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Educational booklet for health promotion among women with primary dysmenorrhea

Cartilha educativa para promoção da saúde entre mulheres com dismenorreia primária

Cartilla educativa para la promoción de la salud de mujeres con dismenorrea primaria

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ABSTRACT

Objective: To describe the construction and validation of an educational booklet for women with primary dysmenorrhea. **Methods**: This is a cross-sectional study conducted at the Women's Health Research Laboratory of Federal University of São Carlos. The study took place between January and June of 2020 in three phases: bibliographical search, construction and validation of the educational material. The validation was made by ten healthcare professionals and twenty-two women with primary dysmenorrhea. A minimum Content Validity Index of 0.80 was considered for content validation in each item of the evaluation instrument and a minimum agreement of 75% between positive responses was adopted to validate the presentation and readability of the booklet. **Results:** The educational booklet presented an overall Content Validity Index of 0.90 among healthcare professionals and an agreement level of 95.4% among the target audience. Only one item presented a value below the one adopted in the content validation analysis. For the final version, changes were made according to the comments and suggestions proposed by the judges for the improvement of the educational booklet. **Conclusion**: The booklet "Menstrual Cramp (Primary Dysmenorrhea) - Physiotherapy in Women's Health Promotion and Education" was constructed and validated for Brazilian women as for the layout and content. Thus, the educational booklet will support the non-pharmacological treatment of women affected by primary dysmenorrhea.

Descriptors: Dysmenorrhea; Educational Technology; Health Education; Self-care; Physical Therapy Specialty; Validation Study.

RESUMO

Objetivo: *Descrever a construção e a validação de uma cartilha educativa para mulheres com dismenorreia primária.* ***Métodos:*** *Trata-se de um estudo transversal realizado no Laboratório de Pesquisa em Saúde da Mulher da Universidade Federal de São Carlos. O estudo ocorreu entre os meses de janeiro a junho de 2020 e apresentou três fases: levantamento bibliográfico, construção e validação do material educativo. A validação foi realizada por dez profissionais da área de saúde e por vinte e duas mulheres com dismenorreia primária. Considerou-se o Índice de Validade de Conteúdo mínimo de 0,80 para a validação de conteúdo de cada item do instrumento de avaliação e a concordância mínima de 75% entre as respostas positivas para validação da apresentação e legibilidade da cartilha.* ***Resultados:*** *O material educativo apresentou Índice de Validade de Conteúdo global de 0,90 pelos profissionais da saúde e nível de concordância de 95,4% entre o público-alvo. Apenas um item apresentou valor abaixo do adotado na análise de validação do conteúdo. Para a versão final, modificações foram realizadas conforme os comentários e sugestões propostas pelos juízes para o aperfeiçoamento do material educativo.* ***Conclusão****: A cartilha educativa "Cólica Menstrual (Dismenorreia Primária): Promoção e Educação em Fisioterapia na Saúde da Mulher" foi construída e validada para mulheres brasileiras em relação ao seu layout e conteúdo. Dessa forma, o material servirá de suporte ao tratamento não farmacológico de mulheres acometidas pela dismenorreia primária.*

Descritores: *Dismenorreia; Tecnologia Educacional; Educação em Saúde; Autocuidado; Fisioterapia; Estudo de Validação.*

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RESUMEN

Objetivo: *Describir la construcción y la validación de una cartilla educativa para mujeres con dismenorrea primaria.* ***Métodos:*** *Se trata de un estudio transversal realizado en el Laboratorio de Investigación en Salud de la Mujer de la Universidad Federal de São Carlos. El estudio se dio entre los meses de enero y junio de 2020 en tres fases: la búsqueda bibliográfica, la construcción y la validación del material educativo. La validación ha sido realizada por diez profesionales del área de la salud y por veinte y dos mujeres con dismenorrea primaria. Se ha considerado el Índice de Validad de Contenido mínimo de 0,80 para la validación de contenido de cada ítem del instrumento de evaluación y la concordancia mínima del 75% entre las respuestas positivas para la validación de la presentación y legibilidad de la cartilla.* ***Resultados:*** *El material educativo presentó el Índice de Validad de Contenido Global de 0,90 por los profesionales sanitarios y el nivel de concordancia del 95,4% entre el público meta. Solamente uno ítem presentó el valor abajo del considerado para el análisis de la validación de contenido. Se ha realizado cambios para la versión final según los comentarios y sugerencias propuestas por los jueces para el perfeccionamiento del material educativo.* ***Conclusión:*** *La cartilla educativa "Dolor Menstrual (Dismenorrea Primaria): Promoción y Educación en Fisioterapia para la Salud de la Mujer" ha sido construida y validada para mujeres brasileñas respecto su layout y contenido. De la misma manera, el material servirá de apoyo para el tratamiento no farmacológico de mujeres con dismenorrea primaria.*

Descriptores: *Dismenorrea; Tecnología Educacional; Educación en Salud; Autocuidado; Fisioterapia; Estudio de Validación.*

INTRODUCTION

Primary dysmenorrhea (PD) is a common gynecological condition characterized by discomfort in the abdominal region before or during the menstrual period in the absence of pelvic disease and which is also often associated with symptoms of fatigue, dizziness, headache, diarrhea, nausea and vomiting[1]. The etiology of PD is not well defined, but it is believed that the release of prostaglandins after a drop in progesterone levels at the end of the luteal phase is responsible for the uterine contraction and for the pain characteristic of this clinical condition[2].

Non-steroidal anti-inflammatory drugs (NSAIDs) and oral contraceptives are, respectively, the first and second line of pharmacological treatment recommended for pain reduction in women with PD[3], but the use of both resources may have contraindications or cause systemic adverse reactions[4]. Because of that, non-pharmacological alternatives are proposed to replace or complement the use of pharmacological methods to improve PD symptoms[5].

The National Policy on Women's Comprehensive Health Care (*Política Nacional de Atenção Integral à Saúde da Mulher – PNAISM*)[6] discusses the female reproductive age. Many women in the menacme period present with diversified signs and symptoms, and PD can impact women's health and quality of life, thus requiring follow-up on its diagnosis, treatment and prevention[3]. Therefore, it is essential to implement public health programs focused on this theme[7].

In this context, health education can be the practice used to develop individuals' responsibility for actions related to their own health, with self-care being the tool used as a means of encouraging such independence[8,9]. In carrying out health education programs, one of the resources capable of promoting better results is the permanent means of communication, such as educational materials: booklets, posters, folders and pamphlets[10,11].

It is believed that the construction and validation of educational material lead to changes in women's health through a process of developing autonomy with healthy practices and attitudes[12] related to the non-pharmacological treatment of PD, thus constituting actions for the promotion of health that improve the quality of life of this population group. Based on the above, this study is justified by the scarcity of publications on the subject targeted at Brazilian women.

Therefore, the aim of this study was to describe the construction and validation of an educational booklet for women with primary dysmenorrhea.

METHODS

This is a cross-sectional study of the construction and validation of educational material by health professionals and women with PD. The study was carried out at the Women's Health Research Laboratory of the Physiotherapy Department of the Federal University of São Carlos, São Carlos, São Paulo, Brazil.

The research took place from January to June 2020 and consisted of three phases: 1. bibliographic search; 2. development of educational material and 3. validation by health professionals and women with PD.

For the literature review phase, the PICO strategy was used (P = patient or problem; I = intervention; C = control or comparison and O = outcomes), with the following descriptors being used: P (women with dysmenorrhea), I (selfcare AND health education) and O (pain management).

Articles on PD were selected in the context of health education and promotion and self-care. Articles featuring other content, repeated or not available, were deleted. After applying these criteria, there was initially a selection based on titles, followed by a selection based on abstracts and, later, the full content of the articles, until a total of 12 studies were analyzed in January 2020.

This analysis made it possible to systematize the content for the development of educational material using relevant and objective information about the most prevalent signs and symptoms of PD in the literature and self-care techniques for educating and promoting women's health based on scientific evidence.

A graphic design professional with proven experience in diagramming carried out the adaptations of aspects related to the organization, layout and illustration of the educational material. These adaptations included notions about format, font size, text distribution, application of colors and also the creation of images for the booklet.

Following the recommendations in the literature[13], ten physiotherapists participated in the validation of the educational material. The criterion for the inclusion of professionals in the study adopted was having experience in the field of Physiotherapy in Women's Health. The professionals were invited to collaborate with the study by contacting them and, after agreeing to participate in the research, they signed the Informed Consent Form by email. It is important to emphasize that all professionals contacted agreed to participate in the study. The data collection took place between February and April 2020.

To carry out the validation step, an instrument adapted from the literature was developed to evaluate the booklet[14]. The instrument had four sections and a blank field for professionals to make additional comments and suggestions for improving the educational material. The first section of the educational material evaluation instrument had questions about the content of the booklet, the second section addressed the vocabulary used in the educational material, the third section dealt with the quality of the illustrations and the fourth section presented general questions about the physical structure of the booklet. All sections had a Likert scale[15] as an answer option, with scores from 1 to 4, as follows: (1) totally disagree, (2) partially agree, (3) agree and (4) totally agree.

Thus, after consenting to participate, the professionals received an email with the procedures for the process of validating the educational material, the booklet and the instrument containing professionals' sociodemographic data and the evaluation of the booklet. The documents were attached to the email, and the professionals' responses were typed in the file itself. The period estimated for the analysis was 30 days from the date of sending the email with such information.

There was a second procedure for validating the booklet with the help of women with PD aged over 18 years and who had self-reported menstrual pain[16] for at least three months. Recruitment took place through the dissemination of the study on media and social media in the city of São Carlos, São Paulo. The validation of educational material by women with PD took place until there were no new suggestions for changes, which was the criterion adopted to determine the number of target participants included in this study[12]. It should be noted that this moment occurred after the validation of health professionals and their respective adjustments to improve the educational material.

For this collaboration, the women signed the consent form and subsequently read the educational material. Then, they filled out a questionnaire with sociodemographic and clinical data and answered two questions about the presentation and readability of the booklet. The questions were "is the language understandable (clear and objective)?" and "is the presentation adequate (cover, colors, images, size, etc.)?", accompanied by the answer options "yes", "no" and "partially". A blank space was also made available for additional comments and suggestions regarding general aspects of the educational material.

The entire procedure for validating the educational material by women with PD took place remotely. After completing the consent form, the women received an email with information about the validation process procedures, so that they should check the educational material, fill in the sociodemographic and clinical data, and answer questions about the presentation and readability of the booklet. It should be noted that the documents were attached to the

email and the responses of women with PD were typed in the file itself. A period of 30 days was also estimated for the return of the analysis, counting from the date of sending the email with the information. Data collection among women with PD took place during the months of May and June 2020.

The Content Validity Index (CVI)[17] was used for the analysis of the validation of the content of the educational material, and it was possible to verify the proportion of agreement of each item of the evaluation instrument in the booklet among health professionals. For the calculation, the sum of the CVI values was used, separately, and then the value was divided by the number of items in the instrument. The literature suggests a cutoff value higher than 0.80[18].

To analyze the validation of the presentation and readability criteria of the educational material, the calculation of the percentage of absolute agreement was considered. The calculation of the percentage of absolute agreement consisted of the sum of positive responses by women with PD and the division of this result by the total number of evaluations performed. The minimum level of agreement required by the literature is 75%[19,20].

The organization and analysis of data from health professionals and women with PD were performed using 2016 Excel. The distribution of sociodemographic and clinical data was carried out and descriptive analysis was performed through calculation of frequency (absolute and relative), measures of central tendency (mean and median) and dispersion (standard deviation), and analysis of the CVI and absolute percentage of agreement.

This study was approved by the Research Ethics Committee of the Federal University of São Carlos (*Universidade Federal de São Carlos – UFSCar*) (Approval No. 3.615.210).

RESULTS

Construction of the Educational Material

The educational material "Menstrual Cramp (Primary Dysmenorrhea): Physiotherapy in Women's Health Promotion and Education" has the size of an A4 sheet (210mmx297mm) folded into three equal parts, with a cover and two-sided printing. The first page of the final version features a topic about the purpose of the booklet, followed by informative content about the concept of menstruation and the signs and symptoms of PD.

However, given the circumstances of delivering the educational material in a virtual environment, the file was made available in a PDF format. The PDF format is standard for digital document archiving and has enabled sharing of the source document with fidelity while preserving the organization, layout and artwork of the booklet.

With regard to the inclusion of self-care techniques, the extraction of scientific evidence enabled the rest of the construction of the booklet to address the following items: application of topical heat, massage and physical exercise. The choice of these items for the construction of educational material is in accordance with the opinion of the American College of Obstetricians and Gynecologists (ACOG)[4] on dysmenorrhea. The application of topical heat, massage and physical exercise are non-pharmacological treatment options that should be encouraged given the low therapeutic cost and low risk of harm to women's health.

Thus, in this context, the application of topical heat corresponds to the use of thermal bags to alleviate the symptoms of discomfort on the pain site. Massage consists of movement techniques close to the region of PD discomfort. Physical exercise is part of the regular practice of stretching and aerobic activities, namely walking. Table I presents the description of the selected articles.

Validation of the Educational Material

The ten professionals designated for the validation of the booklet were all female and belonged to all five regions of Brazil. In addition, seven (70.0%) had a doctorate and three (30.0%) had a master's degree. Time since graduation, as well as time working as a physiotherapist, ranged from 4 to 30 years, with a mean of 15.8 ± 7.4 years.

It should be noted that the collection of sociodemographic data is an important function in the formulation of educational material given the time devoted to academic training and the plurality of professionals specialized in this subject, which allows different perspectives on the same subject. Table II presents the sociodemographic data of the sample of professionals.

Table I - Description of selected articles. São Carlos, 2020.

Author	Methods	Data
Jo & Lee (2018)	Systematic review and meta-analysis.	Heat was effective to alleviate the signs and symptoms of PD when placed in the abdominal region during the menstrual period.
Azima et al (2015)	Randomized controlled clinical trial.	Massage close to the pubic symphysis for 30 minutes throughout the menstrual period showed positive results in reducing the signs and symptoms of PD.
Brown & Brown (2010)	Systematic review.	The study highlights the lack of robust evidence on physical activity in reducing the signs and symptoms of PD. However, it points out a continuous 30-minute walk or a running program with a weekly frequency as beneficial options for reducing the discomfort of PD.
Armour et al (2019)	Systematic review and meta-analysis.	Low-intensity physical activity, such as stretching exercises, proved to be effective in reducing PD discomfort, especially if done three times a week, lasting 10 to 20 minutes. Heat was moderately effective in alleviating the signs and symptoms of PD for 8 to 12 hours a day.
Lee et al (2015)	Randomized controlled clinical trial.	The use of transcutaneous electrical nerve stimulation (TENS) for 10 minutes together with the use of heat for 20 minutes proved to be effective in reducing the signs and symptoms of women affected by moderate or severe PD.
Klotez et al (2018)	Systematic review.	Physical activity, especially aerobic exercises performed three times a week for 40 minutes, proved to be effective in reducing the signs and symptoms of PD.
Armour et al (2019)	Systematic review and meta-analysis.	Low and/or high intensity physical activity, three times a week, for approximately 45 to 60 minutes, had an effect on reducing the signs and symptoms of PD.
Kannan & Claydon (2014)	Systematic review.	Heat has been shown to be effective in reducing the signs and symptoms of PD when applied for 12 hours for three consecutive days at the site of discomfort.
Abaraogu et al (2016)	Systematic review.	Heat proved to be effective in reducing the signs and symptoms of PD when applied for 30 minutes in the abdominal region.
Carroquino-Garcia (2019)	Systematic review and meta-analysis.	The practice of therapeutic exercises for 8 to 12 weeks proved to be effective in the duration and intensity of pain in PD.
Motahari-Tabari et al (2017)	Randomized controlled clinical trial.	Stretching exercises for 15 minutes, three times a week, proved to be effective in reducing the signs and symptoms of PD.
Vaziri et al (2015)	Randomized controlled clinical trial.	Aerobic exercises and stretching exercises with emphasis on the abdominal and pelvic regions proved to be effective in reducing the signs and symptoms of PD.

Table II - Description of sociodemographic data from the professionals who participated in the validation of the educational material. São Carlos, 2020.

Variables	Health professionals
	Mean ± Standard deviation
Age (years)	38.2 ±7.1
Time post-graduation (years)	15.8 ±7.4
	n (%)
Region	
North	1 (10%)
Northeast	2 (20%)
Midwest	1 (10%)
Southeast	5 (50%)
South	1 (10%)
Level of education	
Masters	3 (30%)
PhD	7 (70%)
Current occupation	
Clinician	1 (10%)
Teacher	8 (80%)
Clinician and teacher	1 (10%)

The CVI of each item of the educational material evaluation instrument is described in Table III. It is possible to observe that item 2.2 presented a CVI below adequate. However, in general, the agreement of all sections of the instrument reached values above the cutoff suggested in the literature, which is 0.80[18]. The mean of all calculated indexes, that is, the global mean of the educational material, reached a value equal to 0.90, thus making it validated.

Table III - Content Validity Index of each item in the evaluation of the educational material. São Carlos, 2020.

Sections and items in the evaluation of the educational material	CVI*
Content	**0.91**
Is information accurate?	0.87
1.2 Is the information appropriate for the target audience?	0.92
1.3 Is the information presented in a context relevant to that of the target audience?	0.95
Language	**0.85**
2.1 Is the language understandable and convenient to the target audience?	0.85
2.2 Are all concepts presented clearly and objectively?	0.77
2.3 Does the booklet contain any errors or harmful ideas regarding the information about the language?	0.92
Illustrations	**0.92**
3.1 A composição visual é atrativa e bem organizada?	0.90
3.2 A quantidade de ilustração está adequada?	0.92
3.3 As ilustrações são pertinentes?	0.95
General	**0.93**
4.1 Is the size (dimension) of the material adequate?	0.95
4.2 Is the text size adequate (number of pages)?	0.95
4.3 Is the presentation of the material adequate (cover, colors, etc.)?	0.90

*CVI: Content Validity Index

Table IV represents the sections of the instrument for evaluating the educational material and the subsequent suggestions from health professionals. Such suggestions were accepted, such as modifying the title of the booklet, reorganizing the content layout, improving the language, reformulating the illustrations, among others. The evaluative aspect of the booklet referring to item 2.2 was also modified according to the suggestions from health professionals so that some information was adequate to improve the understanding of the target audience of the educational material.

Table IV - Changes suggested by health professionals. São Carlos, 2020.

Sections	Suggestions
Content	Emphasize in the subheading “physical exercise” the number of stretching exercises and the execution time.
	Add to the subheading “primary dysmenorrhea” the appetite changes of the menstrual period.
	Make the self-massage time more understandable.
Language	Standardize the word “dysmenorrhea” instead of “primary dysmenorrhea” throughout the booklet.
	Correct the spelling of the words “self-care” and “primary”.
	Change in the subheading “physical exercise” the phrase “inner leg” to “inner thigh”.
	Replace the phrase “layer of the uterus” with “inner layer of the uterus”.
	Review the title of the booklet to make it more attractive to the target audience.
	Change in the subheading “self-massage” the phrase “opposite direction” to “counterclockwise”
	Modify the subheading “after all, what is it?” by “what is menstrual cramp?”.
	Replace in the subheading “primary dysmenorrhea” the phrase “for menstruation” with “for menstruation to occur”.
Illustration	Standardize the illustrations.
	Redo the illustration on applying topical heat to the lower back.
General	Capitalize each word on the cover.
	Use more vivid colors.
	Shorten the source of sponsors section.
	Check the text formatting, keeping it justified.
	Reorganize the illustrations on page 2 of the booklet.

Sociodemographic and clinical characteristics of women with PD

Twenty-two women with PD, with a mean age of 28.2±4.9 years, participated in the validation of the questionnaire. All of them reported experiencing menstrual cramps for at least three months, and all of them used some medication to ease the pain resulting from this period. The mean duration of the menstrual cycle was 28.4±1.9 days.

Less than half of the women interviewed (40.9%) reported using non-pharmacological methods for menstrual cramps, namely the application of a hot water bottle. Previous experience in pain management with the application of a hot water bottle can facilitate understanding of the booklet.

It is important to highlight that the description of the sociodemographic and clinical data of the sample of women with PD contributes to the analysis of the health status. These are consistent indicators of the impact of PD on quality of life and helped, above all, to support the process of building the final version of the educational material.

Table V presents the sociodemographic and clinical characteristics of women with PD.

Table V - Description of sociodemographic and clinical data from women with primary dysmenorrhea (PD). São Carlos, 2020.

Sociodemographic Variables	Women with PD
	Mean ± Standard deviation
Age (years)	28.2±4.9
Level of education	**n (%)**
Complete primary education	5 (22.7%)
Secondary education	3 (13.5%)
Incomplete higher education	14 (63.6%)
Clinical variables	
	Mean ± Standard deviation
Duration of menstrual cycle (days)	28.4±1.9
Use of medication for menstrual cramps	**n (%)**
Yes	22 (100%)
Medication use frequency	
Once a day	14 (63.6%)
Two to three times a day	7 (31.8%)
Four or more times a day	1 (4.5%)
Effect of medication	
Total	12 (54.5%)
Partial	10 (45.4%)
Use of non-pharmacological method	
Yes	9 (40.9%)
No	13 (59.0%)

Only five women (22.7%) completed the evaluation with comments about the booklet. The comments referred to the insertion of a title for the illustrations, the addition of data on healthy eating, and some statements supporting the understanding of the booklet. The pertinent suggestions were accepted until there were no more doubts. Only one woman (4.5%) reported not understanding the textual information and the presentation (cover, colors, images, size, etc.) of the educational material. Thus, the level of agreement regarding these criteria in the booklet was 95.4%.

DISCUSSION

The construction and validation of the booklet titled “Menstrual Cramp (Primary Dysmenorrhea) - Physiotherapy in Women’s Health Promotion and Education” was based on the project researchers’ finding of the scarcity of educational materials for women in the process of developing the autonomy of practices and healthy attitudes related to the non-pharmacological treatment of PD.

Educational materials designed for individuals with chronic diseases play an important role in the population’s health education[21]. As PD is considered a chronic pain syndrome, the use of the booklet has become especially appropriate, as autonomy is facilitated and the target audience adheres to actions that influence their health standards[22,23].

That said, the process of preparing the booklet in this study was characterized by the use of a participatory approach. The union between specialist professionals and the target audience is seen as fundamental for improving the quality of educational materials, since different perspectives on and approaches to the same topic can be pointed out for heatlh education and promotion[24].

It should be noted that both the evaluation carried out by the specialist professionals and the evaluation carried out by the target audience in the present study showed high agreement between responses. Thus, the high degree of consensus found demonstrates the effectiveness of creating educational material for women with PD. Other studies that mention the process of designing booklets in the health field also showed high agreement[19,25,26].

In the present study, despite the analysis of the language section having the lowest level of agreement in the approval of the educational material among specialist professionals, the section did not present opinions that included the selection of the answers “totally disagree” or “partially agree”. The language of the educational material is a fundamental element for its understanding by the target audience through the use of clear, objective and colloquial expressions[27].

The use of an accessible vocabulary is also important to stimulate interest and transmit correct information to the target population, thus favoring the reader's education about and motivation towards the subject exposed in the booklet[28]. In addition, the attention given to language adaptations is a fundamental process in the design of materials related to education and health promotion[27]. Therefore, in this study, after the modifications suggested by the specialist professionals, the language used by the educational material was easily understood.

However, it should be noted that the comprehension of the booklet is not only achieved by adapting the language, but also by complementing the illustrations and images in the material. This combination helps the action on the work of health promotion and education and, therefore, creates conditions for the target population to develop the capacity to strengthen the self-care behaviors described therein[28]. In the present study, it was possible to observe that the illustrations and images were approved by the target population in their different levels of education, thus benefiting the final result of the booklet, and by women who knew and did not know the non-pharmacological methods described in the booklet.

The use of the CVI is observed in other studies that describe the construction and validation of educational materials[19,25,26,29]. These studies also carried out the necessary modifications according to the opinion of specialist professionals and the target audience. It is important to emphasize that the validation process by these individuals directly affects the quality of the material, thereby making it effective for use.

Thus, the educational materials constructed and validated provide educational interventions based on health promotion actions, strengthening the individual's ability to identify their demands and recognize self-care attitudes[8]. PNAISM cites health promotion as a guiding principle to consolidate women's health status and, consequently, their quality of life[6]. In view of that, the construction and validation of this educational material addresses the need of the female population regarding the non-pharmacological treatment of PD, encouraging the promotion of healthy attitudes.

This study has limitations regarding the lack of multidisciplinarity of specialist professionals. The analysis by professionals from different areas could have further favored aspects related to PD knowledge in addition to recognizing the different perspectives and opinions on the subject. There are studies that attest to the importance of a team composed of multiple professionals in the validation of educational materials[19].

It is believed that, despite the favorable evaluation made by women with PD on the appearance of the booklet, a more diversified sample could have been more advantageous for the validation of the educational material. The representation of the target audience needs to be comprehensive, as the focus of health education and promotion is the population itself, which, in Brazil, has a vast cultural diversity[19].

CONCLUSION

The educational material had a CVI of 0.90 and a level of agreement of 95.4%, being considered validated. It is expected that the booklet will bring about changes in the process of developing autonomy of healthy practices and attitudes related to the non-pharmacological treatment of primary dysmenorrhea. Thus, this educational material can contribute to health education and promotion actions, leading to an improvement in the quality of life of women with primary dysmenorrhea.

CONFLICTS OF INTEREST

The authors declare that there were no conflicts of interest.

CONTRIBUTIONS

Jéssica Cordeiro Rodrigues, **Mariana Arias Avila** and **Patricia Driusso** equally contributed to the study conception and design; the acquisition, analysis and interpretation of data; and the writing and/or revision of the manuscript. All authors approved the final draft.

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