Postpartum plan for pregnant and postpartum women: production of educational material

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Conflicts of interest: nothing to declare.

Abstract

Objective: To develop and validate an educational material for the construction of a postpartum plan by women in the pregnancy-puerperal cycle, with or without health professionals.

Methods: Methodological study, organized in three stages. 1) Content analysis and selection, theoretical elaboration of the project and language adaptation; 2) Production of material, with preparation of graphic design and illustrative project; 3) Validation with seven judges in the areas of women’s health and health education. Data collection was carried out using a characterization questionnaire and the Suitability Assessment of Materials for evaluation of health-related information for adults (SAM). The analysis was carried out using descriptive statistics and Content Validity Index, with items that presented a value equal to or greater than 0.80 being considered approved.

Results: The care plan entitled “My postpartum plan” showed excellent acceptance and reliability, evidenced by an overall Content Validity Index of 0.98. The main suggestions presented were about adapting the writing to a simpler and more accessible language, which were accepted by the authors. Experts highlighted the importance and relevance of the postpartum plan for the target audience.

Conclusion: The material proved to be a valid and reliable instrument for use by women during the pregnancy and puerperal cycle, encouraging reflection on care and early preparation to face this period.

Keywords
Postpartum period; Educational technology; Health education; Obstetric nursing; Pregnant women

Descritores
Periodo pós-parto; Tecnologia educacional; Educação em saúde; Enfermagem obstétrica; Gestantes

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Abstract

Objective: Desenvolver e validar material educativo para a construção de um plano de pós-parto pela mulher no ciclo gravídico-puerperal, com ou não profissionais da saúde.

Métodos: Estudo metodológico, organizado em três etapas. 1) Análise e seleção de conteúdo, elaboração teórica do projeto e adaptação na linguagem; 2) Produção do material, com elaboração do design gráfico e projeto ilustrativo; 3)VALIDAÇÃO com sete juízes nas áreas de saúde da mulher e educação em saúde. A coleta de dados foi executada com a aplicação de um questionário de caracterização e o SUITABILITY ASSESSMENT OF MATERIALS FOR EVALUATION OF HEALTH-RELATED INFORMATION FOR ADULTS (SAM). A análise foi realizada usando estatísticas descritivas e Índice de Validez de Conteúdo, sendo considerados aprovados os itens que apresentassem valor igual ou superior a 0,80.

Resultados: O plano de cuidado intitulado “Meu plano de pós-parto” mostrou ótima aceitação e confiabilidade, evidenciado por um Índice de Validez de Conteúdo global de 0,98. As principais sugestões apresentadas foram a adaptação da escrita para uma linguagem mais simples e acessível, sendo estas aceitas pelas autoras. Os especialistas apontaram a importância e relevância do plano de pós-parto para o público-alvo.

Resumo

Objetivo: Desenvolver e validar material educativo para a construção de um plano de pós-parto pela mulher no ciclo gravídico-puerperal, com ou não profissionais da saúde.

Métodos: Estudo metodológico, organizado em três etapas. 1) Análise e seleção de conteúdo, elaboração teórica do projeto e adaptação na linguagem; 2) Produção do material, com elaboração do design gráfico e projeto ilustrativo; 3) Validação com sete juízes nas áreas de saúde da mulher e educação em saúde. A coleta de dados foi executada com a aplicação de um questionário de caracterização e o SUITABILITY ASSESSMENT OF MATERIALS FOR EVALUATION OF HEALTH-RELATED INFORMATION FOR ADULTS (SAM). A análise se deu por estatística descritiva e Índice de Validez de Conteúdo, sendo considerados aprovados os itens que apresentassem valor igual ou superior a 0,80.

Resultados: O plano de cuidado intitulado “Meu plano de pós-parto” apresentou ótima aceitação e confiabilidade, evidenciado por um Índice de Validez de Conteúdo global de 0,98. As principais sugestões apresentadas foram a adaptação da escrita para uma linguagem mais simples e acessível, sendo estas aceitas pelas autoras. Os especialistas apontaram a importância e relevância do plano de pós-parto para o público-alvo.
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Introduction

The puerperium or postpartum period begins after birth, with the delivery of the placenta, and lasts approximately six weeks, accompanied by changes at anatomical and physiological levels in the woman’s body, as well as changes in mental health, sexuality and the need for reorganization personal and family.(1) Motherhood can be considered one of the greatest transition events, as it presents a reality hitherto unknown to women, which they describe as a period of joy, but also of great responsibilities and emotional changes, creating an opportunity for mental and emotional imbalance. an emotional fragility.(2-4)

This phase is strongly interconnected with living conditions, the community included and available social support, since the insertion of a new member leads to changes in the roles of the entire family, mobilizing the entire household to share chores and emotional support.(5)

Given this context, associated with frequent negligence and little knowledge of many women about the postpartum period, the planning and execution of educational actions prove to be a necessary strategy for strengthening women, increasing their self-confidence and reducing situations of stress and anxiety during this period.(5)

Care plans are a technology that helps strengthen the bond between the person being cared for, their family and health professionals. By allowing an empathetic, adaptive and safe approach to the patient’s reality, it provides women with the possibility of making conscious decisions and actively participating in their own care.(6-8)

In the obstetric area, care plans are constantly applied to the moment of birth, expressing the woman’s desires for this moment and highlighting her role.(8) However, it is uncommon to develop a plan aimed at the postpartum period that lead the woman to reflect on the care and needs of this phase. These are situations such as, for example, tiredness, concern about returning to the pre-pregnancy physiological and physical state, changes in body image and self-esteem, in addition to anxiety and insecurities.(9)

Considering this phase of intense adaptations, which demands reliable information, a support network and active participation of women in decision-making, this study is justified. It provides a tool that can encourage women to reflect on possible needs and care planning according to their life context, in order to face this period more effectively.

Therefore, the objective of the present study was to develop and validate educational material for the construction of a postpartum plan by women in the pregnancy and puerperal cycle, together or not with health professionals.

Methods

This is a methodological study, carried out in a virtual environment, carried out from January 2022...
to January 2023. To better understand the research process, the present project was divided into three stages described in figure 1.

To formulate the information, a survey of scientific articles and guidelines was carried out that address the main demands and care needed by women during the postpartum period. To this end, the databases PubMed, LILACS, BDENF and SCOPUS were used, with the descriptors and terms “puerperium”, “postpartum”, “health education”, “health technology” and “postpartum plan”, and with the following filters: full article with free access, in English, Portuguese and Spanish, and published in the last 5 years, totaling 19 articles. Furthermore, the latest publication from the World Health Organization was used with recommendations on maternal and neonatal care for a positive postpartum experience.(10)

After reading the materials, a critical analysis of the included studies was carried out and the main contents that would make up the material were selected based on the proposed theme. Finally, with the completion of the theoretical project, language adaptation was carried out in order to facilitate understanding by the target population.(11)

The visual project was produced by the first author, using Canva — a free online graphic design tool. It was designed to facilitate the viewing, understanding and interaction of women, users of health services, with the content being developed in black and white and colored versions, thus aiming to facilitate possible printed distribution by health institutions.

The experts were selected through convenience, non-probabilistic snowball sampling, which uses networks of references and indications to capture the sample,(12) with the seed participant (first specialist selected), a professor from a public university in the state of São Paulo. The selected experts must meet at least one of the following criteria: (1) Teaching experience in the area of interest; (2) Guidance on academic work on the topic; (3) Doctorate degree with a thesis on the topic of interest, and; (4) Authorship of scientific articles on the topic in journals.

The judges were contacted via email with the invitation letter and after confirming participation, they sent the Informed Consent Form (ICF), the material produced and the link to access the characterization questionnaire and the validation instrument, applied via the Google Forms platform. The characterization data were: gender, age, state of residence, level of education, recent professional activity and previous contact with the specialty topic.

The Suitability Assessment of Materials for evaluation of health-related information for adults (SAM) instrument, translated and adapted into Portuguese by nurses in 2015,(13) consists of 22

Figure 1. Description of the methodological steps for developing and validating the postpartum plan
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questions and guides the evaluation of six areas: content, demand for literacy, graphics, layout and design, learning and motivation, and cultural appropriateness. The evaluation is related to the score “0 — not adequate”, “1 — adequate” and “2 — very adequate”, and the analysis can be done globally or for each item. For its use, contact was made via email with the authors requesting consent to use the material, which was approved.

The validation process with the judges took place between August and October 2022, with seven judges selected, four from the area of women’s health and three from the area of health education. After the evaluation was carried out by all experts, the data were organized and processed in a Microsoft Excel 10 spreadsheet. Sociodemographic data were analyzed descriptively. To analyze the data from the validation stages, we chose to use the Content Validity Index (CVI), which measures the proportion of experts who agree on a certain aspect of the instrument and its items. In relation to the averages obtained, it was decided that the items would reach a CVI equal to or greater than 0.80 (80%) as a criterion for acceptance or reformulation of the items.(14)

The research was assessed and approved by the Research Ethics Committee of the School of Nursing of the University of São Paulo (CEP/EE-USP) under opinion no. 466/2012, in March 2022.(15)

Results

The educational material of the care plan type entitled “My Postpartum Plan” consists of 9 pages, being subdivided into: cover, presentation, maternity checklist, support networks, nutrition, physical exercise, family planning, mental health and signs alert (Figure 2). All the material is interactive and has space for filling in information or marking, in addition to having a color version and a black and white version, aiming to facilitate the distribution of the material by health services.

For the evaluation, seven judges were selected, all linked to Brazilian public institutions and residents of the state of São Paulo, with an average age of 39.28 years (24 – 63 years), mostly women (85.7%), with doctorate degree (57.14%;) and master’s degree (42.85%), working, on average, for 17 years in the areas of nursing teaching or clinical nursing (hospitals and birth centers) (Table 1).

All evaluated items reached the minimum approval criterion (CVI ≥ 0.80), which was calculated

Figure 2. “My postpartum plan” material validated by judges in color version
Table 1. Acceptance and agreement with the items of the educational material in the validation stage by experts (n= 7)

<table>
<thead>
<tr>
<th>Assessed Items</th>
<th>Very adequate (n)</th>
<th>Adequate (n)</th>
<th>Not adequate (n)</th>
<th>N/A* (n)</th>
<th>CVI**</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Content</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1 The purpose is evident</td>
<td>5</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>1,0</td>
</tr>
<tr>
<td>1.2 Content is about behaviors</td>
<td>3</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>1,0</td>
</tr>
<tr>
<td>1.3 Content is focused on purpose</td>
<td>7</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1,0</td>
</tr>
<tr>
<td>1.4 Content highlights key points</td>
<td>5</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>1,0</td>
</tr>
<tr>
<td>2. Literacy requirement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1 Reading level</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>0</td>
<td>0,85</td>
</tr>
<tr>
<td>2.2 Use active voice writing</td>
<td>7</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1,0</td>
</tr>
<tr>
<td>2.3 Uses vocabulary with common words in the text</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0,85</td>
</tr>
<tr>
<td>2.4 Context comes before new information</td>
<td>5</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>1,0</td>
</tr>
<tr>
<td>2.5 Learning is facilitated by topics</td>
<td>7</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1,0</td>
</tr>
<tr>
<td>3. Illustrations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.1 The purpose of the illustration referring to the text is clear</td>
<td>5</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>1,0</td>
</tr>
<tr>
<td>3.2 Types of illustrations</td>
<td>5</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>1,0</td>
</tr>
<tr>
<td>3.3 The figures/illustrations are relevant</td>
<td>7</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1,0</td>
</tr>
<tr>
<td>3.4 Lists, tables, etc. have an explanation</td>
<td>7</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1,0</td>
</tr>
<tr>
<td>3.5 Illustrations have captions</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>1,0</td>
</tr>
<tr>
<td>4. Layout and presentation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.1 Layout characteristic</td>
<td>4</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>1,0</td>
</tr>
<tr>
<td>4.2 Font size and type</td>
<td>4</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>1,0</td>
</tr>
<tr>
<td>4.3 Subtitles are used</td>
<td>6</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1,0</td>
</tr>
<tr>
<td>5. Stimulation/Motivation of learning</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.1 Uses interaction</td>
<td>5</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>1,0</td>
</tr>
<tr>
<td>5.2 The guidance is specific and gives examples</td>
<td>7</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1,0</td>
</tr>
<tr>
<td>5.3 Motivation and self-efficacy</td>
<td>5</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>1,0</td>
</tr>
<tr>
<td>6. Cultural adaptation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.1 Is similar to your logic, language and experience</td>
<td>5</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>1,0</td>
</tr>
<tr>
<td>6.2 Cultural image and examples</td>
<td>5</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>1,0</td>
</tr>
</tbody>
</table>

*Not assessed; **Content Validity Index

from the sums of the responses “very appropriate” and “adequate”, obtaining an overall CVI of 0.98. With the exception of the items “reading level” and “uses vocabulary with common words in the text”, which obtained 85% approval (CVI = 0.85), the other items were evaluated at 100% adequacy (CVI = 1.0), in addition to some items related to content, literacy, illustration and motivation that were evaluated 100% as “very adequate” (Table 1). Most of the suggested changes were classified as: 1) Organization of content; 2) Reading level, and; 3) Design and illustrations. Although all items had reached the minimum required acceptance, it was decided to make changes to the layout of the material’s content, increasing the number of pages in order to make them less overloaded, adding new illustrations, textual revision and grammatical revision. At the end of the validation process, all experts highlighted the importance and relevance of the postpartum plan, with its application and use being of considerable value, which will encourage reflection on care and early preparation to face this period, which is often complex, and difficult for women and their support network.

Discussion

The health care plan developed allows women, present in the pregnancy-puerperal cycle, to reflect on the care needed during the postpartum period and the demands and changes associated with it. In an interactive way, it helps to strengthen bonds between the woman, her support network and health agents, awakening their view of the importance of thinking about the postpartum period, as well as the possibility of personal, emotional and family organization early arrival of this period.

The material was positively evaluated by experts, who highlighted its contribution to the planning and organization of activities and care. It is noteworthy that no study was found that worked towards the formulation, execution and validation of a postpartum plan for women during the postpartum period, which makes this work relevant and innovative.

As women are going through major changes, during the postpartum period, they become more vulnerable, increasing the risk of mental disorders and mood changes that harm their daily life practices, their connection with their social network, support and care for the newborn. Thus, implementing educational actions that empower wom-
en during this period becomes an effective and positive strategy.\textsuperscript{(16,17)}

The literature indicates that the implementation of courses and training on postpartum during pregnancy enhances women's feeling of self-confidence and improves knowledge about this phase. In addition to reducing cases of maternal and paternal depression and stress, it promotes greater involvement of spouses in domestic tasks and childcare.\textsuperscript{(17,18)}

Studies have shown that the approach to postpartum issues by health professionals, for the most part, is limited to guidance on breastfeeding and care for the newborn, neglecting educational actions related to social, mental and family changes.\textsuperscript{(19-21)} Aiming for a more comprehensive approach to such changes, the plan drawn up in this study lists issues from different areas, namely: family organization and support networks, physical and mental health care and family planning.

Support networks that promote emotional support, assistance in caring for the newborn and cooperation in carrying out domestic tasks are identified as an important agent in women's perception of adjusting to changes in the postpartum period.\textsuperscript{(5)} In this way, In the postpartum plan, the woman will be able to reflect on who her support network will be and redistribute tasks among household members, promoting an early organization of family functions and reducing the stress caused during the postpartum period.

Support networks are shown to be a significant protective factor against the development of anxiety attacks, postpartum depression and stress, which can influence a woman's quality of life, as well as the bond, nutrition and development of the child.\textsuperscript{(20,22)} Therefore, it is essential that this issue is addressed by health professionals, associated with the formulation of prophylactic strategies, such as sharing tasks, carrying out leisure activities, carrying out physical activities and early identification of symptoms.\textsuperscript{(5,16)}

Furthermore, the couple's sexual dimension is also affected and, sometimes, neglected, as the focus of care becomes different. As it is influenced by a series of physiological and psychosocial factors, both partners need to be physically and psychologically prepared to return to sexual activities.\textsuperscript{(23,24)} Talking to your partner about these issues becomes essential, as does the decision about future children. Many women return to sexual activity before being approached by the health team about the available contraceptive methods, so talking about it, even during prenatal care, will help in early decision-making and reduce the risks of an unplanned pregnancy.\textsuperscript{(25)}

Given the need to address several important topics and the difficulties presented by health professionals, such as lack of availability, lack of knowledge about the topic and patient involvement, the application of health plans enables and encourages women to reflect on the topic, making decisions based on your reality and involving the health professional only in case of doubts and possible discussions regarding the decisions made.\textsuperscript{(2,5,6)}

The steps taken to formulate the material were essential to achieving the proposed objective. The survey of evidence from the literature made it possible to approach the main themes to be discussed, while the validation process ensured that the information exposed was not incorrect or incomplete.\textsuperscript{(26)}

The material was successfully validated by all experts, presenting an overall CVI of 0.98, exceeding the value stipulated for approval. According to the results of the study, most items obtained 100% approval, with the exception of the items “reading level” and “use of vocabulary with common words”.

For changes made to the material after validation, the authors paid attention to using simpler vocabulary, changing terms that could make understanding difficult for the target audience. In addition to these changes, some recommendations regarding illustrations, material design and content organization were accepted. Similarly, in other studies, we observed the adaptation of educational materials in terms of language, organization and illustration, after validation with experts, this stage being of great importance for the formulation of educational technologies.\textsuperscript{(27,28)}

Health professionals have a great responsibility in caring for women in the pregnancy and puerperal cycle, training them for the new reality they will face with the arrival of a new member. However, there is a difficulty in reconciling this need with the work overload and the little time available for this purpose,
thus, educational materials constitute a technology that favors patient/professional communication in a playful way, to empower the subject, promoting autonomy, empowerment and education.\(^{(15,29)}\)

The study has limitations linked to the restriction of the validation process in the state of São Paulo and the non-evaluation of the educational material by women. The authors intend to carry out the evaluation process in a future study, as well as the production of informative educational technologies such as videos associated with the themes covered in the postpartum plan, enhancing women’s training for this period.

It is noteworthy that this study produced the first Brazilian care plan focused on the postpartum period. Therefore, the expectation is that this material will contribute to the reflection and preparation of women and their support network for the puerperal period, with qualified, comprehensive nursing care adapted to the reality of the user.

**Conclusion**

The present study enabled the construction of an interactive educational material, entitled “My Postpartum Plan”, for use by women and their support network during the pregnancy and puerperal cycle, allowing their conscious and active participation in care. The plan proved to be valid and adequate, evidenced by the high scores in validation by experts, characterizing it as a reliable material with important application. Furthermore, the use of the plan has the potential to contribute to the creation of the professional/user bond in health institutions, as well as to nursing care in the educational process. By approaching important themes in an interactive, relaxed and quick way, it will be possible to meet the need for practicality in the preparation of such activities caused by the high flow of people in health services.

**Collaborations**

Silva IW, Silva CM, Lettiere-Viana A, Brito APA, Cirico MOV, Glavina WSN, Ferreira FM and Tomaz RGO contributed to the study design, analysis and interpretation of data, writing of the article, relevant critical review of the intellectual content and approval of the final version to be published.

**References**


