http://www.periodicos.uem.br/ojs/index.php/CiencCuidSaude
ISSN on-line1984-7513
DOI: 10.4025/cienccuidsaude.v23i0.66114

ORIGINAL ARTICLE

HOME CARE FOR CHILDREN WITH GASTROSTOMY: PRODUCTION AND VALIDATION OF CARE-EDUCATIONAL TECHNOLOGY

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ABSTRACT

Objectives: To describe the process of production and validation of care-educational technology (CET) on video to support home care for children with gastrostomy. **Methods:** Methodological research to produce and validate CET in video. An integrative review was carried out followed by the construction of the script, to determine the content and structure of the technology. The validation process took place in two stages: content validation (15 expert judges) and technical validation (05 family/caregiver judges), between September 2021 and February 2022. In this process, a Likert scale was used, with three domains: objective; structure and presentation; relevance. To avoid subjective biases, the Intraclass Correlation Coefficient (ICC) was calculated, and the items with ICC≥80% were maintained. **Results:** Video was produced with 12 minutes, which develops in two axes: knowing more about gastrostomy and home care. It includes guidelines such as peristomal skin care, food and medicine supply, prevention and management of problems related to gastrostomy. It obtained ICC≥80% in all evaluative items, in the two validation phases. **Conclusion:** The CET produced and validated allows to support the care of parents to children with GTT at home, facilitating the acquisition of technical knowledge and reducing the risks to the child and tensions in the family.

Keywords: Gastrostomy. Pediatric Nursing. Educational Technology.

INTRODUCTION

The advent of more effective therapies and the adoption of a family-centered perspective has significantly improved child care, allowing babies and children, who previously succumbed to complex diseases, now have the opportunity to survive and receive treatment in an outpatient setting or in their own homes, avoiding long hospital stays and minimizing the separation of their families[1].

Given the complexity involved in the care of these children, it became necessary to establish a specific nomenclature for them. In Brazil, the term adopted to refer to these children is "Children with Special Health Needs" (CRIANES)[2]. The CRIANES are categorized not by the medical diagnosis itself, but by their needs, which may include in addition to the dependence on prescribed drugs, requiring specific interventions to maintain clinical stability[3].

Among the many limitations presented by these children, it is emphasized the inability of usual nutrition due to abnormalities in the throat or esophagus and severe neurological alteration[4]. This condition requires the use of an alternative food route in order to avoid complications such as malnutrition, dehydration and aspiration pneumonia[5]. In these cases, gastrostomy is a nutritional measure commonly used when seeking an alternative for long-term care[4]. This procedure involves the insertion of a tube through the anterior abdominal wall directly into the stomach, allowing the infusion of pasty foods, liquids and food formulas[5].

However, the specificities of care of these children are challenging, due to the dependence

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generated by the need to make gastrostomy and use after hospital discharge[5]. This condition requires continuity of care at home, however, families are not instrumentalized to assume daily and intermittent care with the child[6].

Due to the complexity of this scenario, health education is an essential care strategy in the health care of CRIANES[7], being developed in the hospital environment and reinforced by the Home Care teams. This strategy should be centered on family care, directed to the needs of the user and his caregiver[8].

As facilitators of this process, Care-Educational Technologies (CET) are characterized as a link between the different spheres of care[9]. In the context of CET, the use of audiovisual resources brings new perspectives, since it associates sounds and images and makes the content closer to the reality of the target audience. In addition, videos can be viewed anytime and anywhere, provided there is a means to play them[10,11].

In contemporary times, the presence of children with special health needs, including those with gastrostomy, is increasingly frequent. To ensure continuity of care in the home environment, the multidisciplinary health team guides and trains family members/caregivers on the use and manipulation of these devices. However, these guidelines may not be sufficient to provide family members with security regarding the proper management of gastrostomy[6].

These considerations mobilized reflection on technological support to support the continuity of care for children with gastrostomy based on the following assertion: an easily accessible educational technology can support home care, reduce risk situations and complications to the child with gastrostomy, and minimize tensions of the caregiver and family.

Based on this assumption, it becomes relevant to carry out this study in order to develop and validate a care-educational technology to support home care for children with gastrostomy in audiovisual format.

METHODS

The objective of this methodological research is to produce and validate a care-educational technology in video format to support families caring for children with gastrostomy.

The production of technology was structured in four (04) phases, which included bibliographical research; description of evidence related to gastrostomy care; script construction and video structuring. The validation stage was conducted in two (02) phases: content validation by expert judges in the area and technical validation by representatives of the target audience, family members of children with gastrostomy hospitalized during the research.

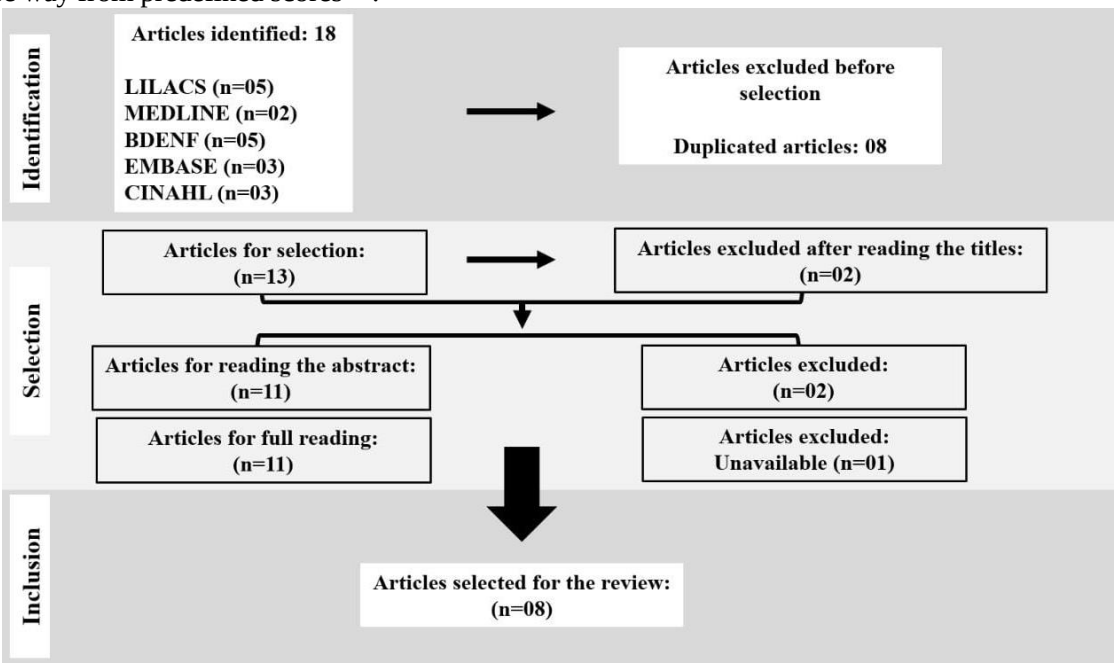
Integrative bibliographic research allows the identification, analysis and synthesis of evidence available in primary studies[12]. The integrative review was guided by the following question: What scientific evidence can support the care of children with gastrostomy?

For the search, we used the Health Sciences Descriptors (Decs): “Nursing Care”, “Gastrostomy” and “Child Health”, associated by the use of Boolean operators “AND” and “OR”, in the databases LILACS, MEDLINE, EMBASE, AHCINIL and BDENF. We considered publications in English, Spanish or Portuguese, which answered the research question, totaling 18 articles identified. Duplicate studies were excluded (n=05), so 13 articles were selected.

As selection strategies, the reading of the titles was used, followed by the reading of the abstracts. In this process, four articles were excluded because they did not meet the objective of the review. Thus, nine articles were selected for full reading, but one article was unavailable, and therefore excluded from this study. The process described is demonstrated in the following flowchart.

After identification of the publications, a careful reading of the articles and a description of the scientific evidence found was performed. From these evidences, a script was developed for the production of the video, whose purpose was to structure topics about home care for children with gastrostomy, as well as scenes and speeches. This script was delivered to a graphic designer to elaborate the illustrations, a process that was directed and accompanied by the researchers. Once the script has been finalized, validation has begun, which consists of evaluating a product in a

precise way from predefined scores[13].



Flowchart 1. Screening of articles based on the PRISMA model.
Source: Adapted from PRISMA, 2020.

In both phases of the validation process, an evaluative instrument was used consisting of three domains: objective, structure and presentation, and relevance (Appendices 1 and 2). Each item of these domains was evaluated by means of a Likert scale, with a classification of 5 points for each item, in which 1 corresponds to totally inadequate and 5 to totally adequate, in addition to space for justifications of the assigned score, if you were between 1 and 3. Free and general suggestions about the video were also included.

In order to avoid biases of subjective nature, the Intraclass Correlation Coefficient (ICC) was calculated to analyze the level of agreement between the evaluators[14]. The ICC varies from 0 to 100%, being considered in this study the ICC $\geq$ 80% as ideal[10]. Thus, the items that presented lower CCI than established were reevaluated. The items with ideal ICC were evaluated for the scores obtained in the instrument, that is, if an item obtained score ≥ 4 (adequate) and ICC $\geq$ 80%, was maintained according to the initial version of the script. The items with scores ≤ 3 (partially adequate) and ICC $\geq$ 80% were modified according to the judges' suggestions.

For the validation process, judges were selected according to the purpose of the analysis. Intentional non-probabilistic sampling was used, for which a quantitative of 20 judges is necessary to obtain a minimum agreement of 85% among the evaluators and a minimum of 70%, with a 95% confidence level and a sampling error of up to 20%[15,16]. Therefore, this value was established as a sample for this research, with the participation of 15 expert judges and 05 family judges/caregivers.

As for the inclusion criteria for specialists, academic-scientific experience and clinical practice in child care were considered. In the curricular analysis, the Lattes Platform was used. From the simple search tool, with the subject "Care for children with gastrostomy", the search was made for Specialists and Masters (in the item "Other Researchers") and then Doctors. In order to better direct the process, the following filters were adopted: Academic Training (Specialization/Master's Degree/Doctorate), Country (Brazil); Professional Performance: Large area (Health Sciences); Area (Nursing); Subarea (Child and Adolescent Health) (all because there were no options to be selected).

In this process, 48 researchers were identified, which were evaluated according to the criteria described in Chart 2.

Chart 2. Selection criteria for content judges

Criteria	Score
Nurse with clinical-assistance experience with children using GTT for at least 3 years	3 points
Possess Dissertation/Thesis related to the topic of interest	2 points/work
Have supervised or participated in Monograph, Dissertation or Thesis evaluation boards involving the topic of interest	1 point
Have works published in magazines and/or events on the construction and validation of CET in the care of CRIANES	2 points/work
Be a specialist in stomatherapy and/or Child Health or similar	3 points
Pontuação Obtida	

Source: Adapted from Benevides et al, 2016.

Among the identified experts, 26 reached the minimum score of six (6) points according to the established criteria, to which was sent Invitation Letter with guidelines on the research. Those who accepted to participate in this study received the Informed Consent Form (ICF), the script for the video and the evaluation instrument in Google Forms format. Of the 26 expert nurses contacted, 15 responded to the content validation instrument. The validation was performed between September and November 2021.

With regard to technical validation, we seek to evaluate how the technology is presented and the ease of understanding for the target audience[15]. Thus, the following inclusion criteria were established: to be a caregiver/family member of children with gastrostomy, older than 18 years, with mastery of the Portuguese language and to be a companion in the pediatric hospitalization of the Maternal-Child Unit of the University Hospital of UFMA, between December 2021 and February 2022.

Five family members/caregivers of children with GTT participated in this study, being mothers and primary caregivers of the children; the experience with the child with GTT ranged from 3 months to 6 years; as for the type of probe, three children used a probe with 3 an adapted Folley probe port and a Botton probe. Thus, a diversified audience was composed, allowing to observe the technology from different perspectives.

Contact with family caregivers was made during pediatric hospitalization. On this occasion, the objectives and the research process were explained, as well as being delivered and guided on the ICF. After signing this document, the video was played on the researcher's mobile phone device and the questionnaire was applied directly and physically.

In this study, both the illustrative didactic/communication-interaction dimension and the technical-scientific content dimension were considered[15]. Content validation occurred in two moments to evaluate the language and how the information was presented. Based on the considerations, a new version of the script was prepared, which was reassessed by the judges and considered appropriate. From the last version of the script, the version of the video was produced and submitted to technical validation. Therefore, technical validation was performed after adjustments suggested by content validation.

The study was conducted in accordance with the ethical and regulatory standards applicable to scientific research. The approval of the Research Ethics Committee, based on the opinion embodied in n. 4.790.675 and CAAE of n. 45044321.6.1001.5086, reinforces the commitment to the protection of participants' rights and the integrity of the data collected.

RESULTS

Through bibliographical research, scientific evidence was organized into two categories: "Knowing the child who uses gastrostomy" and "Caring for the child with gastrostomy at home". These categories based the structure of the script, composed of 15 scenes set in a ward, with the participation of a child who needs gastrostomy, his father, mother and a nurse from the Pediatric Clinic. The dialogue begins with the parents reporting their doubts regarding gastrostomy and the necessary care.

After the parents' request, the nurse

explained about the GTT and developed the content of the script. In the first axis there are clarifications about the concept of GTT; types and probe dwell time; besides the parts of the probes and their respective functions. The second axis addressed four (4) topics: cleaning and care of the skin around the probe, preparation of food, how to offer food and medicines by the probe, and the prevention and management of common problems related to gastrostomy, such as accidental exit, obstruction of the probe and skin lesions.

After the preparation of the first version of the script, it was submitted to content validation by experts. The judges returned with suggestions to adapt the content of the technology, which were met by analysis of the ICC. The new version was sent to the content judges for the second round of validation, through which all items from the three domains of the script obtained ICC $\geq$ 80%, being classified as adequate or fully adequate. As shown in table 1.

Table 1. Agreement between content judges about the audiovisual technology script for home care of children with GTT. São Luís, Maranhão-Brazil. 2021

EVALUATED ITEMS	CLASSIFICATION					ICC (%)
OBJECTIVES	**1 n**	**2 n**	**3 n**	**4 n**	**5 n**	
The information/contents are or are consistent with gastrostomy care	-	-	-	3	12	80.0
The information/content presented is in accordance with scientific evidence	-	-	-	1	14	93.3
The information/content is consistent with the purpose of the video	-	-	-	3	12	80.0
Meets the practice in home care for children with gastrostomy	-	-	-	3	12	80.0
STRUCTURE AND PRESENTATION	**1 n**	**2 n**	**3 n**	**4 n**	**5 n**	
Educational technology is appropriate for family members of children with gastrostomy	-	-	-	2	13	86.7
Information is presented in a clear and objective manner.	-	-	-	3	12	80.0
The material follows a logical sequence of content presentation	-	-	-	2	13	86.7
RELEVANCE	**1 n**	**2 n**	**3 n**	**4 n**	**5 n**	
The points addressed represent key points in the care of children with gastrostomy	-	-	-	2	13	86.7
The material allows its use in hospital training and maintenance of learning at home	-	-	-	3	12	80.0
The material addresses issues necessary for the quality of life of children and their caregivers	-	-	-	2	13	86.7
Presents relevant and current thematic content	-	-	-	2	13	86.7

Source: the author, 2021.

As for the domain "Objectives", in items 1, 3 and 4 the ICC was equal to 80%, and most judges attributed score 5 (totally adequate), with no need to be reevaluated or modified. Thus, the judges considered the information consistent with the objective of CET and compatible with the practice in home care. The second item of this domain obtained ICC from 93.3% to fully adequate (5) among experts, considering the content as based on scientific evidence.

In the evaluation of the Structure and Presentation domain, 86.7% (n=13) of the experts considered it totally appropriate (5) that the CET is appropriate for family members of children with gastrostomy and presents the content in logical sequence. The second item evaluates the clarity and objectivity of the information, being the item with the lowest ICC (53.3%) at the first moment of content validation. In addition, it was classified as partially adequate (3), that is, the language used in the script had to be changed to facilitate the transmission of information, and then it was reevaluated. In the second moment, this item was considered as totally adequate, with ICC of 80%.

Regarding the "Relevance", the first item evaluates whether the key posts of care for

children with gastrostomy are presented, obtaining ICC = 86.7% for classification as fully adequate (5). The second item of this domain, which evaluates the use of CET for training in a hospital environment and maintenance of learning at home, which was classified as fully adequate (5), with ICC = 60% in the first round of evaluation. After the modifications suggested by the judges, this item was reevaluated and obtained a score of 5 and ICC = 80%.

Regarding the third and fourth items, the ICC was 60% and 66.7%, respectively, when assigning the score 5 (totally adequate). Because they obtained ICC lower than 80%, both items needed to be reevaluated. In the second round of evaluation of the experts, both obtained ICC of 86.7%, being considered by the experts that the CET presented current and necessary themes for the quality of life of children with GTT and their caregivers.

Regarding the considerations of the experts, even the items evaluated as fully adequate presented suggestions, and the most frequent were about the standardization of the images, the adequacy of the language used and the use of gauze below the stabilizer. These suggestions supported the modifications made before the second round of analysis of the judges for content validation.

After the content validation, the audiovisual material was produced. The elaborated video lasted 12 minutes, consisting of images and animation, as well as parts filmed, as shown in Figure 1. A version was also adapted to be easily played and disseminated by mobile devices.

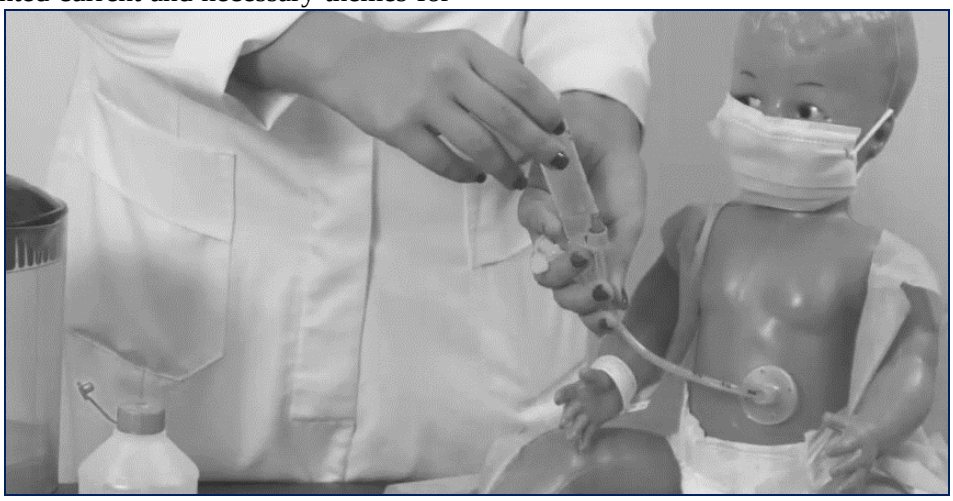


Figure 1. Demonstration of how to offer the GTT diet with a syringe.
Source: the author, 2021

Five family members/caregivers of children with GTT participated in the technical validation, following the analysis of the three domains, according to table 2.

Table 2. Agreement between technical judges about the three domains of audiovisual technology for home care of children with GTT. São Luís, Maranhão-Brazil. 2022

EVALUATED ITEMS	CLASSIFICATION					ICC (%)
OBJECTIVES	1	2	3	4	5	
	n	n	n	n	n	
The content is directly related to the target audience (family members of children with gastrostomy)	-	-	-	-	15	100
The information/content is consistent with the purpose of the video	-	-	-	-	15	100
Meets the practice in home care for children with gastrostomy	-	-	-	-	15	100

STRUCTURE AND PRESENTATION	**1**	**2**	**3**	**4**	**5**	
	n	**n**	**n**	**n**	**n**	
The video is attention-grabbing and holds the interest of the target audience	-	-	-	-	15	100
The guidelines are presented in a clear and objective manner	-	-	-	-	15	100
The sequence of topics presented facilitates understanding	-	-	-	-	15	100
The video duration is adequate	-	-	-	4	1	80.0
The video presents enough situations and characters	-	-	-	-	15	100
The size of the letters, the quality of the sound and the images are adequate	-	-	-	-	15	100
The images and information are related and complement the understanding	-	-	-	-	15	100
RELEVANCE	**1**	**2**	**3**	**4**	**5**	
	n	**n**	**n**	**n**	**n**	
The information addressed is important for the care of children with gastrostomy at home	-	-	-	-	5	100
The material addresses necessary topics for family members of children with gastrostomy	-	-	-	-	5	100
The guidelines presented will help in the daily life of caregivers of children with gastrostomy	-	-	-	-	5	100

Source: the author, 2022

In the "Objectives" domain, all items obtained a score of 5, considering that video CET meets the practice in home care and presents important information for the safe care of children with GTT at home.

Concerning the Structure and Presentation domain, the item "video duration" was the only one to obtain ICC < 100%. However, even the judges who attributed a lower score described that, although the video has a long duration, they did not consider it necessary to modify the duration, because it presents all the relevant information to home care in an objective and enlightening way.

In the evaluation of the third domain, ICC=100% was obtained (all items obtained score 5 - totally adequate). Thus, the guidelines presented will support the daily care of children with GTT, making CET video relevant to this process. After the validation process, both the content and the technique, Video CET on GTT care at home was considered adequate by expert judges and family judges as a tool to facilitate the health education process of family members/caregivers of children with gastrostomy.

DISCUSSION

The use of care-educational technologies is configured as a resource to enhance care-education and allow nursing to confirm the social commitment of the profession[16,17]. These tools can facilitate the teaching-learning process[9] and provide the acquisition of skills that are not part of the daily lives of individuals, as is the case of family members of children with gastrostomy. This is because the use of GTT limits children and requires the whole family to adapt to the management of this device, which is typical of the hospital environment[5].

With regard to home care, families do not feel guided about the care of CRIANES[17], which contributes to the fears at the time of discharge, both because of the condition of the child and because they do not feel able to perform care at home[18]. For this reason, it was produced and validated technology consisting of two axes, bringing guidance on management, but also general information on the manufacture of GTT. In addition, a conversation with the nurse before the gastrostomy was chosen as the plot of the video, emphasizing that the video can be used as support for the guidelines to the family members, not only at discharge, but preferably before the procedure.

The second axis is directed to direct child

care and management of problems related to the use of gastrostomy, such as accidental exit, obstruction of the probe and skin lesions. These themes are pointed out as challenges in the care of these children at home, even in cases where they received guidance prior to discharge[19,20]. One of the factors that contributes to this is the lack of systematization of care and standardization of guidelines by professionals. In this regard, nursing should be the main source of reference for the preparation of the family regarding the cudiados to be performed with the child in the context of the household[18]. In addition to the weaknesses in the teaching process, which hinder learning and postpone adaptation to the new reality[21].

In this study, the expert judges considered that the material is appropriate for training in the hospital and maintaining learning at home (80%), and is based on scientific evidence (93.3%). The use of validated CET during the health education process is a strategy to systematize guidelines for safe care at home. It is worth mentioning that even standardizing the guidelines, it is necessary to analyze the context of each family, to identify adaptations necessary to subsidize home care.

The CET produced in this research, in video mode, lasts 12 minutes. Video is a strategy to particularize the learning process, respecting the time of individual assimilation, since it can be played whenever necessary[22]. As for time, videos up to 6 minutes have a higher percentage of retention, being more attractive to the audience. However, longer videos are accessed more often per person, suggesting that the content made available has greater weight in relation to the time required by the video[10]. This was also evidenced in this research, when, in the space for suggestions, the mothers reported that they considered the video "a little long" but that there was no need to modify the CET because it contained all the information necessary to guide the home care of children with GTT.

To ensure that a technology is reliable and can be applied by other researchers, it is necessary to validate this technology[15]. Clarity and objectivity are fundamental items in the validation of an CET, because these technologies must transmit information in an understandable way. In addition, a confusing language incompatible with the target audience may cause fatigue and dispersion[10,16]. Regarding this item, 80% of the expert judges and 100% of the caregivers considered the language used in the video clear, objective and easy to understand.

Interactivity in educational content provides a dynamic environment, leading the public to reflect on the subject addressed[10]. In this regard, 100% of family judges/caregivers considered that the video can hold attention while watching, as well as presents a relationship between audio and images facilitating understanding. Thus, it is inferred that using validated CET can help at the time of guidance and care demonstrations, as well as facilitate the seizure of this information by family members.

As for the limitations of this study, there is the fact that validation with family members occurred in a period in which hospitalizations and surgeries decreased, which contributed to the smaller number of judges for technical validation, as well as the realization in a single reality. Therefore, it is suggested the application in future studies in order to make it comprehensive.

CONCLUSION

The CET produced and validated in the research, aims to intermediate the teaching-learning process, making it more dynamic and enabling access to information at any time, as well as repetition of them. Thus, the CET produced and validated provides information and support for safe care for children with GTT in a home context.

It is noteworthy that the validation of the content by experts confirms that the information presented in the CET is based on the best evidence for safe care. In turn, technical validation qualifies the CET for having been evaluated as appropriate for the target audience and for achieving the objective of assisting in the health education process and in the care of children with GTT.

RESUMO

Objetivos: Descrever o processo de produção e validação de tecnologia cuidativo-educacional (TCE) em vídeo para suporte ao cuidado domiciliar a crianças com gastrostomia. **Métodos:** Pesquisa metodológica para produzir e validar TCE em vídeo. Realizou-se revisão integrativa seguida pela construção do roteiro, para determinar o conteúdo e a estrutura da tecnologia. O processo de validação ocorreu em duas etapas: validação de conteúdo (15 juízes especialistas) e validação técnica (05 juízes familiares/cuidadores), entre setembro de 2021 e fevereiro de 2022. Nesse processo, utilizou-se escala tipo Likert, com três domínios: objetivo; estrutura e apresentação; relevância. Para evitar vieses subjetivos, calculou-se o Coeficiente de Correlação Intraclasse (ICC), sendo mantidos os itens com ICC≥80%. **Resultados:** Produziu-se vídeo com 12 minutos, que se desenvolve em dois eixos: conhecendo mais sobre gastrostomia e cuidados no domicílio. Engloba orientações como cuidado com a pele periestoma, oferta de alimentos e medicamentos, prevenção e manejo de problemas relacionados à gastrostomia. Obteve ICC≥80% em todos os itens avaliativos, nas duas fases de validação. **Conclusão:** A TCE produzida e validada permite apoiar o cuidado dos pais às crianças com GTT no domicílio, facilitando a aquisição de saberes técnicos além de reduzir os riscos à criança e tensões na família.

Palavras-chave: Gastrostomia. Enfermagem Pediátrica. Tecnologia Educacional.

CUIDADO DOMICILIARIO DEL NIÑO CON GASTROSTOMÍA: PRODUCCIÓN Y VALIDACIÓN DE TECNOLOGÍA CUIDATIVO-EDUCATIVA

RESUMEN

Objetivos: describir el proceso de producción y validación de tecnología cuidativo-educativa (TCE) en video para apoyar el cuidado domiciliario de niños con gastrostomía. **Métodos:** investigación metodológica para producir y validar TCE en vídeo. Se realizó revisión integradora seguida por la construcción de guion para determinar el contenido y la estructura de la tecnología. El proceso de validación ocurrió en dos etapas: validación de contenido (15 jueces expertos) y validación técnica (05 jueces familiares/cuidadores), entre septiembre de 2021 y febrero de 2022. En ese proceso, se utilizó escala tipo Likert, con tres dominios: objetivo; estructura y presentación; relevancia. Para evitar sesgos subjetivos, se calculó el Coeficiente de Correlación Intraclase (ICC), siendo mantenidos los ítems con ICC≥80%. **Resultados:** se produjo video con 12 minutos, que se desarrolla en dos ejes: conociendo más sobre gastrostomía y cuidados en el domicilio. Engloba orientaciones como cuidado con la piel periestomal, oferta de alimentos y medicamentos, prevención y manejo de problemas relacionados a la gastrostomía. Obtuvo ICC≥80% en todos los ítems evaluativos, en las dos fases de validación. **Conclusión:** La TCE producida y validada permite apoyar el cuidado de los padres a los niños con GTT en el domicilio, facilitando la adquisición de saberes técnicos además de reducir los riesgos al niño y las tensiones en la familia.

Palabras clave: Gastrostomía. Enfermería Pediátrica. Tecnología Educativa.

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Submitted: 01/12/2022
Accepted: 15/03/2023

Financial support

National Council for Scientific and Technological Development (CNPq)

Appendix 1. Instrument for Content Validation with expert judges

Date: ___/___/_____
Identification:
Age: Gender: M ( ) F ( )**Area of training:**
Time since graduation: Time working:
Degree: Specialization ( ) Master's Degree ( ) Doctorate ( )
Specify the area:
INSTRUCTIONS:
Please read each option carefully and carefully. Then evaluate the script for the video by marking an X on one of the numbers next to each statement. Give your opinion according to the valuation that best represents the degree in each criterion below:
1- Totally inadequate 2- Inadequate
3- Partially adequate 4- Adequate
5- Totally adequate
For options 1 to 3, please describe the reason why you considered this item. Remembering that there are no right or wrong answers, what matters is your opinion. Pleaseanswerallitems.

1. **REGARDING THE OBJECTIVES** – It refers to the purposes, goals or ends that one wants to achieve with the use of Care-Educational Technology (CET).

1.1 The information/content is or is consistent with gastrostomy care	1 2 3 4 5
If between1 and 3:	
1.2 The information/content presented is based on scientific evidence	1 2 3 4 5
Ifbetween 1 and 3:	
1.3 The information/content is consistent with the purpose of the video	1 2 3 4 5
If between 1 and 3:	
1.4 Meets practice in home care for children with gastrostomy	1 2 3 4 5
If between 1 and 3:	

2. **REGARDING STRUCTURE AND PRESENTATION**- Refers to the way of presenting the guidelines (general organization, presentation strategy, coherence, formatting).

2.1 Educational technology is appropriate for family members of children with gastrostomy	1 2 3 4 5
If between 1 and 3:	
2.2 Information is presented in a clear and objective manner	1 2 3 4 5
If between 1 and 3:	
2.3 The material follows a logical sequence of content presentation	1 2 3 4 5
If between 1 and 3:	
2.4 The script presents enough characters and situations to convey the information	1 2 3 4 5
If between 1 and 3:	

3. REGARDING RELEVANCE- Refers to the characteristics that assess the degree of significance of the material presented.

3.1 The points addressed represent key points in the care of children with gastrostomy	1 2 3 4 5
If between 1 and 3:	
3.2 The material allows its use in hospital training and maintenance of learning at home	1 2 3 4 5

If between 1 and 3:					
3.3 The material addresses issues necessary for the quality of life of children and their caregivers	1	2	3	4	5
If between 1 and 3:					
3.4 Presents relevant and current thematic content	1	2	3	4	5
If between 1 and 3:					

COMMENTS AND SUGGESTIONS:

Appendix 2. Instrument for Technical Validation with family/caregiver judges

Date: ___/___/_____
Identification:
Age: **Gender:** M ( ) F ( )
INSTRUCTIONS:
Watch the video carefully and read each option carefully. Then rate the video by marking an X on one of the numbers next to each statement. Give your opinion according to the valuation that best represents the degree in each criterion below:

1. TotallyInadequate
2. Inadequate
3. PartiallyAdequate
4. Adequate
5. TotallyAdequate

For options 1 to 3, please describe the reason why you considered this item. Remembering that there are no right or wrong answers, what matters is your opinion. Pleaseanswerallitems.

1. **REGARDING OBJECTIVES** – They refer to the purposes, goals or ends that you want to achieve with the use of the video.

1.1 The information/content is consistent with the purpose of the video	1 2 3 4 5
If between 1 and 3:	
1.2 Meets practice in home care for children with gastrostomy	1 2 3 4 5
If between 1 and 3:	
1.3 The content is directly related to the target audience (family members of children with gastrostomy)	1 2 3 4 5
If between 1 and 3:	

2. **REGARDING STRUCTURE AND PRESENTATION**- It refers to the way of presenting the guidelines (general organization, presentation strategy, coherence, formatting).

2.1 The video is eye-catching and holds the interest of the target audience	1 2 3 4 5
Ifbetween 1 and 3:	
2.2 The guidelines are presented in a clear and objective manner	1 2 3 4 5
Ifbetween 1 and 3:	
2.3 The sequence of topics presented facilitates understanding	1 2 3 4 5
If between 1 and 3:	
2.4 The video duration is adequate	1 2 3 4 5
If between 1 and 3:	
2.5 The video has enough characters and situations	1 2 3 4 5
If between 1 and 3:	
2.6 The size of the letters, the quality of the sound and the images are adequate	1 2 3 4 5
If between 1 and 3:	
2.7 The images and information are related and complement the understanding	1 2 3 4 5
If between 1 and 3:	

3. REGARDING RELEVANCE–It refers to the characteristics that assess the degree of significance of the material presented.

3.1 The information addressed is important in the care of children with gastrostomy at home	1 2 3 4 5

If between 1 and 3:	
3.2 The material addresses necessary topics for family members of children with gastrostomy	1 2 3 4 5
If between 1 and 3:	
3.3 The information addressed will help in the daily life of caregivers of children with gastrostomy	1 2 3 4 5
If between 1 and 3:	

COMMENTS AND SUGGESTIONS: