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Traumatic birth and childbirth-related post-traumatic stress disorder: International expert consensus recommendations for practice, policy, and research

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ABSTRACT

Background: Research suggests 1 in 3 births are experienced as psychologically traumatic and about 4% of women and 1% of their partners develop post-traumatic stress disorder (PTSD) as a result.
Aim: To provide expert consensus recommendations for practice, policy, and research and theory.
Method: Two consultations (n = 65 and n = 43) with an international group of expert researchers and clinicians from 33 countries involved in COST Action CA18211; three meetings with CA18211 group leaders and stakeholders; followed by review and feedback from people with lived experience and CA18211 members (n = 238).
Findings: Recommendations for practice include that care for women and birth partners must be given in ways that minimise negative birth experiences. This includes respecting women's rights before, during, and after childbirth; and preventing maltreatment and obstetric violence. Principles of trauma-informed care need to be integrated across maternity settings. Recommendations for policy include that national and international guidelines are needed to increase awareness of perinatal mental health problems, including traumatic birth and childbirth-related PTSD, and outline evidence-based, practical strategies for detection, prevention, and treatment. Recommendations for research and theory include that birth needs to be understood through a neurobiopsychosocial framework. Longitudinal studies with representative and global samples are warranted; and research on prevention, intervention and cost to society is essential.
Conclusion: Implementation of these recommendations could potentially reduce traumatic births and childbirth-related PTSD worldwide and improve outcomes for women and families. Recommendations should ideally be

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incorporated into a comprehensive, holistic approach to mental health support for all involved in the childbirth process.

Problem

Traumatic birth experiences can affect women, their partners and maternity staff. Around 4% of women and 1% of partners develop post-traumatic stress disorder (PTSD) as a result of childbirth.

What is already known

Traumatic births and childbirth-related PTSD have a substantial impact on women and their families, yet are potentially avoidable and treatable. Evidence has identified modifiable factors, such as support during birth, which protect against the impact of potentially traumatic birth events.

What this paper adds

Recommendations for practice, policy and research and theory are provided, based on an international expert consensus.

Background

Being pregnant and having a baby is a time of huge physical, psychological, and social change. Worldwide, there are over 140 million births every year [1] and some involve severe obstetric or neonatal complications, morbidity or mortality. Global rates of infant mortality are 2.9%, maternal mortality 0.2%, and 'near miss' maternal mortality ranges from 0.4% to 1.6%. [2–5] Research suggests around 1 in 3 births are experienced as psychologically traumatic, [6] especially when complications occur, the baby dies, adequate support is lacking, and/or intersectional forms of discrimination combine, e.g., age, race, gender identity, class, weight, chronic disease, and disability. As a result, meta-analyses suggest 4% of women who give birth develop childbirth-related PTSD (CB-PTSD) and 1% of partners present at the birth, [7] with clinically significant CB-PTSD symptoms observed in 17% of women. [7].

Traumatic birth experiences and subsequent CB-PTSD symptoms can cause substantial suffering and have major long-term health implications for women, their infants, and families. For example, CB-PTSD is highly comorbid with depression and fear of subsequent births, [8] reduced breastfeeding, [9] disrupted mother-infant relationships, [10] and strain on couples' relationships. [11] There is also evidence of intergenerational transmission of vulnerability and trauma, which may affect the child into adolescence and adulthood. [12] Traumatic birth experiences can also affect healthcare attendants and professionals present [13] and generate significant costs for healthcare systems, with possible economic consequences for society as a whole. [14].

Prevention of traumatic births and CB-PTSD is therefore a global priority, consistent with the United Nation's Millennium and Sustainable Development Goals for improved women's, maternal, and child health, [15] the World Health Organisation's call for every woman to have dignified, respectful maternity care, [16] and the Council of Europe and European Parliament's resolution on the importance of women's sexual and reproductive rights. [17] Traumatic birth and CB-PTSD have been predominantly researched in high-income countries, such as the UK, USA, Australia, and European countries, with less research conducted in low- or middle-income countries (LMIC). Studies in LMIC settings find higher prevalence rates of postpartum CB-PTSD, e.g., 12% in Turkey [8] and 29% in Iran. [18] Women in LMIC are also likely to have less access to maternity care, greater socio-economic disadvantage, and health inequalities. [19] Research and policy statements also focus almost exclusively on women, disregarding men, other birth partners, or birthing people not identifying as female.

In 2019 an international group of researchers and clinicians specialising in traumatic birth and CB-PTSD was set up to increase knowledge and practice in this field (European Commission Cooperation in Science and Technology (COST) Action grant CA18211). [20] This group examined different aspects of traumatic birth and CB-PTSD, including conceptualization, [21] prevention, [22] impact on women and their families, care providers, and the economic cost to society. This work and existing evidence was drawn on to propose key recommendations for practice, policy, and research and theory (Table 1).

Methods

Recommendations were developed through two large consultations

Table 1
COST Action CA18211 recommendations.

Recommendations for Practice	
1	Clinicians must respect women's rights to autonomy before, during, and after birth i.e., maltreatment and obstetric violence must stop and women must receive responsive care.
2	Clinicians must interact with childbearing women and their families in ways that maximise positive birth experiences and minimise negative experiences for women and their supporting persons.
3	Clinicians must respond to childbirth-related mental health problems with compassion, understanding, and respect.
4	Principles of trauma-informed care need to be integrated across all maternity care settings and into clinical training programs.
5	Following an experience of childbirth-related trauma, secondary prevention and treatment of perinatal mental health issues must include the family as a whole and focus on prevention in a subsequent pregnancy and birth.
6	Routine clinical outcomes should incorporate assessment of parents experiences of care and identification of negative birth experiences in order to evaluate and improve care.
Recommendations for Policy	
7	National and international guidelines for maternity care and mental health care are needed to increase awareness of perinatal mental health problems, including traumatic birth and CB-PTSD, and outline evidence-based, practical strategies for detection, prevention and treatment.
8	Healthcare policies for maternity and mental health services should include specific recommendations for prevention, detection, and treatment of traumatic birth and CB-PTSD.
9	Maternity care services need to offer routine screening for perinatal mental health and traumatic birth as part of family-centered, integrated care.
10	Policy needs to support models of maternity care that have women's rights and needs as the center of their care, including the prevention of maltreatment, obstetric violence and mental health problems.
11	Continuing education in trauma-informed care needs to be provided to all staff in maternity care to support prevention, detection and treatment of those with mental health problems.
12	Maternity services need to be resourced to act on feedback around respectful care, including dignity, autonomy, and healthcare providers' communication and interaction with women.
Recommendations for Research and theory	
13	Birth must be understood through a neuro-biopsychosocial framework: Traumatic births may leave a long-term imprint on the mother and child, which needs to be taken into account in research and clinical practice.
14	Longitudinal studies with representative and global samples are warranted. Both parents need to be represented in research and theory. Interdependence within the family has to be considered by applying dyadic/triadic analytical approaches.
15	To assess CB-PTSD use of validated, diagnosis-based tools is required. To determine diagnoses and prevalence, cut-offs need to be established and adapted to different cultural settings.
16	Research on prevention and intervention that could ameliorate or prevent the onset of CB-PTSD is essential.
17	Research is needed on the economic costs of traumatic birth and CB-PTSD to highlight and quantify the adverse implications for the family and society as a whole.
18	Research on traumatic birth and CB-PTSD needs to involve those who are affected as expert collaborative partners to guarantee relevance and legitimacy.

with members of the network. The first consultation was conducted at a meeting in 2020 (Amsterdam) attended by 65 members who were asked to discuss and generate key recommendations arising from their working groups (WG). Working groups focused on different aspects of birth trauma and CB-PTSD as follows: WG1 optimising birth to prevent or reduce birth trauma; WG2 the influence of macro factors e.g. culture, organisational structures, regional structures; WG3 the impact on women and families; WG4 intergenerational transmission; WG5 health economics. Two more working groups contributed across the whole Action: WG6 on communication and impact; and WG7 lived experience stakeholders. The work conducted by the Action had a wide focus that included birth trauma (where birth is experienced as traumatic but CB-PTSD does not necessarily arise), [21] mild to moderate CB-PTSD symptoms, and the clinical disorder of CB-PTSD. Working groups conducted reviews of research evidence, [7,22,23] conceptual work [21,24] and empirical research (e.g. surveys, secondary analyses). [25,26].

Recommendations were collated into a list and categorised. Similar recommendations were combined and wording checked for consistency and refined. The streamlined list of recommendations was then presented back to members at a second meeting in 2021 involving 43 members (online). Members were asked to refine, update and revise the recommendations in light of subsequent work. Recommendations were then further refined through three in-person meetings with the Action's working group leaders and stakeholders with lived experience in 2022 (Iceland and Ireland) and 2023 (Belgium) to prioritise and condense recommendations and ensure relevance and applicability to policy, practice and research. Final recommendations were then circulated by email to 238 Action members and associates for feedback and approval in 2023.

Recommendations for practice

Risk factors for CB-PTSD include vulnerability factors before or during pregnancy (e.g. previous trauma, depression), complications during birth (e.g. operative birth), and postpartum factors (e.g. additional trauma/stressors). [27] The multiple determinants of CB-PTSD mean that not all complex births are experienced by women as traumatic, and not all traumatic births result in CB-PTSD. It is also important to differentiate between pre-existing PTSD (present before pregnancy) and new onset childbirth-related PTSD (caused by events of birth). Pre-existing PTSD may be exacerbated by events of birth and new symptoms or re-traumatisation may occur, but the index trauma was prior to childbirth.

Whilst trauma responses are individual, a substantial body of research highlights the fact that negative interactions with caregivers during birth are associated with suboptimal outcomes. [27,28] Women with CB-PTSD report that poor support during birth contributed significantly to their CB-PTSD, with negative encounters with staff contributing to negative birth experiences, increasing risk of CB-PTSD. [29,30] Whilst every negative interaction in maternity care does not constitute mistreatment, various types of mistreatment have been identified by the WHO, [16] the International Federation of Gynecology and Obstetrics, [31] and research. [32,33] These include (but are not limited to): physical abuse; verbal abuse; stigma and discrimination; nonconsented care; abandonment of care; detention or refusal to access healthcare facilities; and health system conditions and constraints. Obstetric violence is a poorly defined term [34] commonly used for forms of mistreatment and violence that breach women's fundamental human rights. [16] Mistreatment during labor and birth is associated with a greater risk of CB-PTSD [35,36] and therefore needs to be eliminated in all settings.

Recommendation 1. Clinicians must respect women's rights to autonomy before, during, and after birth i.e., maltreatment and obstetric violence must stop and women must receive responsive care.

Conversely, positive encounters with caregivers can have a protective effect, even in the context of complex pregnancies and births. [37] Clinicians are in a unique position to prevent or mitigate against the experience of traumatic birth and development of CB-PTSD through, e.g., developing relationships based on mutual trust and respect, and ensuring women have more positive experiences. [29,37] It is better to prevent harm by optimising positive birth experiences and reducing negative experiences, than for trauma to occur in the first place.

Recommendation 2. Clinicians must interact with childbearing women and their families in ways that maximise positive birth experiences and minimise negative experiences for women and their supporting persons.

Recommendation 3. Clinicians must respond to childbirth-related mental health problems with compassion, understanding, and respect.

Specialist support services for those who experience traumatic births are uncommon. An international mapping study of services in 18 European countries found that only a third had any formal service provision for traumatic birth and CB-PTSD, although most had general perinatal or mental health services that people could be referred to. [25] In addition, less than half had some form of pre-registration training on traumatic birth and CB-PTSD for healthcare professionals, and there was a complete absence of post-registration training. [25] Professional guidelines and curricula therefore need development to recognise the need for specialist services, education, and training for traumatic birth and CB-PTSD.

Preventing or reducing traumatic births and CB-PTSD requires recognition of the widespread nature of trauma across the lifespan, the individual nature of trauma experiences and PTSD risk, and identification of those who experienced traumatic births so care providers can respond effectively when trauma occurs, and reduce the risk of re-traumatisation during birth.

Models of trauma-informed care are promising in this regard, although they have not been specifically developed or tested within midwifery or obstetric care. [38] Thus, a trauma-informed care approach is a good starting point, based on the evidence currently available, whilst this approach is being adapted and evaluated for use in childbirth settings. [39] Interdisciplinary collaboration is essential to ensure progress and success in this regard.

Recommendation 4. Principles of trauma-informed care need to be integrated across all maternity care settings and into clinical training programs.

Given the evidence that some birth companions or supporting persons can develop CB-PTSD, [13] clinicians need to be mindful of their interactions with the supporting person and dyad. Exploration of how birth companions and caregivers can optimise support for the dyad to mitigate against CB-PTSD are important considerations for future research.

Recommendation 5. Following an experience of childbirth-related trauma, secondary prevention and treatment of perinatal mental health issues must include the family as a whole and focus on prevention in a subsequent pregnancy and birth.

Routine evaluation is important to improve care. Routine outcome measures in maternity care should include assessment of parents' experiences of care and identification of those who had traumatic birth experiences in order to: (i) evaluate and improve care; and (ii) enable secondary prevention of mental health issues associated with traumatic birth, such as CB-PTSD. Evaluation needs to be simple in order to be effectively incorporated into routine care. A family-centered approach is essential to minimise the potential negative effects of the intergenerational transmission of the sequelae arising from traumatic birth and CB-PTSD.

Recommendation 6. Routine clinical outcomes should incorporate assessment of parents experiences of care and identification of negative birth experiences in order to evaluate and improve care.

Recommendations for policy

Traumatic experiences and perinatal mental health problems should be of particular concern to policymakers because of the long-term negative consequences for women and infants and the increased health burden and societal costs. To ensure maternity service and healthcare providers are trauma sensitive, improvements to health systems are necessary at the macro level (e.g. regulations, national guidelines and quality indicators for embedding trauma sensitive care in the health system), meso level (e.g. offering specialist support services), and micro level (e.g. birth environment, training healthcare providers). Policies need to be developed and established to increase awareness and implement changes to reduce the impact of traumatic birth on women, families, and society. Increased awareness and actions need to include health professionals, healthcare providers, health organisations, health insurance companies, other financers of healthcare, governmental bodies and consumers.

Recommendation 7. National and international guidelines for maternity care and mental health care are needed to increase awareness of perinatal mental health problems, including traumatic birth and CB-PTSD, and outline evidence-based, practical strategies for detection, prevention and treatment.

However, to date, few countries have policies in place for the prevention of traumatic birth and treatment of CB-PTSD, [25] with a few notable exceptions. [40,41] Similarly, formal service provision for traumatic birth or CB-PTSD was only identified in a third of countries. [25] Many countries had non-perinatal psychological services that could treat CB-PTSD. However, lack of clear policy or guidance means many do not access these services. [38] This lack of policy and specialist services is despite evidence showing that screening and specialist treatment programs for perinatal mental health problems are cost-effective. [42] A systematic review of the cost-effectiveness of interventions for perinatal mental health problems, including CB-PTSD, found that screening, psychological or social support, and specialist treatment programs were all cost-effective interventions for these problems. [42].

Recommendation 8. Healthcare policies for maternity and mental health services should include specific recommendations for prevention, detection, and treatment of traumatic birth and CB-PTSD.

Recommendation 9. Maternity care services need to offer routine screening for perinatal mental health and traumatic birth as part of family-centered, integrated care.

This highlights important gaps regarding formalised policies, clinical guidelines for healthcare, education and training of healthcare providers in traumatic birth and CB-PTSD. There is a critical need for national policies emphasising the importance of respectful, trauma-informed care for women, especially those who have had traumatic birth experiences or perinatal mental health problems. Systematic screening is essential for identifying those women and birth companions affected, and establishing formalised care pathways to facilitate access to effective care for women and families. Clinical guidelines, training on trauma-informed care and perinatal mental health problems, and adequate resourcing of services need to be in place to support healthcare providers to address the problems and prevent traumatising behaviors, such as obstetric violence.

Recommendation 10. Policy needs to support models of maternity care that have women's rights and needs as the center of their care, including the prevention of maltreatment, obstetric violence and mental health problems.

Recommendation 11. Continuing education in trauma-informed care needs to be provided to all staff in maternity care to support prevention, detection and treatment of those with mental health problems.

Recommendation 12. Maternity services need to be resourced to act on feedback around respectful care, including dignity, autonomy, and healthcare providers' communication and interaction with women.

Recommendations for research and theory

To provide a more holistic understanding of mechanisms explaining how trauma during birth and CB-PTSD leads to adverse perinatal mental health outcomes and intergenerational effects, an integrative approach to research is needed, which draws on theory to consider neurobiological, psychological, and social factors involved, and their interactions. [43] Such an approach is crucial in the context of early identification and prevention because it will support the development of pathways to prevention and personalised interventions targeting both biological risk profiles and the psychosocial context. [43].

Recommendation 13. Birth must be understood through a neuro-biopsychosocial framework: Traumatic births may leave a long-term imprint on the mother and child, which needs to be taken into account in research and clinical practice.

Research design is important, in particular the need for prospective, longitudinal studies to determine the incidence and trajectory of CB-PTSD, comorbid disorders, as well as mechanisms underlying intergenerational effects. Whilst there are increasing numbers of longitudinal studies in this area there is still a need for more prospective studies. Another important consideration is representativeness of study samples with regard to demographic, cultural, obstetric, and intersectional characteristics of participants. Existing research is primarily based on western, white, middle-class samples, so it is essential to determine prevalence rates, common and specific risk factors in minority groups and at-risk samples. [22].

The importance of the family system and interdependences within the family needs to be considered in research. Most (expectant) parents are in a committed relationship during the perinatal period, and they share common experiences and events, such as the birth of the baby. Hence, both parents should be included in research and theory. Dyadic approaches to research and analysis are crucial to account for interdependence within the couple. [44] Dyadic approaches could also be extended to the wider family by including siblings or grandparents using, e.g., the Social Relations Model to disentangle family, actor, partner, and relationship effects.

Recommendation 14. Longitudinal studies with representative and global samples are warranted. Both parents need to be represented in research and theory. Interdependence within the family has to be considered by applying dyadic/triadic analytical approaches.

Research measurement is critical and there are a wide range of interview and self-report measures available that have been used to assess CB-PTSD, usually with alterations to identify birth as the index traumatic event. [22] In order to accurately determine prevalence rates and establish optimal cut-off values, the use of diagnostic instruments is necessary. Available measures include those such as the birth-specific City Birth Trauma Scale [45] or generic PTSD Checklist for DSM-5 but the most effective cut-off values for diagnostic accuracy when used with postpartum women need to be established. [46] Measurement of CB-PTSD also needs to be culturally-appropriate. For example, self-report assessment in LMIC settings needs to consider potential difficulties with literacy.

Recommendation 15. To assess CB-PTSD use of validated, diagnosis-based tools is required. To determine diagnoses and prevalence, cut-offs need to be established and adapted to different cultural settings.

Similarly, research on prevention and intervention approaches that could ameliorate or even prevent the onset of CB-PTSD is essential. Furthermore, robust evidence on prevalence and impact of traumatic births and CB-PTSD will enable the economic costs of traumatic births and CB-PTSD to be established. Economic data and analysis would highlight and quantify (in cost terms) the adverse implications for the family and for society as a whole. This would provide a sound rationale

and financial incentive for prioritising prevention and intervention, which are currently lacking in healthcare systems worldwide.

Recommendation 16. Research on prevention and intervention that could ameliorate or prevent the onset of CB-PTSD is essential.

Recommendation 17. Research is needed on the economic costs of traumatic birth and CB-PTSD to highlight and quantify the adverse implications for the family and society as a whole.

Importantly, research on traumatic birth and CB-PTSD needs to involve those who are affected as expert collaborative partners to ensure that critical issues for birthing women and parents can be addressed as a priority, so that research meets their needs and is acceptable to birthing people and parents.

Recommendation 18. Research on traumatic birth and CB-PTSD needs to involve those who are affected as expert collaborative partners to guarantee relevance and legitimacy.

Conclusions

This paper outlines key recommendations for practice, policy, research and theory that are based on reviews and evidence on traumatic birth and CB-PTSD. Adoption and implementation of some or all of these recommendations has the potential to reduce the incidence of traumatic births and CB-PTSD and improve outcomes for women, infants, families, health services, and society. It is important for routine evaluation of these actions and outcomes to be incorporated into healthcare services and public health initiatives from the outset to provide further evidence on the efficacy and effectiveness of these initiatives. It should be noted that these recommendations were developed by a European network and predominantly based on research conducted in high income countries. Recommendations might therefore need to be adapted or re-prioritised in low-resource settings. Ongoing evaluation will inform modification and adoption of recommendations in LMIC countries and internationally; as well as enable future review and updates of recommendations to prevent CB-PTSD and the substantial disease burden associated with it. Finally, while the emphasis on CB-PTSD is important, it should not undermine the need for mental health support for all those involved in the childbirth process. A more comprehensive, holistic approach to mental health has the potential to provide better outcomes for everyone involved.

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Author contributions

AH, SA, SGN and MN co-ordinated the work and drafted the manuscript. Working group leaders AB, SIK, MO, GT, MN, SGN, JDT, AH represented each working group in the consensus process. KH represented persons with lived experience. JL obtained the original funding and led the CA18211 COST Action. All authors contributed to the consensus process, read and approved the final manuscript.

Declaration of Competing Interest

None declared.

Appendix A. Supporting information

Supplementary data associated with this article can be found in the online version at doi:10.1016/j.wombi.2023.11.006.

References

[1] UNICEF. How many babies are born a year? 2022.
[2] World Health Organization. Infant mortality. Available from: https://www.who.int/data/gho/data/themes/topics/indicator-groups/indicator-group-details/GHO/infant-mortality.
[3] World Health Organization. Maternal mortality. Available from: ⟨https://data.unicef.org/topic/maternal-health/maternal-mortality/⟩.
[4] A. Heitkamp, A. Meulenbroek, J. van Roosmalen, S. Gebhardt, L. Vollmer, J.I. de Vries, et al., Maternal mortality: near-miss events in middle-income countries, a systematic review, Bull World Health Organ 99 (10) (2021) 693–707 (f).
[5] O. Tunçalp, M.J. Hindin, J.P. Souza, D. Chou, L. Say, The prevalence of maternal near miss: a systematic review, BJOG 119 (6) (2012) 653–661.
[6] K.L. Alcorn, A. O'Donovan, J.C. Patrick, D. Creedy, G.J. Devilly, A prospective longitudinal study of the prevalence of post-traumatic stress disorder resulting from childbirth events, Psychol. Med. 40 (11) (2010) 1849–1859.
[7] C.S. Heyne, M. Kazmierczak, R. Souday, et al., Prevalence and risk factors of birth-related posttraumatic stress among parents: a comparative systematic review and meta-analysis, Clin. Psychol. Rev. 94 (2022), 102157.
[8] P. Dikmen-Yildiz, S. Ayers, L. Phillips, Depression, anxiety, PTSD and comorbidity in perinatal women in Turkey: a longitudinal population-based study, Midwifery 55 (2017) 29–37.
[9] N. Cook, S. Ayers, A. Horsch, Maternal posttraumatic stress disorder during the perinatal period and child outcomes: a systematic review, J. Affect. Disord. 225 (2018) 18–31.
[10] S. Van Sieleghem, M. Danckaerts, R. Rieken, et al., Childbirth related PTSD and its association with infant outcome: a systematic review, Early Hum. Dev. 174 (2022), 105667.
[11] A. Delicate, S. Ayers, A. Easter, S. McMullen, The impact of childbirth-related post-traumatic stress on a couple's relationship: a systematic review and meta-synthesis, J. Reprod. Infant Psychol. 36 (1) (2018) 102–115.
[12] A. Horsch, S. Stuijfzand, Intergenerational transfer of perinatal trauma-related consequences, J. Reprod. Infant Psychol. 37 (3) (2019) 221–223.
[13] N. Uddin, S. Ayers, R. Khine, R. Webb, The perceived impact of birth trauma witnessed by maternity health professionals: a systematic review, Midwifery 114 (2022), 103460.
[14] Bauer A., Parsonage M., Knapp M., Iemmi V., Adelaja B. The costs of perinatal mental health problems. London School of Economics and Political Science, London, UK. 2014.
[15] United Nations DESA, 2022. The Sustainable Development Goals Report 2022 - July 2022. New York, USA: UN DESA.
[16] World Health Organization. The prevention and elimination of disrespect and abuse during facility-based childbirth. 2015. ⟨https://apps.who.int/iris/bitstream/handle/10665/134588/WHO_RHR_14.23_eng.pdf⟩.
[17] European Parliament. Sexual and reproductive health and rights in the EU, in the frame of women's health. Official Journal of the European Union. 2022;C81:43-62.
[18] S. Abdollahpour, T. Khadivzadeh, Prevalence of traumatic childbirth and post-traumatic stress after delivery in Iran: a systematic review and meta-analysis, J. Obstet. Gynecol. Cancer Res. 4 (3) (2022) 86–92.
[19] T.A. Houweling, C. Ronsmans, O.M. Campbell, A.E. Kunst, Huge poor-rich inequalities in maternity care: an international comparative study of maternity and child care in developing countries, Bull. World Health Organ. 85 (10) (2007) 745–754.
[20] COST Action CA18211: Perinatal Mental Health and Birth-Related Trauma: Maximising best practice and optimal outcomes (DEVoTION) ⟨https://www.cost.eu/actions/CA18211/⟩. Accessed 23 Oct 2023.
[21] J. Leinweber, Y. Fontein-Kuipers, G. Thomson, et al., Developing a woman-centered, inclusive definition of traumatic childbirth experiences: a discussion paper, Birth 49 (4) (2022) 687–696.
[22] Horsch A., Garthus-Niegel S., Ayers S., et al. Childbirth-related posttraumatic stress disorder: definition, risk factors, pathophysiology, diagnosis, prevention, and treatment. AJOG. In press.
[23] S. Shorey, S. Downe, J.Y.X. Chua, S.O. Byrne, M. Fobelets, J.G. Lalor, Effectiveness of psychological interventions to improve the mental well-being of parents who have experienced traumatic childbirth: a systematic review and meta-analysis, Trauma Violence Abuse 24 (3) (2023) 1238–1253.
[24] J. Leinweber, Y. Fontein-Kuipers, S.I. Karlsdottir, A. Ekström-Bergström, C. Nilsson, C. Stramrood, G. Thomson, Developing a woman-centered, inclusive definition of positive childbirth experiences: a discussion paper, Birth 50 (2) (2023) 362–383.
[25] G. Thomson, M.Q. Diop, S. Stuijfzand, A. Horsch, CAb Consortium, Policy, service, and training provision for women following a traumatic birth: an international knowledge mapping exercise, BMC Health Serv. Res. 21 (1) (2021), 1206.
[26] Buyukcan-Tetik A., Seefeld L., Bergunde L., Ergun T.D., Dikmen Yildiz P., Horsch A., Garthus-Niegel S., Oosterman M., Lalor J., Weigl T., Bogaerts A., van Haeken S., Finlayson K.W., Downe S., Ayers S. (under review). Birth expectations, experiences and childbirth-related post-traumatic stress symptoms in mothers and birth companions: Dyadic investigation using response surface analysis. Br J Health Psychology.
[27] S. Ayers, R. Bond, S. Bertullies, K. Wijma, The aetiology of post-traumatic stress following childbirth: a meta-analysis and theoretical framework, Psychol. Med. 46 (6) (2016) 1121–1134.
[28] M.A. Bohren, G.J. Hofmeyr, C. Sakala, R.K. Fukuzawa, A. Cuthbert, Continuous support for women during childbirth, Cochrane Database Syst. Rev. 7 (7) (2017). CD003766.

[29] M.H. Hollander, E. van Hastenberg, J. van Dillen, M.G. van Pampus, E. de Miranda, C.A.I. Stramrood, Preventing traumatic childbirth experiences: 2192 women's perceptions and views, Arch. Womens Ment. Health 20 (4) (2017) 515–523.
[30] R. Harris, S. Ayers, What makes labour and birth traumatic? A survey of intrapartum 'hotspots', Psychol. Health 27 (10) (2012) 1166–1177.
[31] Call for Elimination of Violence Against Women. Figo. 2016. ⟨https://www.figo.org/call-elimination-violence-against-women⟩. Accessed 20 October 2023.
[32] M.A. Bohren, J.P. Vogel, E.C. Hunter, O. Lutsiv, S.K. Makh, J.P. Souza, C. Aguiar, F. Saraiva Coneglian, A.L. Diniz, Ö. Tunçalp, D. Javadi, O.T. Oladapo, R. Khosla, M. J. Hindin, A.M. Gülmezoglu, The mistreatment of women during childbirth in health facilities globally: a mixed-methods systematic review, PLoS Med. 12 (6) (2015), e1001847.
[33] M.S.G. van der Pijl, C.J.M. Verhoeven, R. Verweij, T. van der Linden, E. Kingma, M. H. Hollander, A. de Jonge, Disrespect and abuse during labour and birth amongst 12,239 women in the Netherlands: a national survey, Reprod. Health 19 (1) (2022), 160.
[34] A.C. Ferrão, M. Sim-Sim, V.S. Almeida, M.O. Zangão, Analysis of the concept of obstetric violence: scoping review protocol, J. Pers. Med. 12 (7) (2022) 1090.
[35] E. Leavy, M. Cortet, C. Huissoud, T. Desplanches, J. Sormani, S. Viaux-Savelon, C. Dupont, S. Pichon, L. Gaucher, Disrespect during childbirth and postpartum mental health: a French cohort study, BMC Pregnancy Childbirth 23 (1) (2023), 241.
[36] I.E.F. Khsim, M.M. Rodríguez, B. Riquelme Gallego, R.A. Caparros-Gonzalez, C. Amezcua-Prieto, Risk factors for post-traumatic stress disorder after childbirth: a systematic review, Diagnostics 12 (11) (2022) 2598.
[37] M.S.G. van der Pijl, M. Kasperink, M.H. Hollander, C. Verhoeven, E. Kingma, A. de Jonge, Client-care provider interaction during labour and birth as experienced by women: Respect, communication, confidentiality and autonomy, PLoS One 16 (2) (2021), e0246697.
[38] M. Sperlich, J.S. Seng, Y. Li, J. Taylor, C. Bradbury-Jones, Integrating trauma-informed care into maternity care practice: conceptual and practical issues, J Midwifery Women's Health 62 (6) (2017) 661–672.
[39] Law C., Wolfenden L., Sperlich M., Taylor J. A good practice guide to support implementation of trauma-informed care in the perinatal period. The Centre for Early Child Development (Blackpool, UK) Commissioned by NHS England and NHS Improvement. 2019.
[40] N.H.S. England. Supporting mental healthcare in a maternity and neonatal setting: Good practice guide and case studies. August 2021 NHS England. Accessed online: https://www.england.nhs.uk/publication/supporting-mental-healthcare-in-a-maternity-and-neonatal-setting-good-practice-guide-and-case-studies/.
[41] Nederlandse Vereniging voor Obstetrie & Gynaecologie. RICHTLIJN: Bevallingsgerelateerde posttraumatische-stressstoornis (PTSS) en posttraumatische-stressstoornisklachten (PTSSklachten). 2019. https://www.nvog.nl/wp-content/uploads/2019/11/Bevallingsgerelateerde-posttraumatische-stressstoornis-PTSS-en-posttraumatische-stressstoornisklachten-PTSS-klachten.pdf (nvog.nl). Accessed 20 Oct 2023.
[42] E. Verbeke, A. Bogaerts, T. Nuyts, N. Crombag, J. Luyten, Cost-effectiveness of mental h777ealth interventions during and after pregnancy: a systematic review, Birth 49 (3) (2022) 364–402.
[43] I. Olza, K. Uvnas-Moberg, A. Ekström-Bergström, et al., Birth as a neuro-psycho-social event: an integrative model of maternal experiences and their relation to neurohormonal events during childbirth, PLoS One 15 (2020), e0230992.
[44] L. Seefeld, A. Buyukcan-Tetik, S. Garthus-Niegel, The transition to parenthood: perspectives of relationship science theories and methods, J. Reprod. Infant Psychol. 40 (2) (2022) 105–107.
[45] S. Ayers, D.B. Wright, A. Thornton, Development of a measure of postpartum PTSD: the city birth trauma scale, Front. Psychiatry 9 (2018), 409.
[46] Weathers F.W., Litz B.T., Keane T.M., Palmieri P.A., Marx B.P., Schnurr P.P. (2013) The PTSD checklist for dsm-5 (pcl-5). Scale available from the National Center for PTSD at ⟨www.ptsd.va.gov⟩.