

RESEARCH ARTICLE (ORIGINAL) 

Mothers' and fathers' learning needs during pregnancy

Necessidades de aprendizagem das mães e dos pais durante a gravidez

Necesidades de aprendizaje de las madres y de los padres durante el embarazo

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Abstract

Background: The adjustment to pregnancy implies that those who experience it incorporate a set of skills for health promotion. The disciplinary knowledge supporting the identification of learning needs is still limited.

Objective: To identify mothers' and fathers' learning needs to promote self-care during pregnancy.

Methodology: Cross-sectional and qualitative study with 80 mothers and 20 fathers intending to become pregnant or with a previous or current pregnancy. Ethical principles were safeguarded. Interviews were conducted between January and June 2016. Data were subjected to content analysis (grounded analysis) using NVivo11.

Results: The learning needs identified by mothers and fathers were divided into the following categories: preparing for pregnancy, adjusting to pregnancy, caring for oneself, caring for the baby (fetus), and ensuring health surveillance.

Conclusion: Three domains of care needs emerged in the adjustment to pregnancy: body process, self-care/self-monitoring, and fetal health. Mothers and fathers have overlapping needs, so the couple can be considered a client of care.

Keywords: pregnancy; self-care; educational needs assessment; nursing care

Resumo

Enquadramento: A adaptação à gravidez implica que quem a vivencia incorpore um conjunto de competências que permitam a promoção da saúde. O conhecimento disciplinar que suporta a identificação das necessidades de aprendizagem é ainda limitado.

Objetivo: Identificar as necessidades de aprendizagem, das mães e dos pais, para a promoção do autocuidado durante a gravidez.

Metodologia: Estudo transversal, qualitativo. Participaram 80 mães e 20 pais, com intenção de engravidar ou gravidez atual ou prévia. Foram salvaguardados os princípios éticos. Foram realizadas entrevistas, entre janeiro e junho 2016. Os dados foram submetidos a análise de conteúdo (*grounded analysis*), com recurso ao NVivo11.

Resultados: As necessidades de aprendizagem identificadas pelas mães e pais foram categorizadas em preparar-se para a gravidez; ajustar-se à gravidez; cuidar de si; cuidar do bebé (feto); assegurar a vigilância da saúde.

Conclusão: Para se ajustarem à gravidez emergem três domínios de necessidades em cuidados - processo corporal, autocuidado/autovigilância e saúde fetal. As necessidades identificadas na mãe e pai são sobreponíveis, pelo que poder-se-á considerar o casal como cliente dos cuidados.

Palavras-chave: gravidez; autocuidado; avaliação das necessidades educacionais; cuidados de enfermagem

Resumen

Marco contextual: La adaptación al embarazo implica que quienes lo viven incorporan un conjunto de habilidades que permiten la promoción de la salud. Los conocimientos disciplinarios que apoyan la identificación de las necesidades de aprendizaje son todavía limitados.

Objetivo: Identificar las necesidades de aprendizaje de las madres y los padres para la promoción del autocuidado durante el embarazo.

Metodología: Estudio transversal y cualitativo. Los participantes fueron 20 padres y 80 madres con intención de quedarse embarazadas, que estaban embarazadas o que lo habían estado anteriormente. Se respetaron los principios éticos. Las entrevistas se realizaron entre enero y junio de 2016. Los datos se sometieron a un análisis de contenido (*grounded analysis*), para lo cual se recurrió a NVivo11.

Resultados: Las necesidades de aprendizaje identificadas por las madres y los padres se clasificaron como prepararse para el embarazo; adaptarse al embarazo; cuidar de uno mismo; cuidar del bebé (feto); asegurar la vigilancia de la salud.

Conclusión: Para adaptarse al embarazo, surgen tres ámbitos de necesidades de cuidados: proceso corporal, autocuidado/autovigilancia y salud fetal. Las necesidades identificadas en la madre y el padre se superponen, por lo que la pareja puede ser considerada como cliente de los cuidados.

Palabras clave: embarazo; autocuidado; evaluación de las necesidades educativas; atención de enfermería

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Introduction

Specialist nurses in maternal and obstetric health nursing (MOHN) have been empowering women and families for self-care and self-surveillance and promoting a positive experience of the pregnancy process through individual or group interventions as an integral part of their mission (Ordem dos Enfermeiros [OE], 2018). These prenatal care interventions designed and implemented by nurses, namely by specialist nurses in MOHN, are key to saving lives, improving well-being and healthcare utilization, and increasing the quality of care.

Today, the transition to parenthood is a desired experience by most couples, and, for this reason, even during pregnancy, they are highly engaged in the adoption of healthy behaviors and early preparation for the next stage (Cardoso, 2011; Jones et al., 2019). This predisposition for active participation is visible in women, but a growing interest has also been observed among men (Andersson et al., 2016), particularly regarding preparation for parenthood (Entsieh & Hallström, 2016; Mnizak et al., 2019). The adoption of a model of care centered on the pregnant couple, as a facilitator of their active participation in the whole process, requires that assessment, diagnosis, and interventions focus on meeting their care needs (Andersson et al., 2016; Almalik & Mosleh, 2017; Direção-Geral da Saúde [DGS], 2015; Jones et al., 2019; OE, 2018; World Health Organization [WHO], 2018).

However, there are no studies available on the nursing-sensitive needs of Portuguese women and men to maintain health during pregnancy. Therefore, this study aimed to identify the learning needs of mothers and fathers to promote self-care during pregnancy.

Background

The pendulum of the quality and satisfaction with nursing care can be the response to clients' perceived needs. Therefore, identifying the needs is an essential step in the planning and delivery of care. However, the disciplinary knowledge of mothers' and fathers' perceptions of their learning needs during pregnancy to promote health and ensure the maximum health potential of their child is still limited. Most of the studies focus on specific topics, such as nutrition (Lucas et al., 2014), physical activity (Brobberg et al., 2015), or medication intake during pregnancy (Ceulemans et al., 2019). Some studies identify broader needs, covering several topics of interest but focusing only on women's perspectives (Almalik & Mosleh, 2017; Kamali et al., 2017). Some relevant topics for women include the management of major complications, medical evaluations and consultations, proper diet, information about medications and supplements, fetal care, and complications after childbirth.

On the perceived needs of women and men throughout pregnancy, Jones et al. (2019) sought to bring the content of prenatal visits closer to mothers' and fathers' perceived needs. They found that mothers' learning needs can be grouped into three major themes: developing relationships

(with the fetus/baby, friends, and family); emotional well-being; and practical aspects. They also observed that mothers and fathers have different learning needs at different times. Mothers were clear about what they wanted to know, but fathers had more vague needs. This study highlights fathers' difficulty in knowing what they need to know. Palsson et al. (2017) found similar results and a significant individual diversity.

The promotion of one's health during pregnancy refers to the phenomenon of self-care, which can be understood based on Orem's Self-Care Deficit Theory (Orem, 2001). In general, self-care is a human regulatory function that individuals perform on their own to preserve life, health, development, and well-being. That is, it is learned and performed according to their needs. As a stage of human development with specific characteristics, pregnancy is understood here as a condition that will entail new needs and, consequently, new self-care requirements.

Thus, in the Portuguese context, any contribution to the practices that promote the self-care and well-being of pregnant women and their partners should start by identifying their perceived learning needs.

Research question

What are the perceived learning needs of mothers and fathers to promote self-care during pregnancy?

Methodology

A cross-sectional, descriptive-exploratory study with a qualitative approach was conducted. Participants were selected with the collaboration of health professionals from the institutions where the interviews were conducted, using a convenience or accidental sampling technique. The following inclusion criteria were applied: agreeing to participate in the study after knowing its objectives, intending to experience a pregnancy soon/being pregnant/having recently experienced a pregnancy. A total of 80 women and 20 men were interviewed. The difference in the number of participants can be explained by the low participation of fathers in health consultations and programs during the period in which the study was conducted. Women had a mean age of 32 years (32.3 ± 5.98), ranging from 16 to 45 years, and men had a mean age of 34 years (34.2 ± 7.52), ranging from 25 to 56 years. Participants had, on average, 12 years of schooling (12.95 ± 3.74), most were married (56%), and about half lived in an urban area (49%). Participants were distributed differently across the five moments planned for the interviews: preconception period (8%), 1st trimester (22%), 2nd trimester (23%), 3rd trimester (37%), and postpartum period (10%). The majority of participants (61%) were experiencing their first pregnancy.

The semi-structured interview script was divided into thematic blocks based on the study objectives. The script was pretested in two interviews (with a mother and a father). The pretest results revealed no need to change the

questions. In addition to data for sociodemographic characterization and obstetric history, it included questions that allowed answering the main question: “What do you think it will be/is/was necessary to learn to confidently care for yourself and ensure your health and that of your child during pregnancy? How and when the questions were posed depended on the course of each interview, with an average duration of 20 minutes. At the end of each interview, the collected content was shared with the participants to obtain their agreement and validation.

Before data collection, all institutions and departments where the study would be conducted were contacted to confirm the previously granted authorizations and the interviews’ schedule. Health professionals identified potential participants based on the records of family planning, maternal health, and puerperium consultations and those enrolled in the health programs “Preparation for Childbirth and Parenthood” and “Postpartum Recovery”. The head health professional made the first contact with the participants. After expressing their interest in participating in the study, the participants were explained the objectives and procedures by the researcher and gave their informed consent.

The interviews were conducted individually in healthcare institutions in the Northern region of Portugal (Personalized Health Care Units, Family Health Units, Community Care Units, and hospital outpatient consultation) between January and June 2016.

The Ethics Committee of ARS Norte authorized the study (Opinion No. 120/2015, study T489).

Data collection reached theoretical saturation when the new interviews no longer added new content to the categories or changed the categories already found. Although the number of male participants was lower than the number of female participants, there was less variability in men’s answers, so theoretical saturation was reached between the 14th and 16th interviews. However, four more interviews were conducted for confirmation. There was greater variability in women’s answers, so saturation was only reached around the 80th interview. The interviews were transcribed, analyzed, and organized following the microanalysis grounded analysis method (Strauss & Corbin, 2008), using NVivo 11 software. This analysis was guided by specific questions derived from the initial question. The first step was the careful selection of the material referring to aspects of self-care during pregnancy. Subsequently, the interviews were coded by breaking down the texts into units of analysis and building different categories in a process of constant comparison. These categories established the conceptual areas of the learning needs for self-care during pregnancy and included subcategories that described the themes within each area.

Results

Mothers’ and fathers’ perspectives of the learning needs for caring for their health and ensuring their child’s health during pregnancy were grouped into five categories: *Preparing for pregnancy*; *Adjusting to pregnancy*; *Caring for*

oneself; *Caring for the baby (fetus)*; *Ensuring health surveillance*.

These categories include learning needs identified by mothers and fathers, even though some themes within two of these categories have emerged exclusively from the mothers’ perspectives (Table 1).

Preparing for pregnancy

In the preconception period, mothers and fathers highlighted the need to learn more about the preconception consultation and whom they should go to. Only mothers reported learning needs about vaccination in this period. “Even before pregnancy, when you decide to get pregnant, what should you do?” (I 33, male).

Adjusting to pregnancy

Both mothers and fathers reported that, in the beginning, it is difficult for them to verbalize what they will need to learn, especially those experiencing their first pregnancy. However, both mothers and fathers identified needs related to adjustment, health status, evolution of pregnancy, symptomatology, illnesses, or complications. “I have no idea what specific care pregnancy requires, and I would like to know more” (I 2, male).

“What happens to our body, the changes ... and the care.” (I 45, female).

They often mentioned the need to know if the pregnancy was going as expected and how it would evolve. Both mothers and fathers mentioned the need for a pregnancy *timeline*. “About the various stages of pregnancy, which I have no idea . . .” (I 1, female). “I use apps that inform about the evolution of pregnancy . . .” (I 70, male).

Concerning the symptoms during pregnancy, fathers reported that they wanted to know if the symptoms were normal and how they could solve them more often than mothers. “What can I do for nausea? was the first question . . .” (I 15, female); “Her symptoms, whether or not they are normal” (I 30, male).

The theme of illnesses and complications of pregnancy was very frequently mentioned by both mothers and fathers, namely the prevention measures and the implications for the fetus. Fathers mentioned needing to know more about how they could help in case of any problem, assuming themselves as key providers of help and support. “Any pain that she would feel and what I should do, if something happens what can I do?” (I 46, male); “The other has to be alert to some signs . . .” (I 6, male).

Caring for oneself

This category included the themes related to mothers’ self-care activities, even though many of them had the father’s participation, namely diet, emotions, the couple’s sexuality and relationship, and aspects of safety and accident prevention. Fathers reported needing to know more even about those aspects that do not involve them directly, such as body care, clothing, and medication or supplements, often because of their potential implications for the child’s (fetus) health. “If painting your nails is harmful, if dying your hair is harmful . . .” (I 48, male); “About the pregnant women’s body position at the end

of pregnancy.” (I 6, male); “Suitable clothes that do not tighten the stomach” (I 46, male).

The concern with food should be highlighted due to the frequency with which it was mentioned, namely the aspects related to food selection or preparation and the prevention of food poisoning. Mothers mentioned weight gain control throughout pregnancy more often than fathers. “From my perspective, the eating habits, when the test was positive, the question was: ‘Now what? What can you eat?’ (I 24, male); “I had to learn how to wash vegetables very well, and I had doubts about using the product from the supermarket to disinfect . . .” (I 59, female).

Body care included aspects related to body hygiene, the choice of hygiene and cosmetic products, and massages. The aspects related to postures and body mechanics focused mainly on their adequacy in late pregnancy.

The theme of physical activity and rest included aspects such as physical activities, issues about the greater or lesser need for rest, and the most appropriate type of exercise during pregnancy. Mothers mentioned physical activity more often than fathers, and only mothers mentioned pelvic floor exercises.

Understanding emotional changes, their effects, and learning to cope with negative emotions were aspects mentioned on the theme related to emotions, particularly by the fathers. “The emotional state and the effects on the well-being of the mother and the baby.” (I 46, male); “Learning to be a point of emotional balance . . .” (I 33, male).

The theme of the couple’s sexuality and relationship includes aspects such as the adaptation of sexual practices and how pregnancy influences the couple’s relationship. Although reported by both mothers and fathers, some women mentioned that it was a personal subject that they would not like to share with health professionals. The idea that sexual intercourse can harm the fetus’ well-being was still prevalent in the interviews. “We don’t talk about these more personal things like our sex life with the doctor or the nurse.” (I 1, woman); “The experience of sexuality, whether it might harm the baby’s development . . .” (I 48, male).

Concerning the theme of medications and supplements, the needs related mainly to knowing which medications pregnant women can take and why they must take some medications and/or supplements.

For both parents, the needs related to the theme of exposure to risk factors included the choice of home hygiene products, the use of harmful substances, and the environment. “Learning about places with radiation, sudden temperature changes, pollution, crowded places . . .” (I 6, male).

The theme of occupational activity, which was reported by both mothers and fathers, relates to aspects such as managing the workplace environment, physical activities, occupational stress, and knowledge of socio-occupational rights. “About informing your boss, information about sick leave, pregnancy rights . . .” (I 45, female).

The fathers often reported issues related to safety and accident prevention, namely those related to driving, airplane trips, and pet care. “Knowing if I should be more careful with animals, should I wear gloves? A mask?” (I 49, female); “And careful with driving the car, because now there are more risks” (I 61, male).

Caring for the baby (fetus)

One of the most frequently mentioned themes by both parents was knowing about the baby’s development and growth throughout the pregnancy, namely the baby’s physical characteristics, gender, and skills. Many of the learning needs in other categories also had an underlying concern for ensuring the fetus’s maximum health potential. Thus, the theme of the baby’s health includes the need for information about the baby’s health status and well-being, fetal body postures, and the influence of some factors that can be controlled. “As well as the baby’s heart rate, because they just say everything’s fine!” (I 86, female); “The baby’s development week by week, how big the baby is, what the baby can feel or do.” (I 16, female); “When the baby starts hearing, moving, what the ultrasound measurements mean . . .” (I 76, male).

The interaction with the baby includes aspects related to intrauterine communication.

Only the mothers mentioned the fetal behavioral patterns, namely knowing how to identify the first fetal movements and how this pattern would evolve throughout pregnancy.

Ensuring health surveillance

This category covers relevant issues for both participants due to the comprehensiveness and frequency with which they were mentioned. It includes the themes related to prenatal consultation, clinical examinations and screenings, departments and professionals. The theme of consultations is related to knowing about the scheduled consultations and the assessments performed in each of them. The most frequently mentioned theme was the need for information about the complementary exams performed during pregnancy, such as ultrasounds, laboratory tests, amniocentesis, and screening for fetal chromosomal abnormalities. They wanted to receive information specifically about when these exams are scheduled to occur and their indications, results, and implications. The organization of departments and professionals includes aspects such as the department where they should perform their health surveillance and/or the professional whom they should choose.

“The number of consultations during pregnancy, the time elapsed between them, all the planning when she’s pregnant like consultations, routines . . .” (I 58, male); “The tests that you’re going to do, how they’re done, what they’re for.” (I 46, male); “I think I have to go, but I would like to know why I have to go to the health center... we should be better referred to . . .” (I 4, female); “I need to know how to reconcile the available health resources - health center, private consultations, hospital consultations?” (I 33, male).

Table 1*Mothers' and fathers' perceived learning needs to promote self-care during pregnancy*

Knowledge about:		Mother	Father
Preparing for pregnancy	Preconception consultation	X	X
	Preconception vaccination	X	
Adjusting to pregnancy	Adaptation to pregnancy	X	X
	Health status and evolution of pregnancy	X	X
	Symptomatology	X	X
	Illnesses and complications	X	X
Caring for oneself	Diet and weight evolution	X	X
	Body care	X	X
	Posture and body mechanics	X	X
	Clothing	X	X
	Physical activity and rest	X	X
	Emotions	X	X
	Couple's sexuality and relationship	X	X
	Medications and supplements	X	X
	Exposure to risk factors	X	X
	Occupational activity	X	X
Safety and accident prevention	X	X	
Caring for the baby (fetus)	Development and growth	X	X
	Health status	X	X
	Behavioral patterns	X	
	Interaction with the baby	X	X
Ensuring health surveillance	Prenatal consultation	X	X
	Clinical examinations and screenings	X	X
	Services and professionals	X	X

Discussion

The parents' perceived learning needs to confidently ensure their health and their child's health during pregnancy contributed to building categories to facilitate the design and implementation of nursing care and, consequently, promote self-care in pregnant couples in Portugal. These results confirm the parents' interest in the adoption of healthy behaviors and the early preparation for the next stage. They also confirm that health care during pregnancy should include the pregnant couple, which is also a recommendation of other studies (Entsieh & Hallström, 2016; Palsson et al., 2017).

Contrary to Jones et al. (2019), no significant differences were observed between mothers' and fathers' needs. Therefore, based on the results, it can be said that mothers and fathers have overlapping needs.

However, mothers had fewer difficulties identifying and specifying their needs, possibly because they are experiencing this bodily process. Jones et al. (2019) and Palsson et al. (2017) also found that fathers had more difficulties identifying their needs. This finding may also reflect the coexistence of traditional models of masculinity and the growing dissemination of a *caring masculinity*, which is particularly evident in the consolidated increase in the use of paternity leave and the fact that younger men are more receptive to measures promoting *early engaged fatherhood* (Wall et al., 2016). Gender issues may be present when the mother's well-being and its potential repercussions on the baby's health serve as a justification for fathers to

assume themselves as key support, that is, a protective factor during pregnancy.

This study confirms the individual variability of the learning needs found in other studies (Entsieh & Hallström, 2016; Palsson et al., 2017). This variability was observed not only in the content, but also in the amount of information referred to as necessary: if some seemed to require all the information to acquire new knowledge and skills, others felt no need at all. The difficulty in managing the amount of information available was also reported.

These needs started being felt during the preconception period, even though first-time parents had more difficulties in anticipating the necessary skills. However, as pregnancy evolved, parents increased their ability to formulate more specific learning needs and expectations, as observed by Jones et al. (2019). Still, the lack of attention on the earliest needs may extend into the first trimester of pregnancy, given that the number of consultations or health programs are scarce in the early period of pregnancy. This gap can have significant repercussions, as the first trimester is a critical period for healthy fetal development and women's emotional well-being.

Overall, the themes identified in each category are common to many participants and consistent with findings from other studies (Almalik & Mosleh, 2017; Jones et al., 2019; Kamali et al., 2017). The following themes should be highlighted due to the high frequency with which parents mentioned them: complementary exams, diet, fetal development, illnesses or complications, and prenatal consultations.

The substantial amount of learning needs about the complementary exams recommended throughout pregnancy calls into question the real impact of these procedures on their well-being and the information obtained for informed decision-making. Similar to other studies, these results reveal the participants' willingness to obtain more information about their indications, results, and implications (Ahman et al., 2016).

Participants also expressed their interest in obtaining more information about the baby's development and the evolution of pregnancy, perhaps because pregnancy is associated with relevant changes that couples feel the need to anticipate and competently cope with or because these topics are rarely addressed in consultations and health programs. According to some participants in this study, the answer to these needs is often found on websites or apps. In a literature review, Hughson et al. (2018) highlighted the huge potential of these resources and found that the most used digital apps were those that contained information about pregnancy health and fetal development. These authors indicated the need for better guidance for women's use of these resources, and it can now be added that this guidance should be extended to men.

A limitation of this study was its convenience sample obtained in health services, which may have made it easier to refer to topics commonly addressed or related to these settings. All participants were Caucasian, even though the sample was heterogeneous in other characteristics such as age and education. The risk of loss of information due to the interviews' written rather than audio record was minimized because all procedures were performed to achieve data saturation. Finally, these results may not be generalized to other parents' perceived needs in other socio-cultural realities.

Conclusion

Parents' perceived learning needs to ensure self-care during pregnancy were grouped into five categories. Three domains of nursing care needs emerged from these categories: 1) body process; 2) self-care and self-monitoring; and 3) fetal health. The needs identified by both mothers and fathers are overlapping, so the couple can be considered as a client of care. Thus, the term *pregnant couple* can assume a prominent place in how clients of care are seen during pregnancy, and the MOHN consultation can be scheduled for both parents simultaneously.

The main difference observed in this study was the fathers' major difficulties in identifying and, above all, specifying their needs, perhaps because they are not the ones experiencing the body process or this model of engagement is very recent and without previous references. However, those willing to learn identified needs in all categories, except for the knowledge about vaccination in the pre-conception period and fetal behavioral patterns.

Identifying these needs contributes to designing and delivering care to the couple focused on the promotion of self-care during pregnancy. The results of this study are

the first step towards the development of a tool to guide the diagnostic process in the consultations by specialist nurses in MHON.

Author contributions

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References

- Ahman, A., Sarkadi, A., Lindgren, P., & Rubertsson, C. (2016). It made you think twice: An interview study of women's perception of a webbased decision aid concerning screening and diagnostic testing for fetal anomalies. *BMC Pregnancy and Childbirth*, *16*(267), 1-10. <https://doi.org/10.1186/s12884-016-1057-y>
- Almalik, M., & Mosleh, S. (2017). Pregnant women: What do they need to know during pregnancy? A descriptive study. *Women and Birth*, *30*(2), 100-106. <https://doi.org/10.1016/j.wombi.2016.09.001>
- Andersson, E., Norman, A., Kanlinder, C., & Plantin, L. (2016). What do expectant fathers expect of antenatal care in Sweden? A cross-sectional study. *Sexual & Reproductive Healthcare*, *9*, 27-34. <https://doi.org/10.1016/j.srhc.2016.06.003>
- Broberg, L., Ersbøll, A., Backhausen, M., Damm, P., Tabor, A., & Hegaard, H. (2015). Compliance with national recommendations for exercise during early pregnancy in a danish cohort. *BMC Pregnancy and Childbirth*, *15*(317), 1-8. <https://doi.org/10.1186/s12884-015-0756-0>
- Cardoso, A. M. (2011). Tornar-se mãe, tornar-se pai - Estudo sobre a avaliação das competências parentais [Doctoral thesis, Universidade Católica Portuguesa]. Repositório Institucional da Universidade Católica Portuguesa. https://repositorio.ucp.pt/bitstream/10400.14/20745/1/Tornar-se%20mae_tornar-se%20pai_Estudo%20sobre%20avaliacao%20compet%C3%Aancias%20parentais.pdf
- Ceulemans, M., Calsteren, K., Allegaert, K., & Foulon, V. (2019). Beliefs about medicines and information needs among pregnant women visiting a tertiary hospital in Belgium. *European Journal of Clinical Pharmacology*, *75*, 995-1003. <https://doi.org/10.1007/s00228-019-02653-w>
- Direção-Geral da Saúde. (2015). *Programa nacional para a vigilância da gravidez de baixo risco*. <https://www.dgs.pt/em-destaque/programa-nacional-para-a-vigilancia-da-gravidez-de-baixo-risco.aspx>
- Entsieh, A., & Hallström, I. (2016). First-time parents' prenatal needs for early parenthood preparation: A systematic review and meta-synthesis of qualitative literature. *Midwifery*, *39*, 1-11. <https://doi.org/10.1016/j.midw.2016.04.006>
- Hughson, J., Daly, O., Woodward-Kron, R., Hajek, J., & Story, D. (2018). The rise of pregnancy apps and the implications for culturally and linguistically diverse women: Narrative review. *JMIR Mhealth Uhealth*, *6*(11), e189. <https://doi.org/10.2196/mhealth.9119>

- Jones, C., Wadehul, F., & Jomeen, J. (2019). Maternal and paternal expectations of antenatal education across the transition to parenthood. *British Journal of Midwifery*, 27(4), 235-241. <https://doi.org/10.12968/bjom.2019.27.4.235>
- Kamali, S., Ahmadian, L., Khajoue, R., & Bahaadinbeigy, K. (2017). Health information needs of pregnant women: Information sources, motives and barriers. *Health Information & Libraries Journal*, 35, 24-37. <https://doi.org/10.1111/hir.12200>
- Lucas, C., Charlton, K., & Yeatman, H. (2014). Nutrition advice during pregnancy: do women receive it and can health professionals provide it? *Maternal and Child Health Journal*, 18, 2465-2478. <https://doi.org/10.1007/s10995-014-1485-0>
- Mnizak, C., O'Brien, H., Greyson, D., Chabot, C., & Shoveller, J. (2019). Nothing's available: Young fathers' experience with unmet information needs and barriers to resolving them. *Information Processing and Management*, 57(2), 1-14. <https://doi.org/10.1016/j.ipm.2019.102081>
- Palsson, P., Persson, E., Ekelin, M., Hallstrom, I., & Kvist, L. (2017). First-time fathers experiences of their prenatal preparation in relation to challenges met in the early parenthood period: Implications for early parenthood preparation. *Midwifery*, 50, 86-92. <https://doi.org/10.1016/j.midw.2017.03.021>
- Ordem dos enfermeiros. (2018). *Regulamento dos Padrões de Qualidade dos Cuidados Especializados em Enfermagem de Saúde Materna e Obstétrica*. https://www.ordemenfermeiros.pt/media/8194/pon-to-5_regulamento-padr%C3%B5es-de-qualidade-ce-eesmo-1.pdf
- Orem, D. E. (2001). *Nursing: Concepts of Practice* (6th ed.). Mosby.
- Strauss, A., & Corbin, J. (2008). *Pesquisa qualitativa: técnicas e procedimentos para o desenvolvimento de teoria fundamentada* (2^a ed.). Artmed.
- Wall, K., Cunha, V., Atalaia, S., Rodrigues, L., Correia, R., Correia, S., & Rosa, R. (2016). *Livro Branco: Homens e igualdade de género em Portugal*. Instituto de Ciências Sociais da Universidade de Lisboa. <https://repositorio.ul.pt/handle/10451/26649>
- World Health Organization. (2018). *WHO recommendations on antenatal care for a positive pregnancy experience: Summary highlights and key messages from the world health organization's 2016 global recommendations for routine antenatal care*. <https://apps.who.int/iris/bitstream/handle/10665/259947/WHO-RHR-18.02-eng.pdf>

