4):1595–605. https://doi.org/101177/1460458218796644

- 30. Espinoza Suarez NR, LaVecchia CM, Ponce OJ, Fischer KM, Wilson PM, Kamath CC, et al. Using shared decision-making tools and patientclinician conversations about costs. Mayo Clin Proc In-nov Qual Outcomes. 2020;4:416–23. https://doi.org/10.1016/j.mayocpigo.2020.04.013
- 31. Sánchez-Huamash CM, Cárcamo-Cavagnaro C. Videos to improve the skills and knowledge of stroke patients' caregivers. Rev Peru Med Exp Salud Publica. 2021;38(1):41-8. https://doi.org/10.17843/rpmesp.2021.381.6130
- 32. Silva JP, Bernardi FA, Franzon JC, Orlandin L, Ferlin GZ, Pereira Junior GA. Step-by-step insulin application: making educational videos for patients and caregivers. Esc Anna Nery. 2021;25(1). https://doi.org/10.1590/2177-9465-EAN-2019-0343
- 33. Simblett S, Greer B, Matcham F, Curtis H, Polhemus A, Ferrão J, et al. Barriers to and facilitators of engagement with remote measurement technology for managing health: systematic review and content analysis of findings. J Med Internet Res 2018;20:e10480. https://doi. org/10.2196/10480
- 34. Bacich L, Moran J. Metodologias ativas para uma educação inovadora: uma abordagem téorico-prática. Porto Alegre: Penso; 2018.
- 35. Fundação Oswaldo Cruz (Fiocruz). Sistema UNA-SUS como ferramenta de democratização da Educação Permanente em Saúde: perfil dos usuários e capilarização dos cursos autoinstrucionais. RBAAD 2021;20. https://doi.org/10.17143/rbaad.v20i1.476
- 36. Salvador PTCO, Martins CCF, Alves KYA, Pereira MA, Santos VEP, Tourinho FSV. Tecnologia no ensino de enfermagem. Rev Baiana Enferm. 2015;29(1):33-41. https://doi.org/10.18471/rbe.v29i1.9883
- 37. Andrade PON, Oliveira SC, Morais SCRV, Guedes TG, Melo GP, Linhares FMP. Validation of a clinical simulation setting in the management of postpartum haemorrhage. Rev Bras Enferm. 2019;72(3):624-631. https://doi.org/10.1590/0034-7167-2018-0065
- 38. Guerra S, Albuquerque AD, Felisberto E, Marques P. Cuidado na atenção domiciliar: efeitos de uma intervenção educacional em saúde. Trab Educ Saúde. 2020;18(3):e00292124. https://doi.org/10.1590/1981-7746-sol00292
- 39. Brondani CM, Ramos LH, Beuter M, Lampert MA, Seiffert MA, Bruinsma JL. Caracterização de pacientes dependentes de tecnologias de um serviço de internação domiciliar. Rev Enferm UFSM. 2013;3(Esp.):689-99. https://doi.org/10.5902/2179769211063
- 40. Negri EC, Mazzo A, Martins JCA, Pereira JA, Pedersoli CE. Clinical simulation with dramatiza-tion: Gains perceived by students and health professionals. Rev Latino-Am Enfermagem. 2017;25:e2916, 2017. https://doi.org/10.1590/1518-8345.1807.2916
- 41. Rodrigues LN, Santos AS, Gomes PPS, Silva WCP, Chaves EMC. Construction and validation of an educational booklet on care for children with gastrostomy. Rev Bras Enferm 2020;73. https://doi.org/10.1590/0034-7167-2019-0108
- 42. Almeida DR, Nodari CH, Guimarães CM, Coutinho AOR, Bez MR. Simulation as a teaching-learning strategy in nursing: an integrative review. Rev Educ Saúde. 2018;6(2):98-105. https://doi.org/10.29237/2358-9868.2018v6i2.p98-105
- 43. Chiarchiaro J, Ernecoff NC, Buddadhumaruk P, Rak KJ, Arnold RM, White DB. Key stakehold-ers' perspectives on a Web-based advance care planning tool for advanced lung disease. J Crit Care. 2015;30:1418. https://doi.org/10.1016/j.jcrc.2015.09.001
- 44. Breneol S, Belliveau J, Cassidy C, Curran JA. Strategies to support transitions from hospital to home for children with medical complexity: a scoping review. Int J Nurs Stud. 2017;72:91-104. https://doi.org/10.1016/j.ijnurstu.2017.04.011