

Educational technologies to encourage (self) care in postpartum women

Tecnologias educativas para promoção do (auto) cuidado de mulheres no pós-parto

Tecnologías educativas para promocionar el (auto) cuidado de mujeres en el posparto

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ABSTRACT

Objective: to evaluate national and international literature regarding the use of educational technologies to encourage self care in postpartum women. **Method:** an integrative review of the literature. The articles were collected from the CINAHL, SCOPUS, PubMed, SciELO, LILACS and Cochrane databases; the time period for the articles referred to January/2004 to July/2014; the languages used in the articles were Portuguese, English, Spanish and French; the articles were selected from the following descriptors: *postpartum care period*, *educational technology*, *nursing* and *self care*. Twenty-seven articles were selected for analysis. **Results:** based on the information found, the scales, counseling and home visits were among the most recommended educational technologies. **Conclusion:** the technologies promote communication, but are sometimes dependent on computer and internet access, which hinder their use by low-income women.

Descriptors: Postpartum Period; Educational Technology; Nursing; Self Care; Review.

RESUMO

Objetivo: avaliar a literatura nacional e internacional sobre o uso de tecnologias educativas para promoção do autocuidado de mulheres no pós-parto. **Método:** trata-se de uma revisão integrativa da literatura. As produções foram coletadas nas bases CINAHL, SCOPUS, PubMed, SciELO, LILACS e Cochrane, utilizando como recorte temporal o período de janeiro/2004 a julho/2014, nos idiomas português, inglês, espanhol e francês, selecionadas a partir dos descritores: *postpartum period*, *educational technology*, *nursing* e *self care*. Ao final, procedeu-se à análise de 27 artigos. **Resultados:** dentre as informações, observou-se que as escalas, o aconselhamento e a visita domiciliar foram as tecnologias educativas mais recomendadas. **Conclusão:** as tecnologias favorecem a comunicação, mas por vezes são dependentes de computador e internet, dificultando o acesso para mulheres de baixa renda.

Descritores: Período Pós-Parto; Tecnologia Educacional; Enfermagem; Autocuidado; Revisão.

RESUMEN

Objetivo: evaluar en la literatura nacional e internacional el uso de las tecnologías educativas para promocionar el autocuidado de mujeres en el posparto. **Método:** revisión integradora de literatura. Se recolectaron las producciones en las bases de datos CINAHL, SCOPUS, PubMed, SciELO, LILACS y Cochrane, en el periodo de enero de 2004 hasta julio de 2014, en los idiomas inglés, español, francés y portugués brasileño, siendo utilizadas las palabras clave: *postpartum period*, *educational technology*, *nursing* y *self care*. Se llevó a cabo el análisis de 27 artículos. **Resultados:** en las informaciones encontradas, se observó que las tecnologías más aconsejadas fueron las escalas, los consejos y la visita al hogar. **Conclusión:** las tecnologías ayudan la

comunicación, sin embargo a veces dependen de computadoras y del acceso a internet, por lo que les dificultan a las mujeres de bajos recursos económicos su acceso.

Descriptores: Periodo Posparto; Tecnología Educacional; Enfermería; Autocuidado; Revisión de Literatura.

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INTRODUCTION

Promoting women's self care during postpartum is part of the nursing care process in the gravid-puerperal cycle. It is therefore necessary to investigate the relationship established from the time that the clinical nurse and pregnant/postpartum woman first meet. One of the other factors that requires attention is the woman's ability to satisfy her needs through self care. This research will help the clinical nurse make medical decisions and, consequently, define the significant goals and interventions regarding the new experiences and meanings in the woman's life⁽¹⁾.

Planning the important activities for these women is therefore a challenge for nursing care. For this reason, it is necessary to encourage the creation and use of educational technologies that are able to mediate care between nurses and women in the form of information dissemination. Amalgamating educational aims to share knowledge and practices in a horizontal relationship, in which the nurse could be the carer and educator, and to add popular expertise to its scientific and technical know-how⁽²⁾.

Regarding the evolution of health care, specifically in the nursing care context, it is observed that technologies are being planned and implemented while taking into account the need to translate the technical and scientific knowledge into tools, processes and materials that are created or used to disseminate such knowledge, and thus improve care quality. Understanding these technologies is not a simplistic factor without considering the knowledge conveyed by culture, or their involvement in everyday problem solving⁽³⁾. The technologies are categorized into two types: dependent, when they rely on electrical resources for their use (computer, internet, television commercial); and independent, when they do not depend on electrical resources for their use (posters, annuals, albums, folders, brochures, cordel literature manuals, guides, comics, newspapers, textbooks, murals)⁽⁴⁾.

In this context, the three most widely used educational technologies in the field of Nursing are: technologies for technical and higher student education, technologies for community health education and technologies for ongoing education with professionals⁽⁴⁾. The objective of all of these options is to increase the possibilities for which nurses can perform their practices as care producers.

This research discusses the tendency of technologies used for community health education, based on the understanding that these technologies do not represent an end in themselves, but rather act as tools to provide quality care. Thus, the technologies that contribute to the nurses' clinical judgment and the consequent selection of priorities for the promotion of self care are differentiated; and, on the other hand, the same can be said regarding the technologies used for health education with postpartum women.

OBJECTIVE

To evaluate the national and international literature regarding the use of educational technologies for encouraging (self) care in postpartum women.

METHOD

Our research is an integrative review, developed in six steps as proposed by Mendes, Silveira and Galvão, namely: Step 1 - identify the hypothesis and select the theme or research question to develop the integrative review; Step 2 - establish the inclusion and exclusion criteria for studies/sampling or literature search; Step 3 - define the information to be extracted from the selected studies/categorization of the studies; Step 4 - evaluate these studies in the integrative review; Step 5 - interpret the results; and Step 6 - present the review/synthesis from this knowledge⁽⁵⁾.

The objective was to answer the following guiding question: Which educational technologies have been developed or used by nurses for women's (self) care in their postpartum period?

The following databases and portals were selected for collecting the data: Cumulative Index to Nursing & Allied Health Literature (CINAHL), SCOPUS, PubMed, Scientific Electronic Library Online (SciELO), LILACS - Latin American and Caribbean Health Sciences Literature database and Cochrane. The survey was conducted in July 2014 using the following keywords available in the Medical Subject Headings (MeSH) and Boolean operators: *postpartum care period* AND *educational technology* AND *nursing* AND *self care*. Some of the databases had their own descriptors, which were added to the search: *technology* and *education* (CINAHL); *technology* (LILACS); *technology assessments* (Cochrane).

The following inclusion criteria were established: articles published between January 2004 and July 2014; articles written in Portuguese, English, Spanish or French and available in full or via proxy server at the State University of Ceará (proxy.uece.br). Duplicate publications, integrative and systematic reviews, theses and dissertations were excluded.

The sample comprised 24 articles following the application of these criteria. The subsequent task was to perform a superficial reading of the titles, abstracts and articles, followed by a reading in full. Collecting the information from the studies involved using an previously developed instrument, adapted from Ursi, to emphasize the following dimensions: article title, authors, year, journal, data base, country, language, target audience, technology, study type, objective, methods, results, recommendations/conclusions⁽⁶⁾.

Figure 1, built according to recommendations from the PRISMA 2009 Flow Diagram⁽⁷⁾, clarifies the inclusion process for the articles found.

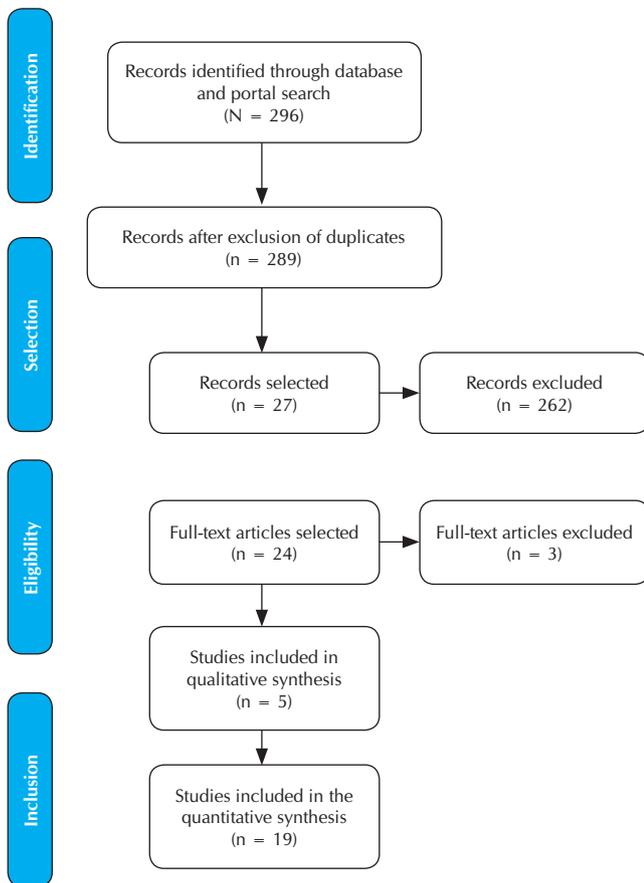


Figure 1 – Inclusion process for articles found

The presentation and discussion of the results were conducted on two main axes: 1) characterization of the studies based on the data collection instrument and the recommendation grade classification and the level of scientific evidence from the *Oxford Centre for Evidence-based Medicine*⁽⁸⁾; and 2) knowledge synthesis, with the presentation of the main contributions of the publications in regards to the topic under study,

the objective being to outline trends in the research projects as per the care of postpartum women, the treatment perspectives and suggestions for future research.

RESULTS

Characterization of the studies

The study sample was made up of 24 articles that can be seen in Table 1 according to their title, year, country, design, number of patients, treatments and outcomes.

Twenty articles were written in English, two in Portuguese, one in Spanish and one in French. As regards the trends in the technologies, 18 were technologies used in health education actions with postpartum women, in addition to five including pregnant women (articles 15, 17, 18, 21 and 23) and four including the women's partners (articles 8, 9, 21 and 22). Among the technologies for ongoing professional education, which play a part in the nurses' clinical judgment and the consequent decisions regarding priorities to encourage self care, six studies involving nurses are worth highlighting (articles 1, 10, 11, 12, 13 and 14).

As regards the methodological aspects of the sample, the quantitative research design types in the studies are: non-experimental (articles 8, 13, 16, 17, 19, 20 and 22), quasi-experimental (articles 2, 7, 12, 15, 18 and 21) and experimental (articles 4, 5, 6, 9, 23 and 24). The other studies do not fit into this classification as they are concerned with: applied technological development research (article 1), qualitative, convergent-assistential type research (article 3), methodological study (article 10), qualitative and descriptive study (article 11) and validation study (article 14).

Based on the recommendation grade classification and level of scientific evidence of the selected studies, we can affirm that: two studies have a grade A recommendation and level of evidence 1 (articles 4 and 23); eight studies have a grade B recommendation and level of evidence 2 and 3 (articles 2, 5, 7, 10, 12, 15, 18 and 21); nine studies are classified as grade C recommendation and level of evidence 4 (articles 6, 8, 9, 13, 16, 17, 19, 20 and 22); and five studies have degree D recommendation and level of evidence 5 (articles 1, 3, 11, 14 and 24).

Table 1 – Sample characterization according to title, year, country, design, number of patients, interventions and outcomes, Fortaleza, Ceará, Brazil, 2015

Nº	Title	Year Country	Design Number of patients	Treatments	Outcomes <i>p</i> value, Odds ratio or RR and CIs
1	<i>Documentation system prototype for postpartum nursing</i>	2013 Brazil	Applied technological development research	<i>Software on the Systematization of Nursing Care</i>	Documentation system: nursing records by means of standardized language.
2	<i>Influence of an educative intervention on the knowledge level about the practice of self-care during the postpartum period in adolescents</i>	2008 Peru	Quasi-experimental study n = 86	Interviews, image exhibitions and a self-care pamphlet	Before the intervention, there was an average level (52.3%), with an overall average of 24.5 ± 10.4; after the intervention, the level of knowledge increased (100%), with an average of 94.5 ± 1.2.

To be continued

Table 1

Nº	Title	Year Country	Design Number of patients	Treatments	Outcomes <i>p</i> value, <i>Odds ratio</i> or <i>RR</i> and <i>CI</i> s
3	<i>Practices used by women at post-birth on nipple problems</i>	2006 Brazil	Qualitative study, of convergent-assistential type n = 14	Interview during a home visit	Promoting breastfeeding by discussing the topic in the mass media is the suggestion to achieve a greater number of children being exclusively breastfed until at least six months of age.
4	<i>A randomized controlled trial of the effectiveness of a postnatal psychoeducation programme on outcomes of primiparas: study protocol</i>	2015 (first online publication in June 2014) Singapore	Randomized controlled study n = 114	Psychoeducation program using home visits and telephone calls	The psychoeducation program is potentially beneficial, guaranteeing greater social support to primiparas.
5	<i>Does telephone lactation counselling improve breastfeeding practices?: a randomised controlled trial</i>	2013 Malaysia	Single blind, randomized controlled trial n = 357	Telephone lactation counseling	There was a higher percentage of mothers in the intervention group (84.3%) who practiced exclusive breastfeeding, compared to the control group (74.7%)
6	<i>Nurse home visits improve maternal/ infant interaction and decrease severity of postpartum depression</i>	2013 United States	Randomized clinical trial with three phases n = 134	Behavioral coaching to increase relational efficacy between depressed mothers and their babies	Treatment and control groups had significant increases in the quality of mother/infant interaction and decreases in depression severity ($p \leq 0,001$).
7	<i>The prevention and reduction of postpartum complications: Orem's Model</i>	2013 Turkey	Quasi-experimental study n = 63	Nursing process using Orem's self-care model	Self-care agency pretest mean score was 97.13 ± 17.20 , while the posttest mean score was 114.44 ± 13.72 .
8	<i>Communication technologies and maternal interest in health-promotion information about postpartum weight and parenting practices</i>	2012 United States	Cross-sectional study n = 145	Internet and mail based program regarding parenting and weight loss counseling	The women were very interested in weight loss programs on the internet (35.9%) and by mail (38.9%) as they were in parenting counseling on the internet (44.8%) and by mail (38.6%).
9	<i>The effect of health visitors' postpartum home visit frequency on first-time mothers: cluster randomised trial</i>	2011 Ireland	Randomized clinical trial n = 295	Home visits	Mothers from the intervention group were the most satisfied with the service and were less likely to use the emergency services for their babies at 8 weeks.
10	<i>Psychometric testing of the Breastfeeding Self-Efficacy Scale-Short form among adolescents</i>	2011 Canada	Methodological study n = 103	Scale to evaluate breastfeeding self-efficacy among adolescents	The Cronbach's alpha coefficient was 0.84 for the antenatal evaluation and 0.93 for the postnatal evaluation.
11	<i>Assessing women's sexual life after childbirth: The role of the postnatal check</i>	2011 Sweden	Descriptive, qualitative study n = 10	Counseling on sexual life after childbirth	The task-oriented counseling strategy was the obstetricians from the women and the subject-oriented one allowed the women to express their feelings and emotions better.

To be continued

Table 1

Nº	Title	Year Country	Design Number of patients	Treatments	Outcomes <i>p</i> value, Odds ratio or RR and CIs
12	<i>Identifying and supporting women with psychosocial issues during the postnatal period: evaluating an educational intervention for midwives using a before-and-after survey</i>	2011 Australia	Quasi-experimental study n = 25	Educational program on psychosocial aspects	The participants felt more confident and competent to identify women in an abusive relationship ($p = 0.002$), encouraging them to talk about psychosocial issues ($p = 0.02$) and supporting them ($p = 0.02$).
13	<i>A community-based screening initiative to identify mothers at risk for postpartum depression</i>	2011 United States	Descriptive correlational n = 5169	Postpartum depression scale	674 women had EPDS scores ≥ 10 ; 185 women with elevated EPDS scores agreed to have a SCID diagnostic interview, and 144 were diagnosed with minor or major depression.
14	<i>Translation and validation in French of a multidimensional scale to evaluate the degree of satisfaction during childbirth</i>	2010 Switzerland	Validation study n = 116	Multidimensional scale to evaluate the degree of satisfaction during childbirth	The Cronbach's alpha was 0.85. The mean score of satisfaction was 65.2 (± 12) with a minimum of 35.5 and a maximum of 86.4.
15	<i>Effects of antenatal education on maternal prenatal and postpartum adaptation</i>	2010 Turkey	Quasi-experimental study n = 120	Individual and group education for postpartum adaptation	While there was a statistically significant difference between the groups in terms of prenatal adjustment ($p < 0.01$), no difference was found in postpartum adaptation ($p = 0.077$).
16	<i>Breast-feeding knowledge and practices among mothers in Manisa, Turkey</i>	2009 Turkey	Cross-sectional, descriptive study n = 158	Breast-feeding counseling	The educational intervention was effective, with a mean pre-test score of 9.9 (SD 2.4; range 3-13) and post-test of 12.6 (SD 0.8; range 9-13), paired $t = 15.3$, $df = 157$, $P < 0.001$.
17	<i>Prenatal and postpartum focus groups with primiparas: breastfeeding attitudes, support, barriers, self-efficacy, and intention</i>	2006 United States	Descriptive, prospective study n = 8	Focus groups with primiparas on breast-feeding self-efficacy, attitude and intention, perception of support and anticipated barriers	In the prenatal groups, the major themes included beliefs that breast-feeding benefits both the mother and baby (benefits for mother and baby, availability of support, uncertainty regarding breast-feeding), and in the postpartum groups there were themes on the perception of breast-feeding itself and the importance and role of supportive others).
18	<i>The effectiveness of a nurse-managed perinatal smoking cessation program implemented in a rural county</i>	2006 United States	Quasi-experimental study n = 194	Nurse-managed smoking cessation program	Smoking cessation: 37.3% of the women from the experimental groups. 16.7% of the women from the control group (Pearson's Chi2 test ($n = 87$) = 4.37, $p = 0.037$).
19	<i>The association between depressive symptoms and social support in Taiwanese women during the month</i>	2004 China	Correlational study n = 240	Chinese ritual as social support to reduce risk of depression	It was found that a higher the level of social support received by women in the first postpartum month resulted in a smaller the risk of depressive symptoms.

To be continued

Table 1 (concluded)

Nº	Title	Year Country	Design Number of patients	Treatments	Outcomes <i>p</i> value, Odds ratio or RR and CIs
20	<i>Physical activity patterns and maternal well-being in postpartum women</i>	2004 United States	Descriptive study n = 91	Physical activity for maternal well-being	Individuals with older children or those with no other children increased domestic activity and decreased maternal occupation compared to individuals with younger children or more than one child.
21	<i>Effectiveness of an internet-based intervention enhancing Finnish parents' parenting satisfaction and parenting self-efficacy during the postpartum period</i>	2011 Finland	Quasi-experimental study n = 1300	Internet discussion forum on breast-feeding and baby care	The parenting satisfaction and parenting self-efficacy increased significantly both in the treatment group and in the control group during the postpartum period.
22	<i>Parents' experiences of using videoconferencing as a support in early discharge after childbirth</i>	2009 Sweden	Descriptive study n = 9	Parent counseling through videoconferencing	The parents felt confident with using the technology and taking control of their privacy and also felt confident having their concerns heard and receiving replies.
23	<i>Prevalence, self-efficacy and perceptions of conflicting advice and self-management: effects of a breastfeeding journal</i>	2007 Australia	Clinical trial n = 276	Journal on breastfeeding	No statistically significant differences were noted between the treatment and control groups in breastfeeding prevalence at 12 weeks or in self-efficacy during hospitalization (65% versus 64.7%, <i>p</i> = 0.83).
24	<i>Effects of listening to music on postpartum stress and anxiety levels</i>	2010 China	Randomized clinical trial n = 77	Relaxing music	The study does not provide evidence that preselected music reduces stress and anxiety levels among postpartum women.

DISCUSSION

Article 22 is an example of a descriptive design whose goal was to describe experiences of using videoconferencing to offer counseling to new parents. This study revealed that videoconferencing can support very premature cases after delivery by making the transition to motherhood/fatherhood easier, which enables new parents to be monitored by an obstetric nurse. The results from this study indicate that this technology can also be applied in rural areas at a future time⁽⁹⁾. The non-experimental studies include those of a descriptive nature, which summarize the state of the phenomenon, and those of a correlational nature, which examine the relationships between variables but do not involve manipulation of the independent variable⁽¹⁰⁾.

The authors from article 8 developed a cross-sectional study to describe access to technology by postpartum women; their views on the information given regarding postpartum weight and parent counseling; and whether these factors varied according to income level or race/ethnicity. 122 of the respondents had access to a computer connected to the internet at home (84.1%), with daily use of internet (77.6%), e-mail (75.4%), mobile (97.1%) and text messages (66.7%). There were significant racial/ethnic differences in terms of domestic internet access

and frequency of internet and e-mail use, with individuals of white ethnicity using these more than ethnic minorities. Overall, 35.9% of women expressed significant interest in an internet-based weight loss program, 38.9% in a weight loss program by mail, 44.8% in internet-based parent counseling and 38.6% in parent counseling by mail. Women with lower incomes were generally more likely to express greater interest in parent counseling by mail, while the higher-income women expressed greater interest in receiving information via the internet regarding weight loss and parent counseling⁽¹¹⁾.

The treatment used in study 21 was an online support system for parents, regarding breastfeeding and baby care, along with a discussion forum. The satisfaction and self-efficacy of parents significantly increased during the postpartum period for both the treatment and control group. The affective skills related to self-efficacy were better than the cognitive and behavioral skills. However, no effect from the treatment was found. Studying the long-term effects and more specific parent groups would be a matter of interest in the future⁽¹²⁾. Quasi-experimental designs involve manipulation but have no comparison group and no randomization group. Powerful quasi-experimental models have controls to compensate for the missing components⁽¹⁰⁾.

Study 23 involved randomly recruiting women to a control group and a treatment group. Both groups participated in

breastfeeding classes, but the treatment group was given a breastfeeding magazine in order to evaluate the effect of this treatment on breastfeeding self-management and self-efficacy. There were no statistically significant differences observed between the groups in terms of breastfeeding prevalence or breastfeeding self-efficacy. There was a statistically significant difference between the groups in relation to conflicting counseling results, but these did not explain the breastfeeding self-efficacy. The decision to breastfeed was a statistically significant contributor to breastfeeding prevalence, more than the self-efficacy of breastfeeding⁽¹³⁾.

These experimental models are considered by many to be the gold standard because these meet the criteria of causal relationship inference. To do this, they involve manipulation, control and randomization⁽¹⁰⁾. Both the experimental and the control group in study 24 received postnatal care, however the treatment (listening to music) was only applied in the experimental group. In addition, the music's effect on relieving stress and anxiety in postpartum women was evaluated. There were no significant differences in the levels of perceived stress and anxiety state between the two groups. Future research projects are recommended to consider stress factors that postpartum women are unable to control, even listening to relaxing music at home⁽¹⁴⁾.

Knowledge synthesis

Postpartum care should not be an aspect understood only by professionals, but principally by women and their family and social surroundings. In the context of nursing, based on philosophical foundations that constitute care, Orem's theory is evidenced, which asserts that self care is an act of individuals, influenced by cultural beliefs, customs and habits from the family and society, by age, stage of development and state of health. Thus, it is fitting that the nurse set out the knowledge and education that each woman has to guide her actions and avoid complications during postpartum⁽¹⁵⁾.

The individual must have sufficient self care know-how to meet her own needs. However, in situations where there is demand for care and the individual is not able to provide this, either partially or completely, themselves, the nurses are responsible for helping develop this practice. Thus, it is important that women are aware of their self care requirements during this period, as well as their own self care limits, to determine if of nurses are required to assist them⁽¹⁶⁾.

The primiparas have the greatest physical and psychosocial challenges in addition to those derived from caring for their newborn in the postpartum period. However, they do not receive adequate professional support after discharge from hospital, which does not help them adapt to their new role. In this sense, postpartum psychoeducational programs that include home visits and telephone calls have proven effective in improving women's health, preventing postpartum depression and guaranteeing greater social support for primiparas. Studies with non-English speaking women and those that include more hospitals are suggested for the future⁽¹⁷⁾.

Another effective strategy, which was implemented for the first time in a postpartum scenario with a view to facilitate communication between professionals and individuals who have recently given birth, was the advanced communication

program, which increased the comfort and the competence of obstetric nurses to identify and care for women with psychosocial problems during this period. The effect of this approach must now be evaluated in terms of the results for women⁽¹⁸⁾.

Article 2 includes information about the development of an educational treatment by means of interviews and exhibitions, which are decided according to the needs identified by the adolescent mothers, using color photographs with graphic designs about self care practices, including aspects of hygiene, nutrition, breast care, sexual activity, physical activity and relaxation. The women were given a leaflet at the end of the treatment that summarized the issues addressed. The educational treatment had a significant influence on the level of knowledge possessed by the adolescents regarding self care practices during postpartum⁽¹⁵⁾.

As regards the most frequently discussed topic in the studies, namely breastfeeding (articles 5, 10, 16, 17, 21 and 23), phone counseling was provided by nurses. Phone counseling is considered effective for increasing the rate of exclusive breastfeeding in the first postpartum month, but not during the periods of four and six months postpartum⁽¹⁹⁾. The results from another study that used the scale as the technology provide evidence that this can be a valid and reliable measurement for predicting the initiation of breastfeeding, as well as the duration, self-efficacy and exclusivity of breastfeeding among adolescents⁽²⁰⁾.

Given the key role that breastfeeding has for improving the general health of the community, breastfeeding counseling should be offered regularly, especially during the prenatal and postpartum periods, while the information provided should be consistent, realistic and evidence-based⁽²¹⁻²²⁾. Interactive methods are needed to increase the self-efficacy of parents during breastfeeding⁽¹²⁾. Article 23 shows that women's perceptions on their own ability to make decisions positively influenced the prevalence of breastfeeding up to 12 weeks after childbirth. Thus, encouraging women to participate in decision making regarding breastfeeding is a useful strategy to promote it⁽¹³⁾.

It should be noted that investment is needed by public managers to promote breastfeeding, mainly in terms of training and involving professionals in the process, as well as making them aware of it. The puerpera has adopted the practice of taking care of her family, failing to follow the guidance given to her by professionals. Thus, it is necessary to provide nursing students with new practical alternatives, moving away from giving care in outpatient and hospital institutions and moving towards domestic environment, which is vast and rich. It is suggested that breastfeeding is encouraged, and that the topic is discussed in the mass media in a manner that recognizes it as a normal part of life in the family and society⁽²³⁾.

Technologies were also the focus for postpartum depression in three of the studies (6, 13 and 19). Behavioral coaching with the objective of increasing relational efficacy among depressed mothers and their babies was only partially evaluated. The care given to the control group by the nurse and the data collection process probably made the results confused, however the home visits performed by the nurse had a positive effect on all the participants⁽²⁴⁾.

Postpartum depression screening scales were also developed and used, however, regardless of the screening tool,

treating a woman with postpartum depression can only be effective when the woman agrees to accept help. The perceived treatment barriers include availability of resources, women's reluctance to seek help, reluctance of the family and economic issues⁽²⁵⁾. In addition to the technologies already presented, the Chinese postpartum ritual of "doing the month" provides valuable social support and can help prevent postpartum depression in women from Taiwan⁽²⁶⁾.

Other topics, albeit at a lesser frequency, were discussed in the studies, such as: Systematization of Nursing Care (articles 1 and 7), weight loss (article 8), sexual activity (article 11), satisfaction with childbirth (article 14), adaptation to motherhood (article 15), smoking (article 18), physical activity (article 20) and others. The developed or used educational technologies were varied, including: scales, counseling, home visits, interviews, telephone calls, internet forums, clinical simulations, magazines, video conferencing, focus groups, group education, software, photo exhibition, pamphlets, music, behavioral coaching, material by mail and others.

Despite the undeniable contributions that these technologies provide to nursing care during postpartum, unfortunately some of them, which are recommended in the publications, can only be practiced using a computer with internet access (dependent technologies), which limits their use by low-income women, for example, which necessitates the creation of more easily accessible technologies, such as annuals, brochures, magazines, booklets and others. This, access to information can become more popularized and benefit a larger number of women.

Our study is relevant as it enabled a bibliographic survey on care strategies and technologies that are being developed

or used by nurses on women going through their postpartum period, thereby providing a synthesis of previously produced knowledge. In addition, the evidence provided in the studies allows for the best quality monitoring of the recent mothers, serving as an important device to be used by the health services to guide clinical practice in women's health care scenarios.

CONCLUSION

Educational technologies that cover postpartum care are related to both the child (breastfeeding and baby care) and the woman (mental health, weight loss, sexual life, smoking, adaptation, physical activity and relaxation). In addition, there is a tendency in international research include the woman's partner in such care, through new parent counseling, for example.

Technologies have also been developed, designed for students and professionals, as a way to facilitate the teaching and practice of professional Nursing in the care of postpartum women, which ensures that here is an improvement in care, either through the implementation of the Systematization of Nursing Care or the clinical simulation of obstetric care.

Furthermore, couples have been motivated towards self care and baby care through educational technologies, which have raised the level of knowledge and confidence during the postpartum period. The use of these technologies is therefore helpful in the process of communication and interaction between couples, nurses and students, the objective being to encourage healthy practices and discourage the inappropriate ones.

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