

The importance of online childbirth preparation courses

Vicentia C. Harizopoulou¹, Evangelia Saranti¹, Angeliki Antonakou², Victoria Vivilaki³

Online antenatal courses are educational programs conducted through various online platforms. They are facilitated mainly by qualified midwives who provide accurate and up-to-date information to the participants. The courses provide expectant parents with information, guidance, and support on childbirth, and the transition to parenthood that they would receive within traditional structures and courses¹.

The courses typically cover various topics of interest, such as physiological changes, physical and emotional well-being during pregnancy, prenatal and postnatal care, information on labor and birth options, newborn care, and breastfeeding^{2,3}. The content can be presented synchronously or asynchronously, in a closed or open group, and in various downloadable or not formats, including lectures, live webinars, discussion forums, videos, and interactive quizzes⁴.

Two are believed to be the key features of online antenatal courses: their flexibility and accessibility, with the latter emerging especially during the COVID-19 pandemic. Measures taken worldwide to ensure public health have limited the ability of pregnant women to attend in-person antenatal courses within traditional structures. Midwives worldwide, following that emerging need were motivated to convert in-person antenatal courses to innovative remote online sessions^{1,5-8}. This extensive use of online antenatal education raised discussion on the method's advantages, disadvantages, and potential benefits for specific groups of pregnant women. It is also worth noting that this discussion is taking place while implementation guidelines and research data on the effectiveness of online antenatal courses, compared to the traditional approach, are limited¹.

Advantages of online antenatal courses

There are many advantages of using an online platform to deliver antenatal courses. Firstly, participants value online antenatal classes' time efficiency, convenience, flexibility, and accessibility^{6,9-11}. They feel free to engage with the course material using their computer or mobile device anytime and from the comfort of their private space. They also feel that they save time and costs by eliminating the need for transportation. Moreover, this ease of access to online courses has a particular implementation in pregnant women with mobility issues and those living in remote or rural areas by breaking down the distance barrier and providing valuable information, guidance, and confidence in birth preparation^{9,12}. In Greece, for example, there are approximately 6000 islands and islets. Of all these islands, around 250 are inhabited. At the same time, many high-altitude mountain villages are not easily accessible, especially during the winter months. Online antenatal courses benefit all those individuals who might not otherwise have access to prenatal preparation programs.

Secondly, online antenatal classes address the needs and expectations of millennial parents, who are online information seekers exposed to and comfortable with technology^{2,10,13-15}. Therefore, the variety of resources (multimedia content, midwife-led sessions, interactive modules) an online class can offer can be tailored to the unique learning needs and characteristics of the woman¹³ by allowing her to revisit specific topics and having autonomy by selecting the content, the pace and the extent of involvement⁶. This is also linked to the recommendations concerning the use of the principles of adult education in antenatal education programs⁶.

Additionally, every implementation of online antenatal courses has the potential to reach a wider cohort of participants^{9,16}. This feature enhances cost-effectiveness and the dynamic to be extended globally to an international population^{9,16}. Antenatal education is not equally widespread around the globe. Online courses can provide an informative and consultative connection between women seeking antenatal education and midwives practicing in different countries. Furthermore, the supremacy of remote courses is evident

AFFILIATION

1 First Department of Obstetrics and Gynecology, Papageorgiou General Hospital, Thessaloniki, Greece

2 Department of Midwifery Science, School of Health Sciences, International Hellenic University, Thessaloniki, Greece

3 Department of Midwifery, School of Health and Care Sciences, University of West Attica, Athens, Greece

CORRESPONDENCE TO

Vicentia C. Harizopoulou. First Department of Obstetrics and Gynecology, Papageorgiou General Hospital, Ring road, Municipality of Pavlou Mela Area, N. Evkarpia, 56403 Thessaloniki, Greece.

E-mail: vikentiaha@yahoo.com

ORCID iD: <https://orcid.org/0009-0001-6004-1205>

KEYWORDS

childbirth, preparation, online courses



Received: 18 September 2023

Revised: 21 February 2024

Accepted: 28 March 2024

in immigrant participants, who face multiple obstacles concerning prenatal care and education¹⁷. Choosing to have online antenatal courses by midwives from their country of origin helps them feel more culturally accepted and relaxed without worrying about language barriers. This choice will also provide pregnant immigrants with a connection with other expectant mothers from their country and an opportunity to build supportive networks.

Further advantages of online antenatal courses include the provision of anonymous identity to those feeling uncomfortable⁹, the avoidance of stigmatization¹⁸ or judgment⁶, and the more convenient participation of busy partners and other family members. The last-mentioned is essential, as pregnant women feel that antenatal courses enhance their partners' understanding and support during pregnancy and childbirth, keeping them involved in the decision-making and the transition to parenthood¹⁹. Moreover, fathers' participation in in-person or virtual antenatal classes improves their attachment to the infant²⁰.

Finally, as the COVID-19 pandemic revealed, online antenatal courses are a good and safe alternative to in-person traditional courses during disasters and epidemics²¹⁻²³. They support antenatal care, provide cutting-edge knowledge, and decrease prenatal distress and anxiety levels²³⁻²⁵.

Disadvantages of online antenatal courses

While online antenatal courses have many advantages, there are also cautions of some potential disadvantages of exclusive online antenatal education. Pregnant women attending antenatal courses desire social interaction^{2,11,13} with people in the same situation, which offers the potential for future friendship and support, particularly at a community level^{2,5,13,19}. Online courses usually lack direct communication, free-time interaction, and non-verbal cues¹, factors closely linked to good communication and building peer support networks during antenatal and postnatal periods. Those factors also restrict the relationship and the inquired personalized guidance¹ between the midwife and the woman. By participating in online courses, they lose chats in the interim of the classes, hallway discussions, natural social chemistry, and coffee talk, as educators vividly describe^{1,24}.

Another drawback of online antenatal courses concerns hands-on demonstrations, embodied learning, and practical skills for labor and early parenting. Replicating and practicing birthing positions, breathing patterns, and massage techniques online are challenging and demanding¹. In the same way, online courses without direct interaction and instant feedback can lead to misconception or misunderstanding if the participants have queries and need further explanation or in-depth analysis^{15,19}. Therefore, pregnant women attending online antenatal courses desire access to educators and highlight the need for direction and support from them⁶.

Additional obstacles during online antenatal courses from the facilitator's and educator's part include the potential medico-legal risks raised, their insufficient familiarity with

technological troubleshooting, the handling of what is called 'Zoom fatigue' and distractions, often due to participants' 'multitasking' while attending the course^{6,11,12,25}.

Moreover, according to the participants' perspectives, a pregnant woman might be suspicious of sharing personal details in online courses and skeptical about the quality of the information and the expertise of the educators⁹. Pregnant women generally prefer professional and conventional sources of information as more trustworthy and valuable^{15,19}.

Finally, a significant disadvantage of online antenatal courses is that not everyone may be comfortable with or have access to the necessary technology or reliable internet connection. Those technical challenges and internet literacy may cause discrimination and exclusion, especially for vulnerable pregnant women^{6,24,26}.

How should midwives move on?

Midwives support antenatal education and implement childbirth preparation courses to meet the needs and expectations of women, their families, and their communities. It is suggested that millennial women expect and appreciate an innovative approach to antenatal education¹¹. They also need information and support in a way and through a channel that they can easily understand and access²⁷. On the other hand, online platforms alter how women experience maternity services and their assessment and reception of information, which requires attention^{13,28}. Several researchers underline the urge to redefine the midwife's role as an antenatal educator in the digital era^{1,11,29}. Most of them reasonably advocate for the maintenance of the core values and content of antenatal education, such as the continuity of care, the goal of woman-centeredness, trustworthiness, the empowering of women, the opportunities for social support and meaningful interaction^{1,6,11,13,29}. Thus, recommendations and protocols for designing online antenatal education are critical and must be formulated on research data.

There is a need for high-quality, randomized trials with sufficient sample sizes to investigate and evaluate the effect of online antenatal education on women, their families, and communities¹⁶. Documented effects on specified primary and secondary pregnancy outcomes will stimulate the debate among midwives, stakeholders, and policy-makers, and indicate the future direction of online antenatal classes. Moreover, future research should specify the assumed differences between in-person and online antenatal courses regarding efficacy, knowledge, skills attained, and participants' overall satisfaction³⁰.

Finally, one significant dimension of providing online antenatal education is the educator's acquisition of digital skills. Digital literacy should be enhanced in contemporary undergraduate midwifery programs to prepare the next generation of midwives for 'digital care' in the evolving digital space and establish the future professional framework^{11,31}.

It will remain unclear whether online antenatal education would have been so widespread if it had not been preceded by the COVID-19 pandemic. Antenatal education

is undoubtedly essential in the transition to parenthood, and its online form is an emerging field with many advantages that should be noticed. Attention to the regulation of the online antenatal educator, the planning, the documentation of procedures, and the ongoing evaluation will facilitate future implementation, enhancement, and sustainability of online childbirth preparation courses.

REFERENCES

- Nolan M. Educators' experience of facilitating antenatal education online. *Int J Birth Parent Educ.* 2021;8(2) (suppl):1-8. Accessed February 21, 2024. https://ijbpe.com/images/supplements/IJBPE_Vol_8_Issue_2_Supplement-Mary.pdf
- Kovala S, Cramp AG, Xia L. Prenatal Education: Program Content and Preferred Delivery Method From the Perspective of the Expectant Parents. *J Perinat Educ.* 2016;25(4):232-241. doi:[10.1891/1058-1243.25.4.232](https://doi.org/10.1891/1058-1243.25.4.232)
- Chen XW, Jiang LY, Chen Y, Guo LF, Zhu XH. Analysis of online antenatal education class use via a mobile terminal app during the COVID-19 pandemic. *BMC Pregnancy Childbirth.* 2022;22(1):412. doi:[10.1186/s12884-022-04745-5](https://doi.org/10.1186/s12884-022-04745-5)
- Sinclair P, Kable A, Levett-Jones T. The effectiveness of internet-based e-learning on clinician behavior and patient outcomes: a systematic review protocol. *JBI Database System Rev Implement Rep.* 2015;13(1):52-64. doi:[10.11124/jbisrir-2015-1919](https://doi.org/10.11124/jbisrir-2015-1919)
- Ciochoń A, Apanasewicz A, Danel DP, et al. Antenatal Classes in the Context of Prenatal Anxiety and Depression during the COVID-19 Pandemic. *Int J Environ Res Public Health.* 2022;19(9):5073. doi:[10.3390/ijerph19095073](https://doi.org/10.3390/ijerph19095073)
- Wallace HJ, Bayes S, Davenport C, Grant M. How should online antenatal and parenting education be structured according to parents? Qualitative findings from a mixed-methods retrospective study. *Womens Health (Lond).* 2023;19. doi:[10.1177/17455057221150098](https://doi.org/10.1177/17455057221150098)
- Lau Y, Chew HSJ, Ang WHD, et al. Effects of digital health interventions on the psychological outcomes of perinatal women: umbrella review of systematic reviews and meta-analyses. *Health Psychol Rev.* doi:[10.1080/17437199.2023.2185654](https://doi.org/10.1080/17437199.2023.2185654)
- Grussu P, Quatraro RM, Jorizzo GJ. Supporting perinatal women in the context of the COVID-19 emergency: can web-based antenatal education classes make it possible? *J Reprod Infant Psychol.* 2020;38(5):471-473. doi:[10.1080/02646838.2020.1834261](https://doi.org/10.1080/02646838.2020.1834261)
- Shahid A, Rebecca Johnson. Evaluation of an online antenatal course 'Understanding pregnancy, labour, birth and your baby' by the Solihull Approach. *Evidence Based Midwifery.* 2018;16(3):101-106. Accessed February 21, 2024. <https://www.rcm.org.uk/media/2819/evidence-based-midwifery-september-2018.pdf#page=29>
- Graseck A, Leitner K. Prenatal Education in the Digital Age. *Clin Obstet Gynecol.* 2021;64(2):345-351. doi:[10.1097/GRF.0000000000000608](https://doi.org/10.1097/GRF.0000000000000608)
- Whitworth K, Donnellan-Fernandez R, Fleet JA. Digital transformation of antenatal education: A descriptive exploratory study of women's experiences of online antenatal education. *Women Birth.* 2024;37(1):188-196. doi:[10.1016/j.wombi.2023.08.008](https://doi.org/10.1016/j.wombi.2023.08.008)
- Sharp T. The virtual meeting room - Telehealth antenatal education and networking for rural women. *Women Birth.* 2018;31(suppl 1):S7. doi:[10.1016/j.wombi.2018.08.030](https://doi.org/10.1016/j.wombi.2018.08.030)
- Arcia A, Stonbraker S, Warner ERA. Continuing Education Module - Information Needs and Information-Seeking Processes of Low-Income Pregnant Women in Relation to Digital Maternity Education Resources. *J Perinat Educ.* 2019;28(3):151-162. doi:[10.1891/1058-1243.28.3.151](https://doi.org/10.1891/1058-1243.28.3.151)
- Ghiasi A. Health information needs, sources of information, and barriers to accessing health information among pregnant women: a systematic review of research. *J Matern Fetal Neonatal Med.* 2021;34(8):1320-1330. doi:[10.1080/14767058.2019.1634685](https://doi.org/10.1080/14767058.2019.1634685)
- Vogels-Broeke M, Daemers D, Budé L, de Vries R, Nieuwenhuijze M. Sources of information used by women during pregnancy and the perceived quality. *BMC Pregnancy Childbirth.* 2022;22(1):109. doi:[10.1186/s12884-022-04422-7](https://doi.org/10.1186/s12884-022-04422-7)
- Chae J, Kim HK. Internet-based prenatal interventions for maternal health among pregnant women: A systematic review and meta-analysis. *Children and Youth Services Review.* 2021;127:106079. doi:[10.1016/j.childyouth.2021.106079](https://doi.org/10.1016/j.childyouth.2021.106079)
- Zhu C. Barriers and Challenges of Immigrant Women's Access to and Experience of Optimal Maternity Care. *The Columbia University Journal of Global Health.* 2023;13(1). doi:55
- Aboujaoude E, Gega L, Parish MB, Hilty DM. Editorial: Digital Interventions in Mental Health: Current Status and Future Directions. *Front Psychiatry.* 2020;11:111. doi:[10.3389/fpsy.2020.00111](https://doi.org/10.3389/fpsy.2020.00111)
- Spiby H, Stewart J, Watts K, Hughes AJ, Slade P. The importance of face to face, group antenatal education classes for first time mothers: A qualitative study. *Midwifery.* 2022;109:103295. doi:[10.1016/j.midw.2022.103295](https://doi.org/10.1016/j.midw.2022.103295)
- Doaltabadi Z, Amiri-Farahani L. The effect of in-person and virtual prenatal care education of the spouses of primiparous women on the father and mother's attachment to infant: a quasi-experimental and controlled study. *Trials.* 2021;22(1):588. doi:[10.1186/s13063-021-05559-0](https://doi.org/10.1186/s13063-021-05559-0)
- Wu H, Sun W, Huang X, et al. Online Antenatal Care During the COVID-19 Pandemic: Opportunities and Challenges. *J Med Internet Res.* 2020;22(7):e19916. doi:[10.2196/19916](https://doi.org/10.2196/19916)
- Hong Z, Li N, Li D, et al. Telemedicine During the COVID-19 Pandemic: Experiences From Western China. *J Med Internet Res.* 2020;22(5):e19577.

- doi:[10.2196/19577](https://doi.org/10.2196/19577)
23. Aksoy Derya Y, Altıparmak S, Akça E, Gökbulut N, Yılmaz AN. Pregnancy and birth planning during COVID-19: The effects of tele-education offered to pregnant women on prenatal distress and pregnancy-related anxiety. *Midwifery*. 2021;92:102877. doi:[10.1016/j.midw.2020.102877](https://doi.org/10.1016/j.midw.2020.102877)
 24. Kim HK. The role of childbirth educators in the context of the COVID-19 pandemic. *Korean J Women Health Nurs*. 2022;28(1):1-3. doi:[10.4069/kjwhn.2022.02.25](https://doi.org/10.4069/kjwhn.2022.02.25)
 25. van den Heuvel JFM, Groenhof TK, Veerbeek JHW, et al. eHealth as the Next-Generation Perinatal Care: An Overview of the Literature. *J Med Internet Res*. 2018;20(6):e202. doi:[10.2196/jmir.9262](https://doi.org/10.2196/jmir.9262)
 26. Hughson JAP, Daly JO, Woodward-Kron R, Hajek J, Story D. The Rise of Pregnancy Apps and the Implications for Culturally and Linguistically Diverse Women: Narrative Review. *JMIR Mhealth Uhealth*. 2018;6(11):e189. doi:[10.2196/mhealth.9119](https://doi.org/10.2196/mhealth.9119)
 27. Downe S, Finlayson K, Tunçalp Ö, Metin Gülmezoglu A. What matters to women: a systematic scoping review to identify the processes and outcomes of antenatal care provision that are important to healthy pregnant women. *BJOG*. 2016;123(4):529-539. doi:[10.1111/1471-0528.13819](https://doi.org/10.1111/1471-0528.13819)
 28. Mackintosh N, Gong QS, Hadjiconstantinou M, Verdezoto N. Digital mediation of candidacy in maternity care: Managing boundaries between physiology and pathology. *Soc Sci Med*. 2021;285:114299. doi:[10.1016/j.socscimed.2021.114299](https://doi.org/10.1016/j.socscimed.2021.114299)
 29. Downer T, McMurray A, Young J. The role of antenatal education in promoting maternal and family health literacy. *Int J Childbirth*. 2020;10(1):52-64. doi:[10.1891/IJCBIRTH-D-20-00012](https://doi.org/10.1891/IJCBIRTH-D-20-00012)
 30. Roch G, Borgès Da Silva R, de Montigny F, et al. Impacts of online and group perinatal education: a mixed methods study protocol for the optimization of perinatal health services. *BMC Health Serv Res*. 2018;18(1):382. doi:[10.1186/s12913-018-3204-9](https://doi.org/10.1186/s12913-018-3204-9)
 31. Terry J, Davies A, Williams C, Tait S, Condon L. Improving the digital literacy competence of nursing and midwifery students: A qualitative study of the experiences of NICE student champions. *Nurse Educ Pract*. 2019;34:192-198. doi:[10.1016/j.nepr.2018.11.016](https://doi.org/10.1016/j.nepr.2018.11.016)

CONFLICTS OF INTEREST

The authors have completed and submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest and none was reported.

FUNDING

There was no source of funding for this research.

ETHICAL APPROVAL AND INFORMED CONSENT

Ethical approval and informed consent were not required for this study.

DATA AVAILABILITY

Data sharing is not applicable to this article as no new data were created.

PROVENANCE AND PEER REVIEW

Not commissioned; internally peer reviewed.

DISCLAIMER

The views and opinions expressed in this article are those of the authors.