Educational actions for preventing pregnancy-related complications

Ações educativas para prevenção de complicações relacionadas à gestação

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RESUMO
Objetivo: identificar e descrever as evidências científicas sobre o uso de estratégias educativas na prevenção das complicações na gestação. Método: trata-se de uma revisão integrativa, realizada de abril a julho de 2018. Foram selecionados artigos em português, inglês ou espanhol. Resultados: amostra final consistiu de 27 artigos, que emergiram cinco categorias: indicadores de qualidade e satisfação da gestante na assistência pré-natal, educação em saúde, estudos de revisão na literatura, instrumento de orientação e relato de experiência profissional. Conclusão: a construção e utilização de tecnologias em saúde na prática assistencial ao pré-natal de baixo e alto risco podem viabilizar aos profissionais uma assistência de qualidade e contribuir positivamente com os indicadores de mortalidade materno-fetal.

Descritores: Complicações na Gravidez; Educação em Saúde; Cuidado Pré-Natal; Promoção da Saúde.

ABSTRACT
Objective: to identify and describe the scientific evidence on the use of educational strategies for preventing complications during pregnancy. Method: this is an integrative review, which was performed from April to July 2018. We selected papers in Portuguese, English or Spanish. Results: the final sample consisted of 27 papers, which arose five categories: quality indicators and satisfaction of pregnant women in prenatal care, health education, literature review studies, guidance tool and professional experience report. Conclusion: the development and use of health technologies in low-risk and high-risk prenatal care practices can allow professionals to provide a quality care and contribute positively to maternal-fetal mortality indicators.

Descriptors: Pregnancy Complications; Health Education; Prenatal Care; Health Promotion.

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INTRODUCTION

Prenatal care is essential during gestation, making it possible to provide guidelines and early detection of preventable changes and complications, improving indicators of maternal and infant morbidity and mortality (1). An international report pointed to global maternal mortality (MM), with an estimated 303,000 deaths in 2015, with developing countries with the highest rates (2). The Ministry of Health (MS) states that the objective of prenatal care is to ensure the development of gestation, allowing delivery of a healthy newborn, with no impact on maternal health, including addressing psychosocial aspects and educational and preventive activities (3).

In the improvement of maternal and child indicators, the Brazilian Ministry of Health implemented the Prenatal and Birth Humanization Program (PHPN), with strategies to improve access, coverage and quality of prenatal care and delivery and puerperium care (4). In the perspective of acting directly in the prevention of pregnancy-related complications, the MS points out the importance of pregnant women and companions having contact with education activities, asking questions and sharing experiences that are not normally discussed in formal consultations, in doctors’ offices, with nurses or dentists (5).

Thus, the assistance of nurses during the pregnancy-puerperal cycle is essential in the preservation and maintenance of maternal-fetal health, with legal support and technical-scientific knowledge. The main role of the nurses is to guide women and their families on the importance of prenatal care, to carry out educational activities and to identify some warning signs for immediate intervention (6). Therefore, the use of educational material can be a relevant tool for this professional with regard to health promotion, teamwork and the best indicators of care (7). In this context, the present study aimed to identify and describe the scientific evidence on the use of educational strategies in the prevention of complications during pregnancy.

METHOD

An integrative review of the literature, carried out between April and July 2018. The stages for the development of the study were: identification of the problem and definition of the relevant hypothesis or question; establishment of criteria for inclusion and exclusion; definition of the information to be extracted from the selected studies; evaluation of included publications; interpretation and presentation of the knowledge synthesis (8). The guiding question was: what are the educational actions for pregnant women during prenatal care in the prevention of complications during pregnancy?

The search for articles was carried out in the electronic databases of the National Library of Medicine (PubMed), Latin American and Caribbean Literature in Health Sciences (LILACS), Cumulative Index to Nursing and Allied Health Literature (CINAHL) and Scientific Electronic Library Online (SciELO). We used the Health Sciences Descriptors (DeCS): Prenancy, Health Education, Prenatal Care and Health Promotion and Medical Subject Headings (MeSH): Pregnancy, Health Education, Prenatal Care and Health Promotion, these being integrated through the operator boolean “and”.

The inclusion criteria were: articles in the Portuguese, English or Spanish languages and published between 2013 and 2018. Duplicate articles or articles that were not available in full were excluded and did not respond to the proposed objective.

The articles were selected, grouped into analysis categories, and forwarded to the EndNote reference manager. We used instruments to collect data about the information considered important for this study, such as: authors, title, periodical, year of publication, country, location database, objective, method, main results and conclusions or recommendations. After the steps, 27 articles were included (Figure 1).

RESULTS

The results show different contexts for the prevention of complications during pregnancy, with direct strategies during prenatal care, especially educational technologies in this period, beliefs and practices of pregnancy, perceptions of pregnant women about educational practices, the understanding of pregnant women about signs of possible dangers during pregnancy, the importance of pregnant women groups in prenatal care and knowledge of prenatal care professionals. The publications were between 2013 and 2018, coming from 11 countries, with different methodological approaches (Table 1). The studies were grouped into five categories.

DISCUSSION

The guidelines and discussions of health professionals during prenatal care contribute to better indicators, according to the results of the surveys included in this literature review. The selected studies investigated the indicators of quality and satisfaction of pregnant women in prenatal care (10,15-17,20-21,23,28-31,34-35,37), literature reviews (22,25-26), the guidance instrument (11) and the report of professional experience (36).

The sample consisted of 17 derived articles (9-12,14-15,18-19,21-22,28-33), a single descriptive or qualitative study (35). These were classified with level of evidence six; three systematic reviews of descriptive studies (20,23-24), with evidence five; three other well-designed case-control or cohort studies...
Table 1 – Distribution of scientific articles according to author, objective, country of origin, design, level of evidence and conclusions, Campinas, SP, Brazil, 2018

<table>
<thead>
<tr>
<th>AUTHORS</th>
<th>OBJECTIVES</th>
<th>COUNTRIES</th>
<th>TYPE OF STUDY</th>
<th>EVIDENCE LEVELS</th>
<th>CONCLUSIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carneiro et al.</td>
<td>Evaluate new educational tool for hypertension prevention</td>
<td>Brazil</td>
<td>Methodological and quantitative</td>
<td>VI</td>
<td>Construction of the final version of the educational tool to prevent hypertension in pregnancy</td>
</tr>
<tr>
<td>Howlett et al.</td>
<td>Investigate beliefs and practices regarding alcohol consumption during pregnancy</td>
<td>England</td>
<td>Descriptive</td>
<td>VI</td>
<td>Most women positively viewed alcohol screening during pregnancy</td>
</tr>
<tr>
<td>Alves et al.</td>
<td>Identify the perceptions of pregnant women about the use of an educational technology</td>
<td>Brazil</td>
<td>Descriptive and qualitative</td>
<td>VI</td>
<td>The strategy contributed to the teaching-learning process. The group showed great acceptance and desire to participate again</td>
</tr>
<tr>
<td>Silva et al.</td>
<td>To know the experience of pregnant women in the participation of educational activities developed during prenatal care</td>
<td>Cuba</td>
<td>Qualitative</td>
<td>VI</td>
<td>The pregnant women recognize the importance of the educational activities, the clarification of doubts, the topics addressed and the clear language of the professionals as some of the factors that stimulate the participation in these activities.</td>
</tr>
<tr>
<td>Sekoni, Aderibigbe e Akande</td>
<td>To investigate the effect of health education on the willingness to undergo HIV testing among the prenatal participants</td>
<td>Nigeria</td>
<td>Experimental</td>
<td>IV</td>
<td>Being aware of the availability of the HIV test in the hospital is a changing element in the willingness to undergo the test.</td>
</tr>
<tr>
<td>Rahman et al.</td>
<td>Explore community perceptions of components of Behavior Change Communication, Improving Motherhood, Neonatal, and Child Survival</td>
<td>Bangladesh</td>
<td>Qualitative</td>
<td>VI</td>
<td>Interventions were well accepted, with the appreciation of daily life by community members and interaction with health workers</td>
</tr>
<tr>
<td>Study</td>
<td>Objective</td>
<td>Country</td>
<td>Methodology</td>
<td>Study Type</td>
<td>Score</td>
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<tr>
<td>Fernandes et al. (15)</td>
<td>To analyze the knowledge, concerns and beliefs of a group of pregnant women about prenatal care</td>
<td>Brazil</td>
<td>Qualitative</td>
<td>VI</td>
<td></td>
</tr>
<tr>
<td>Khan et al. (16)</td>
<td>To evaluate the effect of breastfeeding counseling</td>
<td>Bangladesh</td>
<td>Experimental and randomized</td>
<td>II</td>
<td></td>
</tr>
<tr>
<td>Khoramabadi et al. (17)</td>
<td>To evaluate the effects of training in the health belief model on eating behaviors.</td>
<td>Iran</td>
<td>Randomized clinical trial</td>
<td>II</td>
<td></td>
</tr>
<tr>
<td>Hernández-Betancur e Vásquez-Truisí (18)</td>
<td>To describe the perceptions about the satisfaction of pregnant women regarding the nursing care received during prenatal care</td>
<td>Colombia</td>
<td>Phenomenological</td>
<td>VI</td>
<td></td>
</tr>
<tr>
<td>Lima (19)</td>
<td>To describe the experience of pregnant women in low-risk prenatal care at the nursing clinic</td>
<td>Brazil</td>
<td>Qualitative</td>
<td>VI</td>
<td></td>
</tr>
<tr>
<td>Frayne e Hauck (20)</td>
<td>Explore the Determinants of a Healthy and Pleasant Pregnancy</td>
<td>Australia</td>
<td>Systematic review</td>
<td>V</td>
<td></td>
</tr>
<tr>
<td>Lori et al. (21)</td>
<td>Explore the understanding and recognition of pregnant women about signs of danger in pregnancy, childbirth and baby care</td>
<td>Ghana</td>
<td>Qualitative</td>
<td>VI</td>
<td></td>
</tr>
<tr>
<td>Henrique et al. (22)</td>
<td>To verify the contributions and potentialities of a group of pregnant women as a complementary benefit to prenatal care</td>
<td>Brazil</td>
<td>Exploratory and qualitative</td>
<td>VI</td>
<td></td>
</tr>
<tr>
<td>Camillo et al. (23)</td>
<td>Identify evidence about the perceptions of pregnant women and puerperas about the actions of health education in primary care</td>
<td>Brazil</td>
<td>Systematic review</td>
<td>V</td>
<td></td>
</tr>
<tr>
<td>Silva, Lima e Osório (24)</td>
<td>To analyze the impact of educational strategies developed in low-risk prenatal care</td>
<td>Brazil</td>
<td>Systematic review</td>
<td>V</td>
<td></td>
</tr>
<tr>
<td>Adams et al. (25)</td>
<td>Evaluate a brief, low-cost and sustainable educational intervention entitled Centering Progressing Oral Health Promotion.</td>
<td>United States</td>
<td>Near-experimental</td>
<td>III</td>
<td></td>
</tr>
</tbody>
</table>

The knowledge and the precautions went through the categories: physical characteristic and organic functions of the concept, the sex of the concept, establishment of the bond mother-concept, revelations of the ultrasound examination; and influence of superstitious beliefs on gestation.

Breastfeeding counseling increased the duration of breastfeeding by 60 days.

One month after the intervention, mean scores of knowledge, perceived severity, and perceived benefits on eating habits in each group were significantly higher in the intervention group.

Prenatal care and education strengthened feelings of acceptance and identity in the role of motherhood, increasing maternal-fetal bonding.

The experiences broadened the view on the importance of nurses, on the management of services and the promotion of educational actions and health care of pregnant women.

Health professionals can help assist prospective parents in promoting health by providing appropriate resources for disease prevention, lifestyle risks, and management of chronic health concerns.

Women identified signs of danger in pregnancy and in the newborn but found it difficult to interpret and operationalize information received during antenatal consultations, indicating that health education did not translate into adequate health behaviors.

The group acted as an effective complementary tool, as it allowed a safer and more informed experience of the pregnancy-puerperal cycle.

It evidenced the need to rethink the care of this public in primary care; the role of mediator and facilitator of the nurse.

Educational practices contribute to favorable obstetric outcomes by minimizing women's doubts and desires during the gestation process, preparing them for childbirth and postpartum, having to incorporate the factors mentioned into work processes.

Oral health education and skills development activities can be effective in improving the quality of life and health of pregnant women.
<table>
<thead>
<tr>
<th>Authors</th>
<th>Title</th>
<th>Country</th>
<th>Methodology</th>
<th>Key Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abdulai et al. (26)</td>
<td>Assessing knowledge and awareness of HBV among pregnant women</td>
<td>Ghana</td>
<td>Cross-sectional</td>
<td>There is a low level of knowledge and awareness of HBV. This could potentially undermine effective prevention and control of HBV in Ghana. Hepatitis B education needs to be included in health promotion activities</td>
</tr>
<tr>
<td>Domingues et al. (27)</td>
<td>To evaluate the knowledge, practices and attitudes of professionals in the public service network and to identify the main barriers to the implementation of care protocols for syphilis management during pregnancy</td>
<td>Brazil</td>
<td>Cross-sectional</td>
<td>Barriers related to knowledge and familiarity with care protocols, difficulties in approaching STDs, user issues and organizational context were verified</td>
</tr>
<tr>
<td>Pohlmann et al. (28)</td>
<td>To know the model of healthcare used in prenatal care in Family Health Strategy units.</td>
<td>Brazil</td>
<td>Qualitative and exploratory</td>
<td>The biomedical model remains the most used in prenatal care and health education developed by the educational groups is reaffirmed as a strategy to overcome the care model</td>
</tr>
<tr>
<td>Lindsay et al. (29)</td>
<td>To explore the perceptions and experiences of Latin American Spanish and Portuguese-speaking women regarding their first child in relation to patient-provider communication and counseling on gestational weight gain and physical activity during pregnancy</td>
<td>United States</td>
<td>Mixed, qualitative study</td>
<td>The results suggest the need for greater integration of communication and counseling on nutritional gain and physical activity in prenatal care services to promote weight gain among low-income Latina women</td>
</tr>
<tr>
<td>Brondani et al. (29)</td>
<td>To analyze the perceptions of pregnant women and puerperas about experiences in the waiting room</td>
<td>Brazil</td>
<td>Descriptive and qualitative</td>
<td>The formation of groups intermediated by the problematizing dialogue, aiming to promote the reciprocity of learning and teaching, focusing on the expanded conception of health, is a relevant point in the waiting room space</td>
</tr>
<tr>
<td>Silva et al. (29)</td>
<td>Evaluate educational practices according to the “Ten Steps to the Success of Breastfeeding” in the Human Milk Bank</td>
<td>Brazil</td>
<td>Descriptive</td>
<td>The relevance of the health professional’s role in encouraging skin / skin contact, and exclusive and on-demand breastfeeding</td>
</tr>
<tr>
<td>Queiroz et al. (32)</td>
<td>To describe the changes in the care of nurses after the implementation of a group of pregnant teenagers in prenatal care, based on the expectations and experiences of pregnant adolescents</td>
<td>Brazil</td>
<td>Descriptive and qualitative</td>
<td>The considerations and the suggestions contributed to guide the nurses in the development of the group and make it a strategic area of care and support</td>
</tr>
<tr>
<td>Heberlein et al. (33)</td>
<td>To develop a framework of prenatal experiences for women and to compare experiences in individual and group prenatal care</td>
<td>United States</td>
<td>Exploratory and qualitative</td>
<td>It was important to: reduce pregnancy-related stress; develop confidence and knowledge to improve health; prepare for labor, birth and newborn and have supportive relationships</td>
</tr>
<tr>
<td>Santos et al. (34)</td>
<td>Offer space for exchange of experiences and construction of joint knowledge of pregnant women and health professionals</td>
<td>Brazil</td>
<td>Descriptive, experience report</td>
<td>The experience of health promotion with pregnant women, serving to show the importance of creativity and the renovation of the nursing professional and the team in the implementation of integral care</td>
</tr>
<tr>
<td>Patra, Arokiasamy Goli(35)</td>
<td>To examine whether the report of maternal health complications is defined by the level of women’s health knowledge</td>
<td>India</td>
<td>Descriptive and qualitative</td>
<td>Women with higher levels of health knowledge reported more complications in pregnancy and postpartum and used more health services</td>
</tr>
</tbody>
</table>
The studies that evaluated quality indicators about the prenatal care, focused on knowledge to prevent complications during pregnancy. Gestational hypertension disorders are a major complication in the prevention of hypertension during pregnancy. Oral health education was cited as important for pregnant women and quality of life.

In an Iranian study, the application of an education model based on “health beliefs” contributed to the transmission of information to pregnant women, when compared to the indicators of the control group. Another study highlighted prenatal education for collective transmission of information to pregnant women, when compared to the indicators of the control group. A study built an instrument for education in the prevention of hypertension during pregnancy. Gestational hypertension disorders are a major public health problem in several countries, which makes the education of pregnant women important for the improvement of specialized services, early diagnosis and prior management of possible related complications.

Trained health professionals are considered determining resources to reduce pregnancy complications, as well as their practices, and should be continually adequate and adapted to the local reality.

CONCLUSION

No studies were found emphasizing the importance of educational actions in high-risk prenatal care, since at this level of care the pregnant women need specialized care, focused on knowledge to prevent complications during pregnancy.

Thus, it is necessary to build and use health technologies in low-risk and high-risk prenatal care.
practice, since this strategy enables professionals to offer quality care and contributes positively to maternal-fetal mortality indicators.

This review presented limitations: some studies did not detail the practice utilized and also the period of educational action during the pregnancies, which could lead to a better use of the technologies studied; the methods outlined and the approaches encountered did not support the elaboration of a meta-analysis.

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