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Educational Technology on Urinary Incontinence during Pregnancy: Development and Validation of an Online Course for the Brazilian Population*

* Extracted from the master's thesis entitled "Development and Validation of a Virtual Teaching-Learning Environment on Urinary Incontinence during Pregnancy," submitted to the Family Health Professional Master's Degree Program of the Centro Universitário Uninovafapi, Brazil, in 2020.

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Theme: Promotion and prevention

Contribution to the subject: The development and validation of this online course for Brazil are expected to further education to promote strategies in Brazilian educational institutions for student qualification in the Physical Therapy course and professionals who provide care to patients experiencing urinary incontinence during pregnancy through distance education, highlighting the quality of life at this unique moment in a woman's life. When considering the cultural diversity of the Brazilian population studied, the continuity of research in this area involving other target audiences in Brazil or other countries becomes paramount to confirm the suitability of this online course for other languages.

Abstract

Objective: To describe the development and validation process of an online course on urinary incontinence during pregnancy in Brazil. **Materials and methods:** This methodological study followed an online course's literature search, development, and validation steps. A total of 22 specialists participated in the validation step, and the content validity index (CVI) was used. Fifty-one Physical Therapy students (target audience) also participated in the Suitability Assessment of Materials. **Results:** The synthesis reached in the integrative review provided the basis for the course's theoretical content, which was regarded as suitable by the specialists regarding its content, language, presentation, stimulation/motivation, and cultural adequacy (CVI = 0.99). The target audience considered the course organized, easily understandable, engaging, and motivational, with a positive response index ranging from 84.3 % to 100 %. **Conclusions:** The Brazilian version of the online course was considered sufficiently adequate in content and interface quality by both specialists and the target audience.

Keywords (Source: DeCS)

Validation study; teaching materials; educational technology; health education; pelvic floor disorders.

4 Tecnología educativa sobre incontinencia urinaria durante el embarazo: desarrollo y validación de un curso en línea para Brasil*

* Originado de la tesis de maestría “Construcción y validación de un entorno virtual de enseñanza y aprendizaje acerca de la incontinencia urinaria durante el embarazo”, presentada al Programa de Maestría Profesional en Salud Familiar del Centro Universitário Uninovafapi, Brasil, en el 2020.

Resumen

Objetivo: describir el proceso de desarrollo y validación de un curso en línea sobre incontinencia urinaria durante el embarazo en Brasil.

Materiales y método: se trata de un estudio metodológico que contempló las etapas de recolección bibliográfica, elaboración y validación de un curso en línea. La validación contó con la participación de 22 expertos y se empleó el índice de validación de contenido (IVC). Además, participaron 51 estudiantes del pregrado en Fisioterapia (público objetivo) en la Evaluación de Idoneidad de los Materiales.

Resultados: la síntesis adquirida en la revisión integrativa fundamentó el contenido teórico del curso, considerado adecuado por los expertos en cuanto al contenido, el lenguaje, la presentación, la estimulación/motivación y la adecuación cultural (IVC = 0,99), así como la apariencia/interfaz (IVC = 0,95). El público objetivo consideró el curso organizado, de fácil entendimiento, atractivo y motivador, con un índice de concordancia en respuestas positivas entre 84,3 % y 100 %. **Conclusiones:** la versión brasileña del curso en línea desarrollado se consideró lo suficientemente adecuada en términos de contenido y calidad de la interfaz, tanto por parte de los expertos como del público objetivo.

Palabras clave (Fuente: DeCS)

Estudios de validación; materiales de enseñanza; tecnología educativa; educación en salud; trastornos del suelo pélvico.

Tecnologia educacional sobre incontinência urinária gestacional: desenvolvimento e validação de curso on-line para o Brasil*

* Extraído da dissertação de mestrado “Construção e validação de ambiente virtual de ensino-aprendizagem acerca da incontinência urinária gestacional”, apresentada ao Programa de Mestrado Profissional em Saúde da Família, do Centro Universitário Uninovafapi, Brasil, em 2020.

Resumo

Objetivo: descrever o processo de desenvolvimento e validação de um curso on-line sobre incontinência urinária gestacional no Brasil. **Materiais e método:** trata-se de um estudo metodológico que contemplou as etapas de levantamento bibliográfico, elaboração e validação de um curso on-line. A validação teve a participação de 22 especialistas e foi empregado o índice de validade de conteúdo (IVC). Também participaram 51 estudantes de graduação em Fisioterapia (público-alvo), considerando o Suitability Assessment of Materials. **Resultados:** a síntese adquirida na revisão integrativa subsidiou o conteúdo teórico do curso, considerado adequado pelos especialistas quanto ao conteúdo, à linguagem, à apresentação, à estimulação/motivação e à adequação cultural (IVC = 0,99), bem como à aparência/interface (IVC = 0,95). O público-alvo considerou o curso organizado, de fácil entendimento, atrativo e motivador, com índice de concordância em repostas positivas a variar de 84,3 % a 100 %. **Conclusões:** informa-se que a versão brasileira do curso on-line desenvolvido foi considerada suficientemente adequada em termos de conteúdo e qualidade da interface, tanto pelos especialistas quanto pelo público-alvo.

Palavras-chave (Fonte: DeCS)

Estudos de validação; materiais de ensino; tecnologia educacional; educação em saúde; distúrbios do assoalho pélvico.

Introduction

Any abnormality that compromises the function, capacity, biomechanics, and kinesiology of the pelvic floor musculofascial structure may be termed “pelvic floor dysfunction” (PFD). This clinical picture includes bladder disorders, anorectal disorders, pelvic organ prolapse, sexual disorders, and chronic pelvic pain (1).

Among the risk factors for developing PFD, the most relevant for women are those related to the pregnancy-puerperal cycle. Hormonal, anatomical, and biomechanical changes are constantly associated with PFD during pregnancy (2). The most commonly occurring PFD during pregnancy is urinary incontinence (UI). Its prevalence is quite controversial due to the underdiagnosis of cases. In a study with a sample of 407 pregnant women, 66.8 % presented with UI, of which 70.1 % were in the third trimester (3).

The most significant risk factor for UI development is urinary loss, even if occasional, before gestation (4). Its remission occurs approximately six months postpartum (5); however, the manifestation of UI during pregnancy increases the risk for women to remain with the same clinical condition up to five years after delivery (4). Therefore, the management of procedures that can prevent this potentially preventable and treatable condition with non-invasive methods and improve pelvic floor function during the pregnancy-puerperal cycle is essential (6).

UI does not pose death risks; however, its negative impact on quality of life is considerable since affected people are constantly burdened with social isolation, depression, anxiety, loss of self-esteem, and difficulties in sexual relationships (7-10). Thus, a different approach toward pregnant women is significant and necessary through changes in educational models, providing better training for future health-care professionals, especially physical therapists, as in this study. Such models should provide quality information, improving women’s knowledge of the possibility of PFD occurrence during pregnancy and the forms of prevention and treatment when necessary (4).

Information and communications technologies (ICT) and new information systems devices represent the most diverse technological resources used for information production, processing, and communication, providing the spread of knowledge in a variety of spaces and forms (11). One of the educational methodologies made available by the ICTs was distance education (DE)—through online courses—, which democratized Brazilian higher education, overcoming the physical and temporal barriers of those who could not study. DE represents one of health professionals’ most used continuing education tools (12).

The continuing education of students through distance learning is considered a significant breakthrough. It is already consolidated

and recognized in the scientific literature since it provides access to updated content using innovative technologies. Moreover, the increasing globalization and spread of information and the need for comprehensive care recommended by the Brazilian Unified Health System (better known by its acronym, SUS) require professionals' continuous updates and improvement to qualify further their work regarding the population's health needs (12).

The literature indicates difficulties in using ICT in the professors' training process related to the lack of informational infrastructure in higher education institutions (HEI), the gaps in the professors' qualification for the use of ICT, and, significantly, the lack of motivation to change the teaching routines that they have adopted over the years (13). A study has added that college students perceive that using ICT could maximize the professor-student interaction and mediate formative teaching; however, the professors' lack of in-depth knowledge of active learning methodologies has hindered this process (14).

Thus, the need and relevance of evaluating the ICT used in physical therapists' training process are evident to reduce these gaps and provide a socially and scientifically relevant technology. Thus, developing a distance learning teaching resource for healthcare professionals and students with a current and relevant theme can minimize the consequences of a health condition that causes significant impacts on the lives of pregnant women.

In light of the above, the present study aims to describe the development and validation process of an online course on UI during pregnancy for healthcare professionals and healthcare students in Brazil.

Materials and methods

This methodological study (15) aims to develop a technological product of the online course category, having as its target audience Physical Therapy undergraduate students of an HEI in Teresina, Piauí, Brazil. This institution offers undergraduate, graduate, and post-graduate courses, both *lato* and *stricto sensu*. The technological product was created as the conclusion project of a professional master's program.

The development and validation process of the online course on UI during pregnancy followed these steps: 1) integrative literature review; 2) online course organization; 3) course content validation by specialists; 4) design validation; and 5) validation by representatives of the target audience.

Integrative literature review

Initially, an integrative review was carried out with the following research question: what is the scientific evidence on UI

during pregnancy? The electronic databases PubMed database (Pubmed®), Latin American and Caribbean Literature on Health Sciences (Lilacs), and Scientific Electronic Library Online (SciELO) were searched. The controlled descriptors “*incontinência urinária*,” “*gestação*,” and “*assoalho pélvico*” and their equivalents in English (“urinary incontinence,” “pregnancy,” and “pelvic floor”) were used. The following inclusion criteria were established: full-text articles available online, published between 2014 and 2018 in English, Portuguese, or Spanish. Editorials, letters to the editor, experience and informal case reports, book chapters, dissertations, theses, and non-scientific texts were excluded.

The integrative review aimed to identify the scientific evidence on the knowledge gaps of students and healthcare professionals on the subject. They were identified and categorized to support the course planning according to these findings and stratification of themes to be addressed by complexity level. The results of the integrative review supported the development of a course plan.

Online course organization

The syllabus to be addressed in the online course was segmented into modules with increasing complexity levels. The online course was provided in the distance learning format and hosted in a virtual environment. It was designed and developed by information technology professionals.

All modules consisted of classes prepared in the PowerPoint software, available in the Microsoft Office package, and also included support material, such as related videos and articles, chosen by the lead researcher.

The online course was based on the Moodle (modular object-oriented dynamic learning environment) free and open-source course management system. Pre-existing software applications and how well they met the research needs were critically evaluated. This stage was supported by professionals from the Núcleo de Educação à Distância - Tecnologia da Informação (Distance Learning - Information Technology Center) of the research institution.

Course content validation by specialists

The selection of content specialists was intentional. The professionals were eligible when they reached a minimum score of five points on the following criteria, considering the development of educational technologies or PFD as the field of interest: having a thesis or dissertation (2 points/work), supervising a thesis or dissertation (1 point/work), having a study published in an indexed journal (1 point/work), participating in research groups/projects (1 point/year), teaching (1 point/year), and professional activity (1 point/year) (16).

The specialists were located on the Lattes platform and were invited to participate in the study via e-mail. For the design evaluation, infor-

mation technology professionals with experience in developing educational technologies participated and were invited by e-mail.

There is no consensus in the literature regarding the recommended number of specialists to analyze educational resources. A study (17) suggests that this number should range from six to 20 specialists. An odd number was adopted in the present study to avoid a tie of opinions (18). Thus, the “snowball” technique was adopted until 13 content specialists were reached.

After developing the online course, entitled “pre-final version,” an e-mail message was sent to the selected content specialists requesting their participation, with information regarding the technological product and the evaluation criteria. The content specialists evaluated the content/proposal, presentation, language, stimulation/motivation, and cultural adequacy on a Likert scale, where 1 - totally inadequate, 2 - inadequate, 3 - partially adequate, and 4 - adequate. The evaluation instrument offered options for negative, neutral, or positive responses. Comments and suggestions were requested when the evaluation was not positive, i.e., different from “4.” The specialists’ recommendations were analyzed and, when relevant, incorporated into the final version of the online course. The evaluation forms were prepared in Google Forms and based on the Suitability Assessment of Materials instrument (19).

From the specialists’ evaluation, a second version was created and submitted for external validation. This evaluation aimed to verify the adequacy of the organization, writing style, presentation, and motivation of the technological product to the course objectives from the target audience’s perspective.

Design validation

Nine design specialists were also selected using the snowball strategy. The design specialists evaluated the course using an agreement scale on the aspects of the course presentation—colors, clarity, organization, logic—in the same gradation as the one presented to the previous group.

Graphic designers illustrated each class to provide more engaging and user-friendly content to support and consolidate the theory presented and adequately format and configure the content, aiming to achieve a logical and harmonic structure between design and information.

Validation by representatives of the target audience

Assessments were carried out with Physical Therapy undergraduate students. This phase was conducted as part of an extension

program promoted in social media and among professors of the subject corresponding to the theme. It was extended to students of several Brazilian HEIs. The inclusion criteria for the participants were: being an undergraduate Physical Therapy student, being regularly enrolled in an HEI, having concluded the Urogynecological and Obstetric Physical Therapy subject or similar, or being enrolled from the sixth semester onward. Fifty-one Physical Therapy undergraduate students participated; 60.8 % were under 25 years old, 92.1 % were female, and 39.2 % were in their seventh semester. After meeting the inclusion criteria, the sample size for this validation stage was defined by a specific mathematical formula, which aimed to estimate the minimum size necessary for performing particular statistical procedures, ensuring the study's reliability (19, 20).

Data collection and data analysis instrument

The content validity index (CVI) was used for content and design validation. The score allows the evaluation of the agreement ratio among the specialists, first related to each item and then to the content. The sum of the agreement of items marked as 3 or 4 was divided by the total number of responses. For the global coefficient, the sum of each item's CVI was obtained and divided by the number of items. As a cutoff point, a value of 0.78 was adopted, considering that the level of agreement among specialists is inversely proportional to the number of participants (15).

The target audience evaluated the pre-final version of the course. The concordance index was the ratio of the number of participants agreeing with the item to the total number of participants multiplied by 100. The items that reached a minimum agreement of 75 % in positive answers were adopted as validity evidence. (22).

The data were organized in Microsoft Excel software, analyzed using descriptive statistics, and presented in a table format.

The present study followed the ethical precepts of research involving human beings. The Research Ethics Committee approved the project under Legal Opinion 2.822.830/2018. All participants were advised of the research objectives and methods and signed the informed consent form.

Results

Given the need for education and awareness of future professionals, especially physical therapists who provide care to pregnant women, the interest in developing and validating the content and presentation of an online course has emerged to prevent new cases and reduce the frequency and stage of clinical symptoms of UI in the future.

The synthesis of knowledge obtained in the integrative review was used to identify the theoretical knowledge to be addressed. After

defining the syllabus of the course and the strategies to be adopted to promote it, the course planning was divided into four modules, in increasing order of complexity, namely: the basic principles of perineal anatomy and pelvic floor function; quality of life and pelvic floor dysfunctions; pelvic floor in pregnancy; pelvic floor muscle training.

With the assistance of a graphic designer, the proper artwork, formatting, and configuration were prepared. The language was chosen according to the target audience; the most relevant information was selected to produce an attractive, objective, and user-friendly tool, using several pictures and illustrations.

The material was structured logically, and the most important information was presented first. In addition, colors that would attract the reader's attention and adequate size and typography were adopted for clear reading comprehension. In addition, a balance was sought between the information and the design of resources.

Table 1 shows that all variables and items analyzed by the content specialists had an average CVI higher than the established cutoff point.

Table 1. Specialists' evaluation of content, language, presentation, stimulation/motivation, and cultural adequacy. Teresina, Piauí, Brazil, 2019 ($n = 13$)

Criterion	Totally inadequate (n)	Inadequate (n)	Partially adequate (n)	Adequate (n)	CVI*
Content					
Does it have a clear objective that allows quick understanding?	-	-	10	3	1.0
Does it address information related to pelvic floor dysfunctions, especially UI during pregnancy?	-	-	9	4	1.0
Is the content limited to the objectives so that readers can reasonably understand it in the time allowed?	-	-	4	9	1.0
Is the course planning organized according to the objective?	-	-	12	1	1.0
Language					
Is the reading level appropriate for the readers' comprehension?	-	-	2	11	1.0
Does the language style make the sentences easy to understand?	-	-	2	11	1.0
Is the information conveyed within a clear context?	-	-	-	13	1.0
Is the vocabulary composed of common words?	-	-	1	12	1.0
Is the understanding made easier by topics?	-	-	3	10	1.0

Criterion	Totally inadequate (n)	Inadequate (n)	Partially adequate (n)	Adequate (n)	CVI*
Presentation					
Is the content organization adequate?	-	-	4	9	1.0
Are the font size and typeface conducive to pleasant reading?	-	-	2	11	1.0
Are the support resources relevant and in line with what is proposed in each module?	-	1	3	9	0.92
Is the quiz at the end of each module adequate, stimulating, and consolidating each lesson's learning?	-	-	2	11	1.0
Are the images used well-designed and in line with the subject of each slide?	-	-	1	12	1.0
Stimulation/Motivation					
Is there an interaction between the text and readers, leading them to reflect?	-	-	4	9	1.0
Are pelvic floor dysfunctions, especially UI, well demonstrated?	-	-	4	9	1.0
Cultural adequacy					
Is the content culturally adequate to the target audience's logic, language, and experience?	-	-	2	11	1.0
Does it present culturally good examples?	-	-	4	9	1.0
Global CVI*					0.99

Source: Prepared by the authors.

The evaluation by the design specialists is presented in Table 2. The specialists suggested some modifications: dynamic improvement of the lessons from slides in video-slides; improvement of the page layout also to be available for smartphones, and reformulation of some theoretical contents since they were not limited to gestation—as proposed by the course theme—, also covering the moment of childbirth. All recommendations were reviewed in the pre-final version of the online course.

Table 2. Evaluation by the design specialists regarding the presentation/interface. Teresina, Piauí, Brazil, 2019 (n = 9)

Evaluated items	CVI*
Are the sentences sorted into color levels appropriate for drawing the target audience's attention?	1.0
Is the text clear and easily understood when read?	1.0
Are the colors and shapes suitable for the type of media?	0.89
Are the guidelines in strategic places for reflection?	1.0
Does it contribute to changing the target audience's behavior and actions?	0.89
Global CVI	0.95

Source: Prepared by the authors.

Table 3 presents the evaluation of the target audience. The agreement rate in positive responses ranged from 84.3 % to 100 %, a satisfactory result to consolidate the final version of the online course.

Table 3. Evaluation by the target audience regarding the agreement regarding the organization, writing style, presentation, and motivation. Teresina, Piauí, Brazil, 2019 (n = 51)

Criterion	Option 1		Option 2		Option 3	
	n	%	n	%	n	%
Organization						
Did the virtual environment draw your attention? (1. Yes; 2. No; 3. Partially)	47	92.1	-	-	4	7.9
Is the content sequence adequate? (1. Yes; 2. No; 3. Partially)	50	98	-	-	1	2
Is the structure of the virtual environment adequate? (1. Yes; 2. No; 3. Partially)	49	96	-	-	2	4
Writing style						
The sentences are: (1. easy to understand; 2. difficult to understand; 3. I do not know)	51	100	-	-	-	-
The written content is: (1. clear; 2. confusing; 3. I do not know)	50	98	1	2	-	-
Presentation						
The colors in the virtual environment are: (1. adequate; 2. inadequate; 3. I do not know)	49	96	-	-	2	4
Do the illustrations help to understand the content? (1. Yes; 2. No; 3. Partially)	47	92.1	-	-	4	7.9
Is the structure of the virtual environment adequate? (1. Yes; 2. No; 3. Partially)	47	92.1	-	-	4	7.9
Motivation						
In your opinion, will any student who sees this virtual environment understand what it is about? (1. Yes; 2. No; 3. Partially)	47	92.1	1	2	3	5.9
Did you feel motivated to see the virtual environment all the way through? (1. Yes; 2. No; 3. Partially)	46	90.2	-	-	5	9.8
Does the educational resource address issues necessary for students to identify clinical signs of UI during pregnancy? (1. Yes; 2. No; 3. Partially)	47	92.1	-	-	4	7.9
Does the educational resource cover topics for students to learn how to manage cases of UI during pregnancy? (1. Yes; 2. No; 3. Partially)	43	84.3	01	2	7	13.7
Did the virtual environment encourage you to act or think about UI during pregnancy? (1. Yes; 2. No; 3. Partially)	51	100	-	-	-	-
Did you like the support resources for each module (videos, articles)? (1. Yes; 2. No; 3. Partially)	48	94.1	-	-	3	5.9
Did you find the quiz at the end of each module important for consolidating the content? (1. Yes; 2. No; 3. Partially)	49	96	-	-	2	4

Source: Prepared by the authors.

UI represents the most frequent PFD during pregnancy, present in 58 % of women. This clinical picture can remain in 30 % of puerperal women, defining the pregnancy-puerperal cycle as a considerable risk factor for developing these dysfunctions. Given its negative impact on quality of life at the personal, professional, social, and sexual levels, it must be considered (23).

Raising awareness among primary care professionals is paramount since they are responsible for prevention and treatment services in the public health setting (24). Physical therapists were chosen as the target audience since they master techniques considered the first line for preventing or treating PFD.

One way to improve the professionals' knowledge of the theme is with training, proposed by the Política Nacional de Educação em Saúde (National Health Education Policy), which aims primarily to transform the practices based on the needs of the professional setting and improve the quality of care (25). For this purpose, creating educational resources is a viable solution, particularly with the increase in digital technologies proposed in this study.

The tool was considered adequate for improving care practices since it reached satisfactory scores among the evaluators with a CVI above the established cutoff point. The specialists represent a unique and singular universe when facing a given situation, which increases the scientific power and confidence of the instrument developed and approved (26).

The literature review stage—aiming to provide educational resources according to the professionals' needs—and the specialists' analysis were essential for the successful evaluation of the course. The integrative review is a critical stage in this process. It allows for surveying the panorama of scientific production on the theme with various methodological approaches, including quantitative and qualitative studies, providing different perspectives on developing technological products. Thus, scientific knowledge can guide valuable clinical decisions. Other studies have adopted this strategy to identify the gaps to be bridged by ICT (27).

According to all categories evaluated by the specialists, the educational device can be considered straightforward in conveying information and logical in its sequence, with compatible visual and linguistic aspects, which are helpful for understanding and reflecting upon urinary loss during pregnancy. Studies (28, 29) have shown that educational resources must be attractive tools, have adequate language for the target audience, and be cohesive and coherent in their structure and objectives with a theme following a logical succession to encourage and promote changes in the actions of the professionals being trained.

The changes proposed by the specialists provided an accurate and improved course for the target audience, reflected in the agreement of more than 94 % of all participants. The incorporation of lessons in video format proved to be of notable importance due to the target audience's profile—mostly university students and healthcare professionals—which demands dynamic activities to keep their interest with possibilities of flexibility in the study planning. It should be noted that, in addition to keeping the users' interest, the dynamism of the video lessons with illustrations aimed to complement information (30).

A relevant recommendation by the content specialists concerned the practicality of the course by adapting the layout for mobile devices, such as smartphones. The increased use of this technology, in addition to the growth of mobile internet, has made it possible to access educational resources anywhere at any time, a fact noted by the increased access to information via websites, blogs, and social media, among others. Therefore, the proposed educational technologies must be adapted to this new context. Furthermore, the quality of mobile internet networks and their cost are highlighted as barriers to effectively using these resources (31), and adaptations are necessary, such as the possibility of downloading video lessons and other files.

Educational resources have been used to improve users' knowledge, actions, and practices (32); thus, the importance of the adequacy of digital technologies to the objectives of the resources under development is highlighted. It has been noted that this is primarily due to the integrative review and specialists' participation in this technology's validation process (33, 34). Therefore, the importance of the convergence between the need to improve certain content and the target audience's interest is reiterated. Aiming to address gaps in the theoretical content to be covered in the course, the specialists in this study suggested adding themes such as the importance of preparation for childbirth.

It was evident that the course layout in terms of organization and presentation was adequate, and the content structured in modules is written in an easily understandable way that sparks interest, with supplementary study resources and tests at the end of each module that helps to achieve the course objective.

The preceding reflects the conformity between the proposal and what will be achieved by the course when carried out. The subsequent stage of technology evaluation, performed by the target audience, is a distinguishing factor for clarifying doubts and the remarks related to the use and relevance of the product to their professional practice. Only they can judge what would be necessary for their clinical practice, which renders this technology precise, appropriate, and relevant to the group (31, 35).

In light of the above, this tool provided a suitable level of usability for students and physical therapists who wish to apply the

knowledge acquired, especially in preventive measures and early diagnosis of UI in the pregnant population. A benefit of this type of technology found in this study is the possibility of time management since users can flexibly organize and control their activities (36).

Thus, it is reiterated that educational technologies, such as the online course in this study, are creative and attractive tools that can be used to acquire skills and knowledge among students and future professionals to improve their care practices.

Conclusions

The online course developed for Brazil was considered sufficiently adequate in terms of content and interface quality, both by specialists and by the target audience; thus, it contributes to filling a gap concerning the development and validation of Brazilian educational resources that address the studied theme.

Therefore, this research proposes that health education should constantly be stimulated among future physical therapy professionals with clear, educational, and dynamic resources to improve their clinical practice, always based on the integrality and well-being of patients and scientific evidence.

As a limitation of this study, using a technique to evaluate content validity may have overestimated the results. Another area for improvement is that the course was carried out at a private university; therefore, considering Brazil's cultural diversity and aiming to confirm the adequacy of this online course, we recommend conducting studies that include other target audiences.

It is expected that the results obtained from the developed and validated online course can be applied to train Physical Therapy students through distance learning of UI, which contributes to improving the quality of life at this unique moment in women's lives.

Conflicts of interest: None declared.

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