

Educational strategies in the pregnancy-puerperium cycle: convergent care research

Estratégias educativas no ciclo gravídico puerperal: pesquisa convergente assistencial

Estrategias educativas en el ciclo gravídico puerperal: investigación convergente asistencial

-  Sirleide Corrêa Rangel¹
-  Delmar Teixeira Gomes²
-  Betina Horner Schlindwein Meirelles³
-  Beatriz Francisco Farah⁴
-  Geovana Brandão Santana Almeida⁵
-  Débora Nogueira Coelho⁶
-  Nádia Fontoura Sanhudo⁷

^{1,2,4,5,6,7}Federal University of Juiz de Fora, (UFJF). Juiz de Fora (MG), Brazil.

³Federal University of Santa Catarina (UFSC). Florianópolis (SC), Brazil.

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Corresponding author

Name: Sirleide Corrêa Rangel

E-mail: sirleiderangel@gmail.com

ABSTRACT

Objective: to collectively restructure a project of educational strategies related to the pregnancy and postpartum cycle, with postpartum women and health professionals from a secondary care prenatal monitoring service. **Method:** convergent care research with a qualitative approach. The data, collected through semi-structured interviews with 16 postpartum women and 9 health professionals, and discussion groups with 8 health professionals, were produced, interpreted using the theoretical concepts of problematizing pedagogy and complex thinking, and analyzed using content analysis. **Results:** two categories were established: perceptions of postpartum women and health professionals about caring-educating in prenatal care and educational strategies in prenatal care: proposals for (re)construction. In the discussion with the group of professionals, the need to include active methodologies, digital technologies in educational processes, and interdisciplinary work emerged. **Conclusion:** the restructuring of the project of educational actions related to the pregnancy-postpartum cycle occurred based on action-reflection -action of the educational process in a participatory, dialogical, liberating, and problematizing conception, in a participatory, dialogical, liberating, and problematizing conception, with the potential to empower women to take an active stance during labor, delivery, and the postpartum period, aiming at autonomy in the context of birth and care for their newborn.

Descriptors: Nursing; Health education; Health promotion; Prenatal care; Health strategies Maternal and child health.

RESUMO

Objetivo: reestruturar coletivamente um projeto de estratégias educativas relacionadas ao ciclo gravídico puerperal, com as puérperas e os profissionais de saúde de um serviço de acompanhamento pré-natal de atenção secundária. **Método:** pesquisa convergente assistencial de abordagem qualitativa. Os dados, coletados por meio de entrevistas semiestruturadas com 16 puérperas, 9 profissionais de saúde e grupos de discussão realizados com 8 profissionais de saúde, foram produzidos, interpretados pelas concepções teóricas da pedagogia problematizadora e do pensamento complexo, analisados segundo o método de análise de conteúdo. **Resultados:** foram estabelecidas duas categorias: percepções das puérperas e profissionais de saúde acerca do cuidar-educar no serviço pré-natal; e estratégias educativas no serviço pré-natal: propostas de (re)construção. Na discussão com o grupo de profissionais, emergiu a necessidade de incluir metodologias ativas, tecnologias digitais nos processos educativos e o trabalho interdisciplinar. **Conclusão:** a reestruturação do projeto de ações educativas relacionadas ao ciclo gravídico puerperal ocorreu a partir da ação-reflexão-ação do processo educativo numa concepção participativa, dialógica, libertadora e problematizadora, com potencial para empoderar as mulheres a assumirem uma postura ativa no momento do trabalho de parto, parto e puerpério, visando à autonomia no contexto do nascimento e no cuidado com seu recém-nascido. **Descritores:** Enfermagem; Educação em saúde; Promoção da saúde; Cuidado pré-natal; Estratégias de saúde; Saúde materno infantil.

RESUMEN

Objetivo: reestructurar colectivamente un proyecto de estrategias educativas relacionadas con el ciclo embarazo-puerperal, con puérperas y profesionales de la salud de un servicio de atención prenatal de atención secundaria. **Método:** investigación convergente asistencial con enfoque cualitativo. Los datos, recolectados a través de entrevistas semiestructuradas con 16 puérperas, 9 profesionales de la salud y grupos de discusión realizados con 8 profesionales de la salud fueron producidos, interpretados por las concepciones teóricas de la pedagogía problematizadora y el pensamiento complejo, analizados de acuerdo con el método de análisis de contenido. **Resultados:** se establecieron dos categorías: percepciones de las puérperas y de los profesionales de la salud sobre el cuidado y la educación en el servicio prenatal; y estrategias educativas en el servicio prenatal: propuestas para la (re)construcción. En la discusión con el grupo de profesionales, surgió la necesidad de incluir metodologías activas, tecnologías digitales en los procesos educativos y trabajo interdisciplinario. **Conclusión:** la reestructuración del proyecto de acciones educativas relacionadas con el ciclo embarazo-puerperio ocurrió a partir de la acción-reflexión-acción del proceso educativo en una concepción participativa, dialógica, liberadora y problematizadora, con el potencial de empoderar a las mujeres para que asuman una postura activa en el momento del trabajo de parto, parto y puerperio, con el objetivo de la autonomía en el contexto del parto y en el cuidado de su recién nacido.

Descriptores: Enfermería; Educación en salud; Promoción de la salud; Atención prenatal; Estrategias de salud; Salud materno-infantil.

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Introduction

The pregnancy and postpartum cycle is a unique time in a woman's life, marked by physical, hormonal, and emotional changes. It is common for questions and fears to arise, which need to be discussed and clarified during prenatal care for safety and better preparation for childbirth and the postpartum period.¹

Prenatal care and health education are essential tools for supporting pregnant women in preventing maternal and perinatal morbidity and mortality.² From this perspective, educational practices during prenatal care are essential. Studies show that relevant guidance on care during pregnancy, childbirth, and the postpartum period is scarce and reveal that women do not feel prepared. They also highlight several unmet needs and emphasize sharing, support, care, and postpartum planning.³⁻⁴ There is a low percentage of guidance on good practices in labor and delivery that support the empowerment of women during the birthing process and prenatal care.⁴

Fragmentation and inconsistency in prenatal care guidance are associated with delayed initiation of follow-up. These factors compromise the quality of care and hinder achieving the recommended goals for adequate prenatal care.⁵ A higher prevalence of guidance is observed when prenatal care is shared between nurses and physicians.⁶

Despite the existence of public policies focused on women's health that guide and emphasize the importance of educational actions throughout the pregnancy and postpartum cycle, there is still a lack of autonomy and protagonism for women in the process of pregnancy and childbirth. This scenario prompts health managers and professionals to reflect on the methods and strategies they implement to ensure women receive all the information they need and have a positive experience of pregnancy, childbirth, and the postpartum period.⁶

In the context of this study, the strategies used included group sessions for pregnant women, guidance in waiting rooms, educational booklets on the rights of pregnant women and prenatal dental care, and individual guidance during consultations. However, the approach to these strategies and the participation of users are questioned. The advice provided to pregnant women should empower them during childbirth through participatory educational practices that foster self-confidence and the exercise of their autonomy.⁷

It is necessary to rethink prenatal education strategies, involving users in restructuring these practices in partnership with health professionals. This guideline aligns with the Ministry of Health's National Agenda for Health Research Priorities, which highlights the importance of evaluating the implementation of health education strategies within the Brazilian Unified Health System (SUS).⁸ These strategies should therefore empower women

to develop critical and reflective awareness, providing them with tools to make informed decisions based on the best available scientific evidence.⁹⁻¹²

From this perspective, this study draws on the theoretical and philosophical contributions of Paulo Freire and Edgar Morin to address the complexity inherent in healthcare practice. Freire's conception of education is based on a liberating and critical proposal in which the teaching process transcends mere knowledge transmission, seeking to create conditions for the subject to construct their knowledge actively.¹³ In turn, Morin proposes complex thinking as a way of apprehending reality in its entirety, recognizing its multiple dimensions, interconnections, and contradictions, rather than the fragmentation of knowledge.¹³ Both authors converge in their defense of an educational transformation, aimed at the formation of critical and emancipated individuals, based on a dialogical, constructivist, and progressive methodological approach that articulates research with care practice.¹⁴

Based on the above, the objective is to collectively restructure an educational project on the pregnancy and postpartum cycle, involving postpartum women and health professionals from a secondary care prenatal monitoring service.

Method

This is a Convergent Care Research (CCR) with a qualitative approach, whose characteristic involves researchers and researched in a dialogic, participatory way to solve or minimize problems arising from care practice¹⁵. The study was reported according to the Consolidated Criteria for Reporting Qualitative Research (COREQ) checklist.

The study was conducted at a secondary care prenatal care service linked to a university hospital in the *Zona da Mata* region of Minas Gerais, a reference in the macro-region for the monitoring of high-risk pregnant women. However, it also serves pregnant women at normal risk who live in the region and belong to areas not covered by primary care.

In addition to prenatal consultations, the service offers health education through groups of pregnant women, with the participation of obstetric nurses and other invited professionals, including obstetricians, pediatricians, psychologists, nutritionists, speech therapists, dentists, social workers, and physical therapists, depending on the theme of each meeting.

Sixteen postpartum women from the prenatal service and nine health professionals from the multidisciplinary team participated in individual interviews. Due to the Coronavirus pandemic, only health professionals who were already exposed participated in the

discussion groups. Among the health professionals interviewed, eight participated in the groups.

Postpartum women who had prenatal consultations at the service above and participated in meetings of the group of pregnant women and professionals from the multidisciplinary team working in educational groups with pregnant women were included; women who were unable to communicate verbally, professionals who, after three attempts to contact them to schedule an interview, did not express interest, and those who were absent at the time of data collection due to vacation, maternity leave, sick leave, or remote work due to the Coronavirus pandemic were excluded.

The selection of postpartum women participating in the study was based on confirmation of their participation in the pregnant women's groups, checking attendance lists, and prenatal consultations from electronic records. The women were invited to participate in the study on the same day as their postpartum consultation, at the end of their appointment, or on the day of their newborn's pediatric clinic consultation.

The multidisciplinary team responsible for the group of pregnant women consists of 13 professionals. Those who attended the group meetings were invited to participate in the study individually, either in person or by telephone. At that time, participants were informed of the objectives and stages of the research, and the interview was scheduled according to each professional's availability. Nurses, doctors, dentists, social workers, and physical therapists participated in the study.

Data collection during interviews with postpartum women and focus groups with professionals was terminated upon reaching data saturation, when no new information relevant to the study objective emerged. The saturation criterion did not apply to interviews with professionals, as the total number of professionals was reduced by one on maternity leave, one working exclusively remotely, and two others who did not express interest in participating in the study after three attempts to contact them.

Two techniques were used for data collection. The first consisted of semi-structured interviews, conducted using a script with guiding questions to understand, from the perspectives of postpartum women and health professionals, the educational actions developed in the prenatal care clinic, and to identify suggestions for new educational strategies that could be implemented. In the next stage, two discussion groups were held with professionals to promote collective reflection and support the definition of educational strategies to be incorporated into the prenatal service.

The interviews, lasting a minimum of twenty minutes and a maximum of sixty minutes, were conducted in the service's consultation rooms, immediately after the consultation with

the postpartum woman or her newborn, with only the researcher and the interviewee present, maintaining dialogue, privacy, and as few interruptions as possible. Just so you know, throughout the data collection process, the precautions against Coronavirus infection were followed in accordance with the institution's recommendations. The statements were recorded on a digital recorder, and the researcher also used a field diary to record her observations. The participants were informed about the next stage of the research, which consisted of discussion groups with health professionals on the educational strategy proposals presented by the postpartum women.

Due to the preventive measures for Coronavirus infection, it was decided to hold two face-to-face discussion groups with health professionals who were already exposed to the health service environment. The meetings lasted two hours, and the statements were recorded after individual consent.

The researcher acted as a mediator in the group discussions, adopting a dialogical, horizontal approach in accordance with principles for conducting small-group discussions from a systemic perspective. An open and welcoming environment was created, encouraging participants to express their opinions freely on the topics discussed. In this dialogical process, both convergent and divergent ideas emerged. The researcher emphasized the importance of multiple perspectives and reinforced the meanings attributed to the statements, seeking to articulate them to build a consensus representative of the collective perspective. The discussions were recorded in detailed minutes, which were later emailed to the participants for validation and signature.

The first discussion group began with a presentation summarizing the data from individual interviews with postpartum women and health professionals. This summary highlighted, in general, the strengths and weaknesses of the care-education process in prenatal services, as well as the new health education themes and strategies suggested. Based on this presentation, we set up a dialogue to reflect on the weaknesses identified and identify opportunities for improvement in the educational process in the context of the service studied.

In the second group, the educational strategies previously suggested in the interviews were (re)presented to the participants to verify agreement or disagreement with their implementation and to understand the justifications in cases of dispute. After selecting the strategies considered priorities and feasible, an action plan was collectively developed using the 5W2H quality tool, consisting of the question: What? Who? When? Where? Why? How? And how much? (How much?). The group's judgment and consensus determined the

answers to these questions. Each professional is committed to implementing strategies in their area of expertise.

The first stage of the research, which included conducting semi-structured interviews with women in the postpartum period and health professionals, took place from May 2020 to January 2021. The second stage of the study involved two discussion groups with health professionals from July to August 2021.

The data were processed and analyzed according to thematic content analysis. We chose to interpret the results separately by data collection instrument: semi-structured interviews with postpartum women and health professionals, followed by discussion groups.

The interviews were transcribed into Microsoft Word 2019. Immediately afterward, the analysis corpus was organized, with a thorough reading of the material, highlighting similar ideas. In exploring the material, statements with the same meaning were extracted, and units of record were established through phrases that gave meaning to the statements and supported the definition of context units and, finally, the categories of analysis. In the case of CCR, the study of information involves the processes of apprehension, synthesis, theorization, and transfer.¹⁴

Based on the codes extracted in the apprehension process and with the deepening of the look guided by the guiding question and the objective delimited for the study, the researcher unified the data obtained in the interviews with the puerperal women and health professionals and in the discussion groups. The theorization occurred after a careful review of the literature and establishment of relationships between the results obtained and the theoretical framework. The transfer process consists of contextualizing the results with the intention of socializing them, without generalizing them, and is related to two meanings of the CCR, directly addressing the research problem-question in the care scenario and expanding the results in order to transmute and innovate a practice into a new practice, with the purpose of achieving an improvement in the quality of care.¹⁵

The results found from the research with postpartum women and health professionals were shared, contextualized, and reflected upon during the discussion groups, which enabled the (re)construction of a preliminary project for educational actions in prenatal care services based on the complex thinking of Edgar Morin and the problematizing, liberating pedagogy of Paulo Freire, to envision a path toward a new dialogical practice from the perspective of interdisciplinary work with the incorporation of active teaching-learning methodologies. The planning of the CCR phases, summarized in Figure 1, allowed us to visualize the researcher's movements of approximation with the care practice scenario and

with the participants, moments of convergence, as well as the necessary distance for data analysis and theorization.

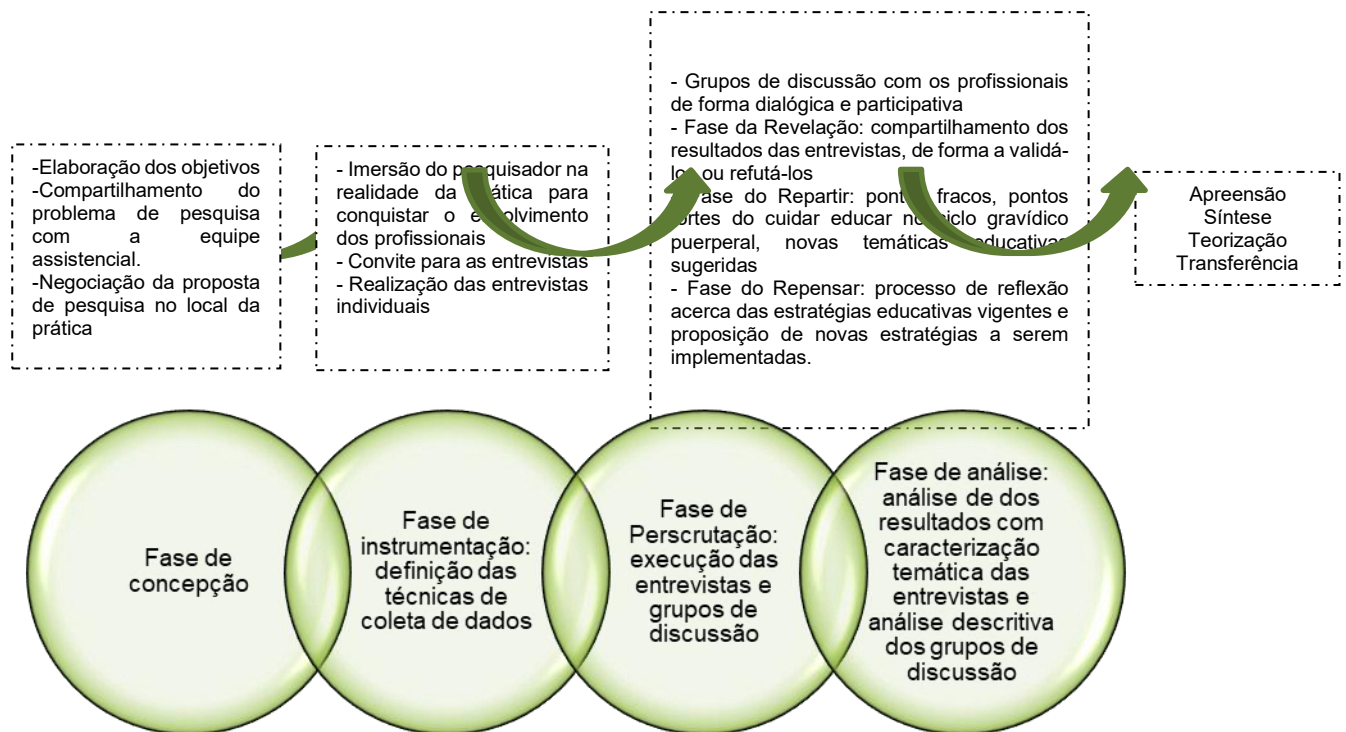


Figure 1 - Synthesis of the moments of convergence between theory and care practice, the PCA dance. Juiz de Fora (MG), Brazil, 2022.

This study was approved by the Human Research Ethics Committee of the Federal University of Juiz de Fora, under opinion No. 3987166. Participants were assured of the privacy, confidentiality, and anonymity of the data obtained from the interviews, using coding at the end of excerpts from the statements, P and PS, referring respectively to postpartum women and health professionals, followed by a sequential number in the order in which the statements were made.

Results

Sixteen postpartum women participated in the study, predominantly aged 30-39 years. Most were married, declared themselves brown, had completed high school, and were employed. All were classified as high obstetric risk and had attended more than seven prenatal appointments. Half were primiparous, which reinforces the importance and necessity of receiving guidance during prenatal care, since everything is new to first-time mothers.

Half of the interviewees participated in only one meeting of the pregnant women's group and were in their second trimester of pregnancy. Most reported difficulties in attending group meetings were due to the need for time off from work and socioeconomic conditions to cover transportation expenses, as evidenced in the following statements:

If the groups were on the same day as the appointment, it would be a way for us not to miss participating, because taking another day off in addition to the appointment day is difficult for me, due to transportation expenses and distance. (P9)

I couldn't attend more meetings because of work. I was able to participate because it coincided with the appointment day. Furthermore, I didn't come to the other meetings because I was working, and the schedule didn't work out. (P2)

The 9 participating health professionals were predominantly female and aged 30-39 years. In terms of education, 77.78% had a lato sensu postgraduate degree and 22.22% had a stricto sensu postgraduate degree. Seven professionals reported having two or more jobs and having formerly worked as teachers, which may positively influence their ability to perform educational activities in health.

Based on the analysis of the interview results, it was possible to establish two thematic categories that highlighted aspects related to the process of caring and educating in prenatal care services: 1. Perceptions of postpartum women and health professionals about caring and educating in prenatal care, and 2. Educational strategies in prenatal care services: proposals for (re)construction.

The results of the interviews were systematized to highlight the weaknesses and strengths of the service, as well as to identify opportunities for improvement from the perspectives of postpartum women and health professionals (Figure 2).

Opportunities for improvement	
Potentialities • Pregnant women's group multidisciplinary team; • Welcoming the professionals; • Prenatal tests are carried out at the clinic; • Support from pharmaceutical industry representatives (gifts and snacks); • Pregnant women's group as a space for exchange, learning, and strengthening bonds; • Openness on the part of professionals to clarify doubts; • Availability of professionals from the multidisciplinary team to take part in the pregnant women's group.	Weaknesses • Little publicity for the pregnant women's group meetings; • Low user participation in the group; • Lack of prioritization of educational activities by professionals and society; • Little rapport between members of the multidisciplinary team of the pregnant women's group; • Approach issues in the pregnant women's group in a very theoretical manner; • Lack of material resources to produce booklets, implementation of dynamics, and practical activities; • Lack of participation by residents, academics, and some medical preceptors in the pregnant women's group; • Excessive number of professionals (students) at prenatal consultations; • Lack of guidance on the postpartum period and newborn care; • The hospital's location, which is not centralized in the city, makes access difficult for users.
New themes • Birth planning; • Family planning; • Neonatal jaundice; • Feeding the newborn; • Puerperal period: hormonal changes, postpartum depression, puerperal blues, support network, maternal care, lochia, difficulties intrinsic to the period; • Difficulties related to breastfeeding: breast engorgement, nipple fissure, inverted nipple, fissure, inverted nipple, mastitis, latch-on; • Humanized childbirth; • "Obstetric violence X Rights"; • Caesarean section: indications, anesthesia, care surgical incision; • Causes of pregnancy loss.	Suggested strategies • Reconciliation of the group day with prenatal appointments; • Educational activities in the waiting room; • Periodic meetings with the pregnant women's group multidisciplinary team; • Training on the importance of health education; • Online pregnant women's group; • Preparation of educational booklets (printed and online versions); • Scheduling puerperal nursing appointments between seven and ten days after delivery; • Guidance on the puerperium and newborn care; • Establishing a psychological care pathway for users as needed.

Figure 2 - Weaknesses and potentialities of care-education in the prenatal service, new themes and strategies suggested by the participants (puerperal women and health professionals). Juiz de Fora (MG), Brazil, 2022.

1. Perceptions of puerperal women and health professionals about care- education in prenatal care

In the view of postpartum women, prenatal care and education are directly related to the welcome and attention provided by professionals, the security obtained from the clarification of doubts, the performance of tests, and guidance related to the pregnancy-postpartum cycle, as evidenced in the statements:

We see the affection you have. We, who are mothers, need a lot of support during this period. Wow! I received it so well received [...]. (P1)

[...] I felt very secure; the doctors stopped talking to me, and it was perfect. I felt very secure during prenatal care. (P5)

I had all the support I required. I have no complaints. I was able to do all the tests here; I had everything I required, all the support. (P6)

Among the guidelines received during prenatal care, those related to childbirth, labor, and non-pharmacological methods of pain relief were the most frequently reported. The participants highlighted the group of pregnant women as an essential space that provided learning opportunities, clarified doubts, strengthened bonds, and exchanged experiences between professionals and with other women to complement prenatal consultations, as reported below:

The group makes a big difference because the consultation is more separate, let's say, professional. It seems like a rhythm: you do this, then you have this exam, they analyze you and listen to the baby—it's very rhythmic. In the course, we have more time; we can ask more questions, talk more, and we feel like that at that moment. So, for me, the group makes a big difference. (P7)

I felt comfortable asking my questions; it's really a group. You can talk, ask questions, and speak with the people guiding you, and hear stories from other pregnant women. It's nice to exchange experiences with other pregnant women. (P5)

The desire to be accompanied by the same professional during consultations was reported to facilitate bonding and contribute to feeling more secure:

So, what I didn't like very much was the fact that it wasn't the same professional at every appointment [...]. But, despite being different professionals, they said the same thing. (P8)

In the opinion of health professionals, prenatal care and education are opportune times to address questions, change lifestyle habits, prevent complications, and detect early

warning signs of severe conditions. Educational activities were considered essential for pregnant women and their families to learn and build knowledge, prepare for pregnancy, childbirth, and the postpartum period, and ensure security during these periods.

They will feel safer, more confident, and have a more positive experience if they are well informed. (PS7)

I think prenatal care is an opportunity to change some habits that are sometimes not so beneficial to health, adopt healthier ones, and prevent complications that can occur during pregnancy. (PS3)

These collective spaces are educational, constructive, and reflective, and it is these moments that can empower people. When you empower individuals, you provide them with better health and a better quality of life. (PS8)

Despite the benefits of educational practices, the professionals participating in the study realize in their practice that the population lacks health information. However, society itself and some professionals do not value educational actions, prioritizing care activities focused on physical examinations, requests for tests, and prescriptions for medications.

We are in a society that is not prepared/informed for this, that does not value these educational activities. (PS9)

During prenatal care, along with medical consultations, I feel that the educational aspect is lacking. I see many practical, care, diagnostic, and curative aspects, but I think the academic aspect needs improvement. (PS7)

2. Educational strategies in prenatal care: proposals for (re)construction

Some educational strategies suggested by users converged with those indicated by health professionals, especially regarding the need to implement practical, demonstrative, and participatory activities in groups of pregnant women:

Active methodology would help them understand [...] the question, create problem situations for them to try to solve, and use a dynamic, clinical case, and the playful part to make it less monotonous; the language would be more precise and easier to understand. (PS1) Perhaps we could work a little more on dynamics with more participatory activities that attract more attention, inviting a mother and baby to demonstrate breastfeeding in practice [...]. (PS3)

Let's work in this way, based on collective construction, she brings what she knows, and we consolidate the knowledge on a scientific basis. (PS8)

The creation and sharing of educational videos and the use of digital technologies:

If they had a service location to access quality, accurate information, it would be better [...] We can record videos, post explanations [...]. (PS6)

Maintaining a minimum level of remote monitoring, even if not in a group, by calling to see how the woman is doing, giving some guidance, for example, in

the postpartum period —and checking her concerns, already makes a big difference. (PS2)

Table 1 illustrates the details of the strategies suggested by the participants.

Table 1 - Educational strategies suggested by postpartum women and health professionals to improve prenatal care. Juiz de Fora (MG), Brazil, 2022.

Postpartum women	Health professionals
Support group for mothers in the puerperal period.	Scheduling a puerperal appointment with obstetric nurses in the first week after delivery for advice on breastfeeding and the difficulties of the postpartum period.
Puerperal appointment scheduled in the first week after delivery, to assess the mother, the newborn, and to advise on the difficulties experienced during this period.	Individual counseling for women on the topics covered in the pregnant women's group, according to the gestational trimester to be carried out by obstetric nurses.
Guidance on the puerperal period at the last antenatal appointments.	Printed or digital educational booklets, sent to pregnant women by WhatsApp message or e-mail, containing guidance on the main themes of the pregnant women's group, in clear, easy and illustrative language. Discussion of the topics in the booklets during prenatal consultations carried out by professionals from the multidisciplinary team.
Educational booklets with guidance on the main themes of the pregnant women's group.	Educational groups in the waiting room of the antenatal clinic.
Creation of informative videos on pregnancy, breastfeeding and baby care, broadcast in pregnancy groups and in the waiting room of the antenatal clinic.	Creation of videos to be broadcast on the televisions in the reception areas of the outpatient clinics, with educational information related to prenatal care, childbirth, postpartum and to publicize the meetings of the pregnant women's group.
Conducting educational groups in the waiting room of the prenatal clinic.	Use of active methodologies, through playful activities, dynamics, demonstrations on mannequins, theaters, problem situations, sharing stories and experiences for the collective construction of knowledge and greater user satisfaction.
Educational groups were held in the antenatal clinic waiting room on the day of antenatal appointments.	Online educational activities using platforms, social networks, WhatsApp, and web pages to deliver synchronous activities such as live sessions or asynchronous content with informative posts from each professional's area.
Prenatal care by the same professional.	Training on health education for members of the multidisciplinary team, including residents, academics and preceptors, to be carried out by teaching professionals.
Inclusion of the following topics for guidance on maternal and child health in pregnant women's groups: causes of pregnancy loss, support network for the puerperal woman, puerperal period with an	

approach to emotional and hormonal changes, care for the newborn and difficulties of motherhood, challenges of breastfeeding, family planning.

Inclusion of practical activities in pregnant women's groups, such as: bathing the newborn and dressing the umbilical stump, using a mannequin.

Use of digital media (Facebook, Instagram, website, online classes) to disseminate information relevant to the gestational period, childbirth, the postpartum period, breastfeeding, and newborn care.

Discussion groups

In the first discussion group with health professionals, the interview results were presented, and new topics to be included in the prenatal service's educational approaches were discussed. The second discussion group was held to discuss the educational strategies to be implemented. Table 2 shows the consensus reached in the two meetings.

Table 2 - (Re)construction of educational strategies in the prenatal service, based on group consensus. Juiz de Fora (MG), Brazil, 2022.

New themes	Educational strategies
Humanized Childbirth	Individual counseling of pregnant women during consultations with the multidisciplinary team on topics pertinent to the pregnancy-puerperium cycle according to the gestational trimester.
Postpartum period	Roundtable approach to the puerperium across all specialties.
Breastfeeding challenges	Puerperal consultation with obstetric nurses in the first week after delivery.
Types of birth and indications for cesarean section	At least one consultation during pregnancy with the following specialties: physiotherapy, dentistry, pediatrics, social work, speech therapy, psychology, and nutrition.
Obstetric violence	Creation and sharing of educational videos by each professional in the multidisciplinary team, covering pregnancy, childbirth, the puerperium, newborn care, and breastfeeding.
Newborn care	Tele-guidance and tele-consultation by multidisciplinary team professionals
Neonatal jaundice	Use of active methodologies in pregnant women's group meetings.
Childbirth plan	Each professional in the multidisciplinary team will carry out synchronous and asynchronous online educational activities, accompanied by informative posts about the pregnancy-puerperium cycle.
Family planning	Workshops on birth plans by obstetric nurses.

Discussion

According to the participants in this study, prenatal reception goes beyond welcoming patients at the door and providing information; it requires establishing empathetic, affectionate interpersonal relationships. Reception is built at each encounter through relationships of trust and commitment established between professionals, services, and users, permeated by conversations that reaffirm the individual's potential as an active subject in the health production process.¹⁶ During this encounter, it is essential that women feel comfortable expressing their doubts and feelings, are listened to and clarified, and receive optimal support.¹

Given the complexity of high-risk pregnancies, care, and education must consider the context in which the woman experiences it and the relationships established among the professional, the woman, and her family. The quality of the interactions established is essential because, in a context that is unfavorable to the development of the parties, negative interactions can limit, reduce, or disadvantage the subject's potential for transformation.¹⁵

Understanding human beings as complex entities involves conceiving of their unity in diversity and their diversity in unity, transcending the reductionism of analytical thinking and the holism of global thinking to obtain a broader, more complementary view of humanity. This broader understanding of human beings is essential when considering health education capable of transforming individual, family, and community realities.¹⁶

The participants considered the group of pregnant women an open space that offered opportunities for learning, bonding, exchanging experiences, building knowledge, and fostering female empowerment. The conversation circle is an educational technique that promotes dialogue, brings people together, the expression of women's doubts, experiences, desires, and needs, contributing significantly to learning, building knowledge about the physical and emotional changes involved in the pregnancy and postpartum cycle, preparing for childbirth, achieving autonomy and empowerment in the process of gestation and childbirth with active participation in care, and strengthening emotional bonds and trust with professionals.¹⁷⁻¹⁸

Developed dialogically and with active methodologies, the groups promote prenatal care participation among pregnant women, help reduce low birth weight and premature births, and increase exclusive breastfeeding rates during the first six months of life.¹⁹

The Coronavirus pandemic imposed social isolation measures, and the use of virtual communication technologies emerged as an alternative to transform models of health work

organization, enabling professionals to maintain contact with patients, support the teaching-learning process, and communicate in public health.^{20,17}

The social media platform Facebook® was considered a potential tool for health promotion and community connection for medical education outside the usual consultation spaces, in which topics developed in accordance with evidence-based medicine allowed interaction through comment spaces for followers and responses from those responsible for the publication, in a clear, cohesive, and respectful manner.²¹

Despite the importance of these technologies, it is necessary to recognize and address the challenges of digital skills so that the process is effective and accessible to all participants. It is essential to discuss and implement public policies that uphold ethical principles, prevent the dissemination of false content, and enable access to the internet, public platforms, and free, high-quality software for all.^{17,22}

To be liberating, the educational process must empower the individuals involved and recognize that each woman has multiple life experiences that need to be shared so that, together with all the actors in the educational process, new knowledge can emerge, a learning process that is only possible by harmonizing with others, based on action-reflection-action capable of promoting change and generating a new reality. “[...] no one educates anyone else, just as no one educates themselves: people educate themselves in communion, mediated by the world.”¹³

Some professionals recognized that the educational groups' approach is predominantly focused on content transmission, with little dialogue. Active methodologies break with the verticalized education model, which involves the transfer of information and is not very effective. They can contribute to greater adherence to educational activities by fostering active community participation and a commitment to constructing knowledge critically and reflectively.²³

Teleguidance and teleconsultation by nurses were considered an educational strategy in the postpartum period that can, through active listening, contribute to counseling, clarification of doubts, and guidance on warning signs, breastfeeding, women's self-care, and newborn care, in addition to enabling the identification of the need for in-person care.

Telehealth interventions can be as effective as face-to-face interventions. This is especially true for populations in rural and remote areas; however, the effectiveness of the intervention may be associated with multiple factors, such as the severity of the patient's health conditions, the type of interventions provided, and the skill of the healthcare provider.²⁴

An example of a tele-nursing service in Recife (PE) called “Talk to the Midwife” used WhatsApp® as a support tool to promote maternal health during the COVID-19 pandemic, which prevented harm to maternal and child health by avoiding delays in care and referring women to a health service in their region’s obstetric care network.²⁵

It is important to note that, in telephone and internet communication, intersubjective human understanding goes beyond explanation, requiring identification and projection with the other individual, identifying similarities, differences, singularities, and the cultures of each, thereby improving interpersonal relationships.¹⁷

It is worth emphasizing the need for professional training in the use of virtual technologies for education and remote care, as well as in the development of telecommunication skills, understanding of emergency parameters, ethical issues, data confidentiality, and cultural fluency.²⁶

From the group's discussions with health professionals, a strategy emerged to create a multidisciplinary roundtable comprising professionals from medicine, nursing, nutrition, physical therapy, psychology, social work, speech therapy, and dentistry to address the postpartum period, as this topic cuts across these professions. The participants highlighted the need to develop strategies to create a welcoming, open, participatory, dialogical, and empathetic environment that strengthens the bond of trust with the health service.

This approach allows the team to transform multidisciplinary practice by seeking a path to interdisciplinarity. This perspective aims to overcome fragmented, reductive, simplistic, and compartmentalized education in disciplines, with a predominance of parts, to reconnect, rearticulate, interact, and confront knowledge in a broader perspective of health, for a better understanding of the phenomenon in its multiple biological, psychological, social, economic, and cultural dimensions²⁷.

The dialogical principle of complex thinking aids in this necessary interdisciplinary articulation, as it enables the integration of ideas that are simultaneously complementary, competing, and antagonistic, favoring the natural human ability to contextualize, differentiate, and reconnect the various types of knowledge acquired and relate them to their life context.¹⁶

The obstetric work process requires a multidimensional approach based on intersectoral and interdisciplinary professional collaboration¹⁵ to overcome reductionism and disciplinary fragmentation in maternal and child health care, and to restore women's autonomy and empowerment.²⁸

The limitations of this study were due to difficulties related to the COVID-19 pandemic, which delayed data collection and altered the composition of discussion groups

with health professionals. In addition, the proposal for new educational strategies was also strongly influenced by the pandemic, adding challenges to implementing online, dialogical, participatory, problematizing, and liberating educational practice using active methodologies.

This study may contribute to consolidating curriculum guidelines for the training of health professionals, grounded in disciplines that address interdisciplinary pedagogical practice and incorporate active and participatory methodologies into the teaching-learning process. In addition to contributing guidelines for the (re)formulation of public policies for health promotion with the valorization of popular knowledge.

The study recognized the importance of nurses in caring for and educating women during pregnancy and the postpartum period, from planning, organizing, and disseminating actions to their implementation and evaluation.

Conclusion

Based on the results of this study, it was possible to understand the educational actions developed in the secondary care prenatal clinic from the perspectives of postpartum women and health professionals. In the subsequent stage, the current educational strategies and proposals related to the pregnancy-postpartum cycle were discussed by the professionals, which supported the restructuring of the academic actions project in the service.

Users emphasized topics related to the postpartum period, newborn care, and breastfeeding difficulties. The professionals, in turn, recognized the need to intensify educational actions focused on the postpartum period, with an emphasis on the importance of the support network, early detection, and referral of situations suggestive of postpartum depression. In addition, the birth plan was highlighted as a relevant tool for preparing women for childbirth.

The study provided input for management and decision-making in maternal and childcare, favoring the continuous improvement of work processes. This contribution was made possible through the articulation of research and care practice, the joint development of an action plan for implementing new educational strategies, and the revision of the academic project for the secondary care prenatal service.

This model has the potential to be applied to other maternal and child care services, contributing to the formulation of educational projects from a participatory perspective.

Authors' contributions

Study design: Sirleide Corrêa Rangel, Nádia Fontoura Sanhudo, Delmar Teixeira Gomes.

Data collection: Sirleide Corrêa Rangel. Data analysis and interpretation: Sirleide Corrêa Rangel, Nádia Fontoura Sanhudo, Delmar Teixeira Gomes. **Manuscript writing:** Sirleide Corrêa Rangel, Débora Nogueira Coelho, Nádia Fontoura Sanhudo. **Critical review of the manuscript:** Betina Horner Schlindwein Meirelles, Beatriz Francisco Farah, Geovana Brandão Santana Almeida. **Approval of the final version of the text:** Nádia Fontoura Sanhudo, Sirleide Corrêa Rangel, Débora Nogueira Coelho.

Conflict of interest

The authors have declared that there is no conflict of interest.

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