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CONSTRUCTION AND VALIDATION OF EDUCATIONAL TECHNOLOGY FOR TEACHING HEALTH ADVOCACY: METHODOLOGICAL RESEARCH

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ABSTRACT

Objective: to build and validate educational technology for teaching health advocacy to undergraduate nursing students, based on the problematization methodology.
Method: methodological study, developed between March and November 2021, at a federal public university in Minas Gerais, Brazil, and containing two stages: construction and validation of content and methodological rigor of educational technology. The validations were carried out by two expert groups: a group with expertise in health advocacy (ten judges) and a group with expertise in the problematization methodology (eleven judges). The database was managed by applying the criteria for selecting the expert judges, controlling and monitoring the validation instruments. The calculation of the validity coefficient (>0.8) was adopted for the validity analysis.
Results: The educational technology obtained a total validity coefficient of 0.883 in content validation and 0.884 in methodological rigor validation, both above the established cut-off point. There was only one evaluation round with the expert judges due to the agreement between the findings.
Conclusion: The educational technology was considered valid in teaching health advocacy to undergraduate nursing students and can contribute to educational interventions in this area in higher education institutions. The development and validation of the educational technology corroborates the promotion of the technical, scientific and political development of nursing by proposing teaching strategies in the training of nurses to consolidate health advocacy in nursing practice.

DESCRIPTORS: Health advocacy. Professional skills. Problematizing methodology. Methodological research. Nursing.

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CONSTRUÇÃO E VALIDAÇÃO DE TECNOLOGIA EDUCACIONAL PARA O ENSINO DE ADVOCACIA EM SAÚDE: PESQUISA METODOLÓGICA

RESUMO

Objetivo: construir e validar tecnologia educacional para o ensino de advocacia em saúde para graduação em enfermagem, baseada na metodologia da problematização.
Método: estudo metodológico, desenvolvido entre março e novembro de 2021, em universidade pública federal de Minas Gerais, Brasil, e contendo duas etapas: construção e validação de conteúdo e do rigor metodológico da tecnologia educacional. As validações foram realizadas por dois grupos de especialistas, sendo um grupo de expertise na temática de advocacia em saúde (dez juízes) e um grupo de expertise da metodologia da problematização (onze juízes). O banco de dados foi gerenciado com a aplicação dos critérios de seleção dos juízes-especialistas, controle e acompanhamento dos instrumentos de validação. Adotou-se cálculo do coeficiente de validade (>0,8) para a análise da validade.
Resultados: A tecnologia educacional obteve um coeficiente de validade total de 0,883 na validação de conteúdo e 0,884 na validação do rigor metodológico, ambos acima do ponto de corte estabelecido. Houve apenas uma rodada de avaliação com os juízes especialistas devido à concordância entre os achados.
Conclusão: A tecnologia educacional foi considerada válida no ensino da advocacia em saúde para graduação em enfermagem, e pode contribuir com intervenções educativas nesse âmbito em instituições de ensino superior. O desenvolvimento e a validação da tecnologia educacional corroboram a promoção do desenvolvimento técnico, científico e político da enfermagem ao propor estratégias de ensino na formação do enfermeiro para a consolidação da advocacia em saúde na prática de enfermagem.

DESCRITORES: Advocacia em saúde. Competência profissional. Metodologia problematizadora. Pesquisa metodológica. Enfermagem.

CONSTRUCCIÓN Y VALIDACIÓN DE TECNOLOGÍA EDUCATIVA PARA LA ENSEÑANZA DE LA ABOGACÍA DE LA SALUD: INVESTIGACIÓN METODOLÓGICA

RESUMEN

Objetivo: construir y validar tecnología educativa para la enseñanza de la abogacía en salud a estudiantes de graduación en enfermería, a partir de la metodología problematizadora.
Método: estudio metodológico, desarrollado entre marzo y noviembre de 2021, en una universidad pública federal de Minas Gerais, Brasil, estructurado en dos etapas: construcción y validación de contenidos y rigor metodológico de la tecnología educativa. Las validaciones fueron realizadas por dos grupos de expertos, un grupo con experiencia en defensa de la salud (diez jueces) y otro con experiencia en metodología problematizadora (once jueces). La base de datos se gestionó aplicando los criterios de selección de jueces especializados, control y seguimiento de los instrumentos de validación. Se adoptó el cálculo del coeficiente de validez (>0,8) para el análisis de validez.
Resultados: La tecnología educativa obtuvo un coeficiente de validez total de 0,883 en validación de contenido y 0,884 en validación de rigor metodológico, ambos por encima del punto de corte establecido. Solo se realizó una ronda de evaluación con jueces expertos debido a la concordancia entre los hallazgos.
Conclusión: La tecnología educativa se consideró válida en la enseñanza de la promoción de la salud para estudiantes de graduación en enfermería y puede contribuir a las intervenciones educativas en esta área en las instituciones de educación superior. El desarrollo y validación de la tecnología educativa corrobora la promoción del desarrollo técnico, científico y político de la enfermería al proponer estrategias de enseñanza en la formación de enfermeros para consolidar la defensa de la salud en la práctica de enfermería.

DESCRIPTORES: Promoción de la salud. Competencia profesional. Metodología problematizadora. Investigación metodológica. Enfermería.

INTRODUCTION

Health advocacy, defined as defending and promoting patients' rights and ensuring equitable and quality care[1,2], is an essential component of nursing training[3]. Globally, the integration of health advocacy into nursing curricula is recognized as fundamental to prepare professionals not only for the care practice, but also as patient advocates, health policy influencers and agents of social change[4,5].

Experiences of teaching health advocacy in nursing education are highlighted, especially in the international context. In the United States, the proposal of a curriculum based on concepts of the social health determinants aims to prepare students for high-quality nursing practice and better patient protection[6]. In another curricular experience, it indicates that nurse educators should explore innovative policy advocacy curricula to prepare nursing students to address health equity[7]. In relation to teaching strategies, there was an intervention of an experiential learning activity of legislative advocacy[8] and the use of simulation of a poverty situation for nursing practice[9].

In Saudi Arabia, a pedagogical intervention based on role-playing was identified, providing experience of real-life scenarios, while playing the roles of advocates and policy-makers[10]. Finally, in Australia, the application of interactive virtual simulation with the use of a case study is verified[11].

In the context of Brazilian nursing, the term is often unknown to professionals, and its body of knowledge for the field is not easily identified[1,3]. In addition, there is a need to broaden the conceptual understanding, since health advocacy practiced expressly by nurses has particular characteristics[1].

In view of the above, it can be seen that the experiences of the health advocacy approach in nursing education come close to strategies of insertion into social reality, mediated by concrete experiences and as a possibility of approaching political decision-makers and the media[3].

In light of this problem, a possible answer to the formation of health advocacy competence is the theoretical and methodological framework of problematization using the Arc method. The Maguerez Arc method was proposed by Charlez Maguerez and applied and explained for the first time in Brazilian literature by Bordenave and Pereira in 1977 and is widely used in health courses and in higher education[12].

In this study, the proposed teaching strategy was identified as an Educational Technology (ET). As well as the relevance of the development and construction of ETs, the process of validating them is also relevant[13].

The validity concept in the ET context can be approached as the degree to which it is appropriate to mediate what it is supposed to mediate. Thus, when an ET is submitted to the validation procedure, the aim is to validate the purpose for which it will be used[13]. In the case of this study, specifically, the aim is to validate whether ET based on the problematization methodology covers the relevant content for teaching health advocacy to nurses, as well as whether it presents the aspects that characterize the problematization methodology.

This research is justified by the lack of studies in the scientific field that point to the construction and validation of ETs for teaching health advocacy in nursing education. There is also a need for more comprehensive educational tools and methods to adequately prepare nurses for advocacy roles in healthcare settings[3,14]. It is hoped, therefore, that the results will be useful in developing professional skills for defending patient rights, tackling social inequalities and strengthening initiatives for the global agenda.

The aim was therefore to build and validate educational technology for teaching health advocacy to undergraduate nursing students, based on the problematization methodology.

METHOD

This is a methodological research design, with a quantitative approach, carried out from March to November 2021, in two stages: 1 – ET development, production and construction, which refers to the theoretical procedure and educational technology construction phase; and 2 – ET validation, which includes content validation and methodological rigor. The ET construction and validation process was systematized according to the model proposed by Pasquali[15].

As for the ET construction phase, it took place from March to September 2021 in Belo Horizonte, Minas Gerais, Brazil, with the establishment of the conceptual framework, definition of objectives and target audience.

From this perspective, ET presents itself as an educational resource that not only transmits theoretical knowledge, but also develops essential skills and attitudes for practicing health law. Therefore, it relies on the conceptual framework of health advocacy, educational needs and the development of problematizing didactic activities, based on the steps proposed by the Maguerez Arc[12] and the findings of the scoping review on teaching strategies for health advocacy in nursing education[3].

There are five stages proposed by the Maguerez Arc, which develop from and return to a part of reality: reality observation and problem identification, key points, theorizing, solution hypotheses and application to reality[12].

Thus, the human resources for preparing the ET content included the participation of two nurses who were the authors of this study. One holds a master's degree in nursing, with experience in nursing practice and a study of health advocacy, and the other holds a doctorate in nursing, with extensive scientific production on the subject of nursing education and practice.

Content validation techniques and methodological rigor were then applied to ensure their effectiveness and relevance. The validation phases took place between October and November 2021, using online forms sent to the experts.

The content validation aimed to assess the relevance of the proposed content for addressing health advocacy in nursing education. The requirements for analyzing the content's relevance were adapted from the criteria previously proposed in the literature[15], which include the following criteria: behavior; objectivity; simplicity; clarity; relevance; precision; variety; modality; typicality; credibility; breadth and balance.

In addition, methodological rigor was understood as the presence of the aspects that characterize the problematization methodology in the proposed educational technology. Initially, the specialist should evaluate the educational technology as a whole, determining its scope and phases. That is, whether each phase of the Maguerez arc cycle has been adequately covered by the proposed set of activities and teaching techniques.

To carry out the ET validation process, two groups of experts were chosen: a group with expertise in health advocacy to validate the ET's content, and a group with expertise in applying the problem-solving methodology to validate the ET's methodological rigor.

Next, in order to identify the experts, queries were carried out in September 2021 in the "search by subject" field of the Lattes Platform of the National Council for Scientific and Technological Development (CNPq). This tool allows access to the technical and scientific profile of specialist judges (professionals, teachers and researchers).

Judges who achieved a minimum score of three points were included, following the inclusion criteria of a university degree in the area of health or education, membership of a research course and publication and development of research involving the theme of health advocacy or problematizing methodology. The literature is controversial about the minimum number of experts and the qualifications of the judges. In this study, five to ten judges were selected[16].

A first search was carried out using the descriptors “health advocacy”, identifying 68 potential CVs to make up the sample of expert judges. Another search, using the descriptors “problematizing methodology” and “Marguerez arc”, identified 297 curricula, as shown in Figure 1.

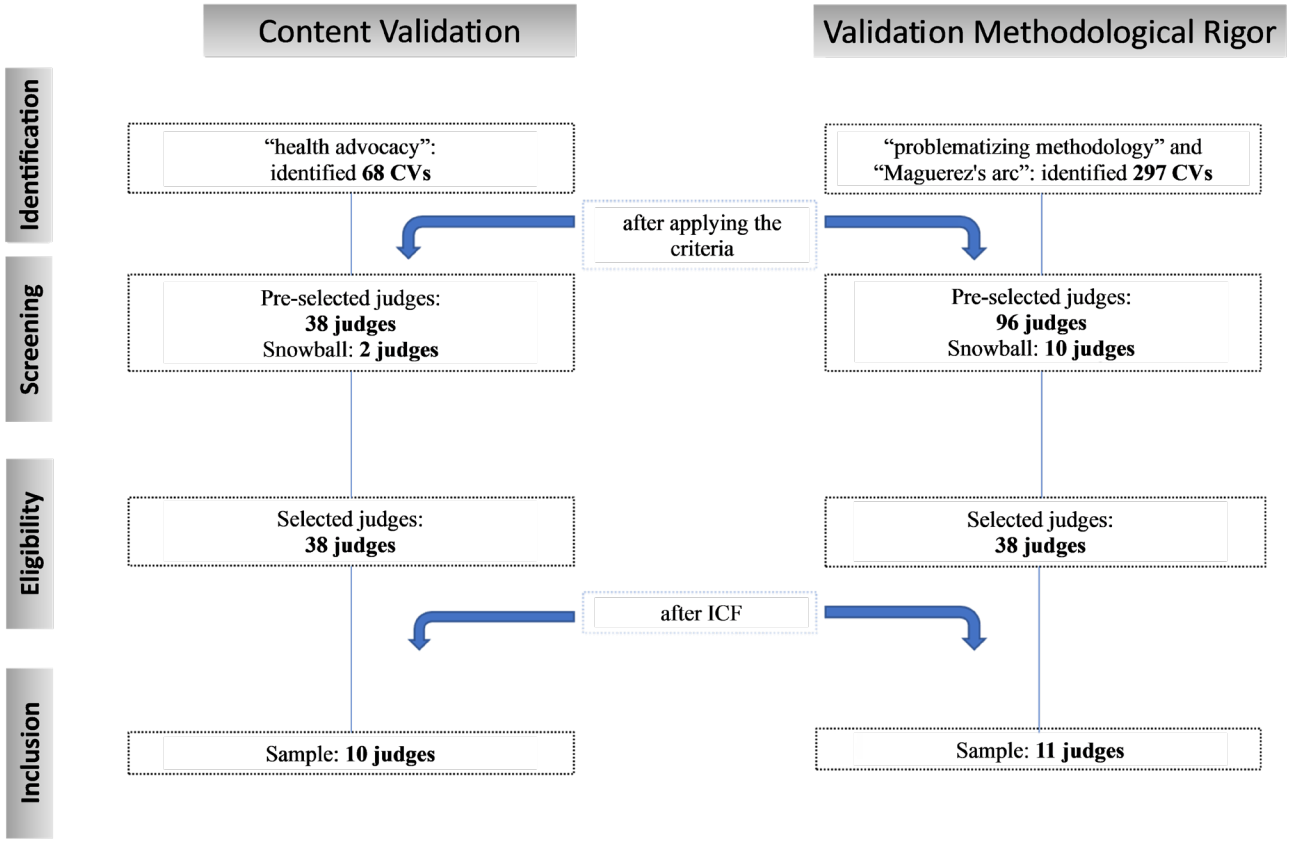

Figure 1 – Expert judges’ sample. Belo Horizonte, MG, Brazil, 2021.

It should be noted that the initial sample of the expert committee included 38 judges specialized in health advocacy and 96 judges specialized in problematization methodology.

The snowball methodology, known as network sampling, was also adopted in the search for experts. The initial experts were then asked to indicate, if they were interested, two other experts who met the eligibility criteria to take part in the study. Of these, only one met the inclusion criteria, two were already part of the sample and the rest were excluded.

Once the group of expert judges had been identified and selected, the validation process began. An invitation e-mail was sent out presenting the research and its objectives. After the first invitation, with a deadline of one week for judges who did not respond, two more attempts were made. Those who agreed and signed the Informed Consent Form (ICF) received a copy of the educational technology proposal, containing the objectives, target audience, methodological design based on the problem-solving methodology and the content to be developed.

The data collection instruments were built using the free electronic tool Google Forms, and consisted of three sections: sociodemographic data, guaranteeing their anonymity; instructions on the process of building the ET and instructions on how to carry out the validation, as well as the validation instrument; and general questions about the ET. These questions concerned its ability to be applied in undergraduate and/or postgraduate courses, in a course or subject structure; the nature of the subject, i.e. whether it could be optional or compulsory; the minimum workload, i.e. at what point in the degree it would be taught; and the teaching method (in-person or online).

The validation criteria in the instruments were arranged on a Likert-type scale with a score of 1 to 4 based on the options “inadequate, partially adequate, adequate and very adequate”, respectively. If the expert marked 1 or 2, they were asked to justify their answer, since they considered it “inadequate” or “partially adequate”.

To analyze the 12 items of the content validation instrument and the 16 items of the methodological rigor validation instrument, the content validity technique was used to calculate the content validity coefficient (CVC)[17] for each item of the instrument (CVC_c) and for the instrument as a whole (CVC_t).

The analysis began by calculating the CVC in five steps: (1) the judges' mean scores (M_x) were obtained; (2) based on the mean, the CVC of each item (CVC_i) was calculated by dividing the means by the maximum value the question could receive; (3) the error (Pe_i) was calculated by dividing the value 1 by the number of evaluating judges, raised by the same number of evaluators; (4) then, the final CVC (CVC_c) of each item was calculated by subtracting the CVC_i by the Pe_i of each item; (5) and, finally, the calculation of the total CVCt of the instrument was obtained by subtracting the mean of the content validity coefficients ($Mcvc_i$) of the items of the instrument by the mean of the errors of the items (Mpe_i)[17]. An item with more than 80% agreement was considered valid[15,16].

The study complied with national and international standards of ethics in research involving human beings and was approved by the Research Ethics Committee of the Federal University of Minas Gerais under Report No. 4.961.564.

The validated educational technology can be accessed at the link: https://drive.google.com/drive/folders/1_Kk1rYtdQPc3Bq4IcuV92Xtt-mczVab-?usp=drive_link

RESULTS

As shown in Figure 1, the study's final sample consisted of 21 expert judges, ten of whom were from the health advocacy expert group and eleven from the problematizing methodology group.

Theoretical procedure and construction of educational technology

At this stage, we began by understanding Health Advocacy as a competence required of Nursing. This stage of the study also included the conclusion of the scoping review, which pointed to health advocacy teaching mediated by theoretical exposure and supervised clinical internship, technology-enhanced simulation, clinical experience, experiential learning, simulated social experiences, digital story creation and narrative pedagogy[3].

Once the ET had been drawn up, it had to be brought closer to the Methodology of problematization using the Arc method, understanding the theoretical and philosophical principles that underpin it. This methodology is anchored in the option for liberating education, based on critical theory and practices, considering the assumptions of creativity and reflection on reality and dialog[18].

The literature identifies three versions of the Maguerez Arc's explanation and use: 1) The Arc explained by Charles Maguerez; 2) The Arc of Maguerez in the second version of explanation and use (by Bordenave and Pereira, 1982); and 3) The Methodology of Problematization with the Arc of Maguerez and the third explanation exercise (by Berbel, 1995, 1996)[12].

Next, it was necessary to define the main didactic elements structuring the educational tool, which included the organization and design of the basic structure to be developed. Thus, this didactic structure was a guide to action. This design was based on Bordenave and Pereira's[19] theoretical framework of teaching strategies, in line with the theoretical perspective of the problematization methodology.

After defining the theoretical dimensionality, the definitions constituting the latent trait of the health advocacy definition were constructed[15]. Then, after drawing up the constitutive definitions, they were worked on in operational terms, delimiting the operational aspects of the practice of health advocacy by nurses, as can be seen in the Chart 1.

Chart 1 – Educational technology content items, Belo Horizonte, Minas Gerais, Brazil, 2021.

Theoretical dimensionality	Constitutive definition	Operational settings
Health advocacy competence as a latent trait to be developed in nursing education.	**1 – But what is advocacy?** 1.1 Health advocacy's origin, concept and dimensions 1.2 Dimensions of the human right to health 1.3 The difference between advocacy, activism and lobbying.	Health advocacy's origin, history, concept and dimensions Difference between advocacy, activism and lobbying.
	2 – Health advocacy as a skill required of nurses 2.1 Health advocacy as a competence	Why practice law? Nurses' actions in different contexts;
	3 – Strategies and actions for health advocacy 3.1 The health advocacy's dimensions 3.2 Health advocacy strategies: Patient advocacy; Social advocacy; Public policy; Advocacy in the legislative, executive and judicial branches. 3.3 Mapping actors and political arenas.	Strategies and actions for health advocacy: Patient advocacy; Social advocacy; Public policy; Advocacy in the legislative, executive and judicial branches. Approaching and living in scenarios where nurses work, as spaces for health advocacy. Adoption of partnerships and coalition measures considering the proposed intervention in reality based on the hypotheses for solving problems.

Source: Adapted from Pasquali.[15]

With the initial model of the educational technology (Test Version), the research team from the Center for Studies and Research on Nursing Teaching and Practice (NUPEPE) at the UFMG School of Nursing also helped to evaluate the content and writing of the educational technology, with a view to identifying grammatical and textual errors, as well as ensuring that the information was consistent and clear.

The ET's target audience was undergraduate nursing students, with the aim of providing support material for classroom and distance learning, as well as contributing to professional training on the subject. However, it is hoped that the course can also be applied to nurses as a refresher on health advocacy. In order to publicize the teaching strategy that is the subject of this study, it will be presented in its entirety in open access.

Content validity and methodological rigor of educational technology

A total of twenty-one specialist judges took part in the study, ten of whom were from the health advocacy specialist group and eleven from the problematizing methodology group.

The committee of experts in the "Health Advocacy Group" had a diverse training period, with 60% having more than 18 years of training; there was a predominance of the Nursing training area (80%). In addition, 90% work in health law, and one judge does not work in health law, but has experience with the problematizing methodology (which justified his inclusion).

It is also evident that the judges work in different fields: teaching (n=7), research (n=6), professional health practice (n=4), public policy formation (n=3), civil society organizations (n=2) and one did not apply. The researchers were not involved in management.

In terms of qualifications, 60% of the committee of experts in this group have a doctorate. Although this was not the inclusion criterion for this group, 80% of the judges reported having experience with the problematizing methodology, with a predominance of experience at the undergraduate nursing (n=8) and postgraduate nursing (n=4) levels.

On the other hand, the committee of experts in the "Problematizing Methodology Group" has a longer period of training, with 80% having more than 30 years of training; there is a predominance of training in health, specifically in Nursing (n=7). All the judges on this committee have experience with the problematizing methodology, working at undergraduate (n=11) and postgraduate (n=7) levels, in different areas of knowledge – nursing (n=7); law, psychology, administration, commercial management and accounting (n=1); science teaching (n=1); a degree in chemistry and a professional master's degree and its technologies (n=1); and dentistry (n=1).

Furthermore, in terms of qualifications, more than 90% of the expert committee in this group has a doctorate, followed by a post-doctorate. There was a predominance of basic nursing training (n=7).

The data from the validation instruments showed that the ET "Didactic structure for teaching health advocacy based on the problematizing methodology following the Maguerez arc scheme" was considered valid in both judges' committees, obtaining a total CVC (CVC_t) of 0.883 in the content validation and CVC_t 0.884 in the methodological rigor validation, both above the established cut-off point. It should be noted that there was only one evaluation round with the expert judges. After reading the suggestions, which were fully accepted, the changes were made without the need for a second evaluation round.

In relation to the content validity of ET's health advocacy theme, it can be seen in Table 1 that the 12 items assessed had an agreement higher than 0.80. In this context, it is proposed that items with a CVC_c below the established cut-off point be reformulated and sent back to be evaluated by the judges[18]. However, this procedure was not necessary.

Table 1 – CVC calculation for content validation – Health advocacy, Belo Horizonte, Minas Gerais, Brazil, 2021.

Item	Mean (M_x)	*CVC_i	†Pe_i	‡CVC_c
1.Behavioral	3.60	0.900	0.00	0.900
2.Objectivity	3.30	0.825	0.00	0.825
3.Simplicity	3.50	0.875	0.00	0.875
4.Clarity	3.30	0.825	0.00	0.825
5.Relevance	3.60	0.900	0.00	0.900
6.Precision	3.40	0.850	0.00	0.850
7.Variety	3.60	0.900	0.00	0.900
8.Modality	3.60	0.900	0.00	0.900
9.Typicality	3.60	0.900	0.00	0.900

Table 1 – Cont.

Item	Mean (M_x)	*CVC_i	†Pe_i	‡CVC_c
10.Credibility	3.80	0.950	0.00	0.950
11.Amplitude	3.50	0.875	0.00	0.875
12.Balance	3.60	0.900	0.00	0.900
§***CVC_t***				**0.883**

Note: *CVCi: Content validity coefficient for each item of the instrument.
†Pei: Error.
‡CVCc: Final content validity coefficient for each item.
§CVCt: Total content validity coefficient of the instrument.

This can be seen in the methodological rigor validation (Table 2) raised by the 16 validation instrument items, which reached the CVC_c above the cut-off point, without the need for a new validation round between the judges.

Table 2 – CVC calculation for methodological rigor validation, Belo Horizonte, Minas Gerais, Brazil, 2021.

Item	Mean (M_x)	*CVC_i	†Pe_i	‡CVC_c
1. Identifying and mapping reality	3.64	0.909	0.00	0.909
2. Proximity to reality	3.73	0.932	0.00	0.932
3. Understand where and how the issue is happening	3.27	0.818	0.00	0.818
4. The guidelines enable observation to identify the problem	3.36	0.841	0.00	0.841
5. Scenarios make it possible to observe reality	3.73	0.932	0.00	0.932
6. The guidelines make it possible to detail the problem	3.36	0.841	0.00	0.841
7. Strategies make it possible to break down the problem	3.55	0.886	0.00	0.886
8. The strategies make it possible to identify possible factors associated with the problem and major determinants of the problem	3.64	0.909	0.00	0.909
9. Choose how to study each key point	3.36	0.841	0.00	0.841
10. The bibliographic search strategy in the virtual environment makes it possible to collect information	3.55	0.886	0.00	0.886
11. The dialogical presentation strategy makes it possible to theorize the key points	3.55	0.886	0.00	0.886
12. The instructional support strategy helps to summarize the content	3.55	0.886	0.00	0.886
13. The guidelines make it possible to develop hypothetical solutions	3.45	0.864	0.00	0.864
14. The guidelines stimulate creativity to find new actions	3.36	0.841	0.00	0.841
15. The guidelines make it possible to plan and implement actions in reality	3.64	0.909	0.00	0.909
16. Drawing up an advocacy plan makes it possible to intervene in reality	3.82	0.955	0.00	0.955
§***CVC_t***				**0.884**

Note: *CVCi: Content validity coefficient for each item of the instrument;
†Pei: Error;
‡CVCc: Final content validity coefficient for each item;
§CVCt: Total content validity coefficient of the instrument.

DISCUSSION

This study's findings point to the importance of constructing and validating teaching strategies in nursing education for the quality of training, as well as the development of critical skills, with a view to regional needs and the promotion of continuous learning.

The content validity and methodological rigor of the proposed educational technology received a valid opinion from the experts, which points to the importance of the health advocacy field in the training of nurses and, likewise, in other professions. The validation of educational technology in the nursing field is a crucial process to guarantee the effectiveness and safety of the use of these tools in the learning environment[13–21]. It should be noted, however, that effective educational technology validation must take place on an ongoing basis and requires collaboration between developers, educators, nursing professionals and students to ensure that the technology meets educational needs and contributes to the training of competent and ethical healthcare professionals[22].

Developing an effective teaching strategy in health advocacy requires careful consideration of the learning objectives, the target audience and the teaching methods. This study's findings are innovative and highly relevant to nursing education, especially in the national context. This is because it reinforces the conceptual and developmental limits of health advocacy in nursing education, as previously highlighted[23].

In relation to the learning objectives and the target audience, the process of constructing the ET for teaching health advocacy was based on clearly defining its concept for the students. In this step, the definition of structured health advocacy was analyzed in terms of its constituents and in relation to the operational aspects of the practice[15], drawing a parallel with the reference framework adopted. In addition, there was an understanding of health laws, professional ethics, patient rights, health regulations and health promoters, including organized civil society, trade associations and social movements.

Therefore, this understanding was brought closer to the conceptual scope of health advocacy, as it is understood that professional training, including nursing, is imbricated in updates in the scenario of global transformations in which they affect, to a certain extent, the educational, labor, political, economic and social contexts[23–24]. Therefore, the use of educational technologies is encouraged as tools to support training processes, especially those that focus on social, political, economic, ethical and legal issues[24] capable of driving action aimed at citizenship and based on the different health contexts, considering the volatility and changes in the world.

In relation to teaching methods in nursing education, it is necessary to recover ethical values and social justice, which are basic prerequisites for practicing health advocacy[25]. The challenges facing policies, curricula and teaching-learning methods applied in the field of training health professionals are obvious. Traditionally, this has been based on traditional teaching methods, with a focus that is still predominantly biologicist, curative, doctor-centered and disconnected from health practices[4,5,25].

At this juncture, it is extremely important to highlight the essence of the ontological and epistemological disputes that surround nursing, given that, since its consolidation as a profession, it has assumed and existed on the basis of a social mandate. However, these must be continually reflected on by society and the profession, which means that they are developed/changed in parallel with the development of society[27–26]. This also applies to aspects of the nursing practice of health advocacy, as they are related to the ethical principles of the nursing profession, such as protection, autonomy, caring for patients and defending the quality of health services[28].

In order to intensify nursing's participation in advocacy, it is necessary to assess the leaders' competence, implement a specific curriculum in educational institutions and expand engagement in professional nursing organizations[28]. Therefore, in order for all health professionals, including nurses, to be able to advocate for patients more effectively, it is essential to provide health advocacy education that is more consistent, comprehensive and applicable in their academic programs, so as to better prepare them to advocate on behalf of their communities and their profession[8].

A common criticism of educational technology research is its frequent lack of methodological rigor and solid theoretical basis. Many studies focus on practical aspects and implementation, guided by intuitive assumptions about the technology's potential, whereas they leave aside the application of theories that could structure and guide research[29].

In the meantime, it is imperative to discuss and reflect on the case for adopting problematizing methodologies for nursing education, given that it presents itself as a possibility to "prepare [...] human beings to become aware of their world and also to act intentionally to transform it"[18:9–10]. Based on constructivist and problematizing theoretical lines, it is understood that, despite achieving content validation and methodological rigor of the proposed educational technology, its application process is directly related to the teacher-student relationship, according to a specific cultural and social context. It can also include other different factors surrounding the school community and the learning process.

Therefore, it is worth highlighting the care and concern in suggesting the proposal of educational technology for teaching health advocacy, in order to avoid the trap of embarking on a didactic structure that is close to a traditional pedagogy present in the first arc version, and that advances in strengthening the characteristics of a renewed education or pedagogy with traces of other worldviews and education. Therefore, it is necessary to emphasize the student's role throughout the process, including a return action to the part of reality taken as the focus of the study[15,18].

The study's limitation is related to the perspective of ET's effect on teaching health advocacy to its target audience, i.e. undergraduate nursing students. Finally, future research is proposed with a wider and more diverse audience.

CONCLUSION

The study's results on the construction and validation of an educational technology for teaching health advocacy are in line with international practices and recommendations. Validation by experts and the use of the problematization methodology demonstrate the study's robustness and the potential effectiveness of the technology developed. These findings make a significant contribution to the nursing education system in Brazil and could serve as a model for other educational institutions worldwide.

The validated educational technology proved to be satisfactory for use in the teaching-learning process in undergraduate nursing courses. Therefore, it can contribute to promoting the technical, scientific and political development of nursing professionals, since it corroborates the implementation of teaching strategies in nurse training and the consolidation of health advocacy.

The perceived importance of health advocacy as an essential skill in the training of health professions is not sufficient for its development and incorporation. It is therefore recommended that health advocacy be formally incorporated into curricula in terms of explicit content, specific learning outcomes and associated assessment criteria.

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NOTES

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