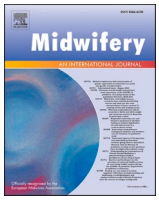
Midwifery 132 (2024) 103964

Contents lists available at ScienceDirect

Midwifery

journal homepage: www.elsevier.com/locate/midw



Review Article

What is 'physiological birth'? A scoping review of the perspectives of women and care providers

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ARTICLE INFO

Keywords:
Physiological birth
Women/Woman
Midwife
Obstetricians
Scoping review

ABSTRACT

Problem: Physiological birth was defined by the World Health Organization in 1997, however, clinical practices in childbirth have changed considerably since this time.
Background: Ambiguous terms in healthcare such as 'physiological birth' may cause confusion amongst care providers and consumers.
Aim: To identify what is known about physiological birth, and how perceptions of physiological birth manifest in current literature.
Methods: This review followed the Joanna Briggs Institute methodology for scoping reviews and the PRISMA-ScR checklist. Four databases were searched using keywords relating to physiological birth. Relevant studies were identified using agreed criteria, and data were extracted and synthesised.
Results: A total of 24 studies met the inclusion criteria for this review. Three connected factors were identified: (1) Physiological birth in a risk-averse system, (2) Dominant voices in birth, and (3) Lack of exposure to physiological birth. No unified universal definition of physiological birth was identified in the literature.
Discussion: 'Physiological birth' as a term lacks consistency. A risk-averse healthcare system could be a barrier to physiological birth. Dominant voices in the birthing space can dictate the way birth occurs. Lack of exposure to physiological birth may diminish the acquisition and maintenance of important skills and knowledge among care providers. Recognising the factors important to women could lead to a positive birth experience.
Conclusion: Excluding a woman's subjective experience from health professionals' understanding of physiological birth increases the likelihood of risk management being the paramount objective in clinical decision-making. We propose it is timely to align clinical understanding of physiological birth with midwifery's woman-centred professional philosophy.

Statement of Significance

Problem or Issue: The definition of 'physiological birth' does not adequately embody the lived experience of women or their care providers.

What is Already Known: Physiological birth is beneficial to maternal and newborn outcomes, however defining what constitutes a physiological birth is challenging. The lack of clear definitions in medical literature and colloquial discourses creates ambiguity that can influence shared decision-making.

What this Paper Adds: This paper reviewed the definition of 'physiological birth' and how physiological birth is perceived by women and care providers. There is a misalignment of the conceptual understanding of physiological birth among women and care providers and this potentially impacts priorities in clinical decision-making.

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https://doi.org/10.1016/j.midw.2024.103964
Received 20 August 2023; Received in revised form 7 January 2024; Accepted 28 February 2024
Available online 29 February 2024

Introduction

Childbirth is a significant event in a woman's[2] life, and there is growing interest in ways to enhance both the experience of the woman and promote physiological birth, to reduce over-medicalisation and increase maternal satisfaction Cook & Loomis, 2012. It is challenging to reliably monitor the rates of 'physiological birth' due to varying definitions of this term in the literature and stakeholder policies. These definitions do not specify what constitutes a physiological birth, from the perspectives of the women undergoing it, or the healthcare professionals supporting it, and it is unclear what interventions in labour and birth change a physiological birth to a non-physiological birth Carpenter et al., 2022. The importance of shared healthcare decision-making is gaining traction in contemporary practice and literature Poprzeczny et al., 2020, Shinkunas et al., 2020,. Shared decision-making involves the woman, her support person and her care provider engaging in a trusting relationship to achieve informed and consensual health and birth-related decisions Makoul & Clayman, 2006. With definitions that focus on medicine, midwifery and biological processes, little consideration is given to the women's perspective of physiological birth, which may subsequently impact shared decision-making and clinical practice ACNM, MANA, and NACPM, 2013.

The definition

In 1997 physiological birth was defined by the World Health Organization as "spontaneous onset, low risk at the commencement of labour, and continuing so for the remainder of labour and birth. The infant is born spontaneously between 37 and 42 weeks of pregnancy with a cephalic presentation. Following birth, both mother and infant are in good condition" World Health Organization, 1997, p121. The impetus for the development of this biological definition was the World Health Organization's call for the elimination of preventable intervention in childbirth, with the purpose of this consensus statement being to benchmark safe, healthy and normal physiological childbirth. This statement provided a framework for maternity care providers, women and policymakers to avoid the overuse of intervention and to protect human childbearing physiology, to achieve safe and sustainable maternity care ACNM, MANA, and NACPM, 2013.

Historical context

The terms 'physiological birth' and 'normal birth' are used interchangeably in colloquial discourse, and remain ambiguous, as they are not clearly defined in peer-reviewed literature. Throughout the 1950s-1980s the majority of women in the United States of America gave birth in a hospital, many under heavy anaesthesia Donnison, 1980; the term 'physiological birth' appears to have emerged in the 1970s when there was a growing movement towards 'natural' childbirth, coinciding with concerns at the increased rates of obstetric intervention Koehn, 2008. Led by the resurgence of midwifery, and the women's health movement, women began seeking homebirths, waterbirths, and education that focused on relaxation and support in labour and birth Donnison, 1980. Many of these practices are now widely used in maternity care Yulizawati et al., 2023, Seed et al., 2023. The term 'normal birth' is commonly used in contemporary language to refer to childbirth without medical intervention or maternal or neonatal morbidity in the perinatal period ACNM, MANA, and NACPM, 2013.

The understanding of 'normal', 'natural' and 'physiological' birth is subject to change over time, as obstetric and midwifery practices continue to evolve Shorey & Ng, 2023. Traditionally, midwifery philosophical values and practices have been deeply rooted in advocating the normality of birth, promoting the innate ability of a woman to birth her baby, and trusting the process of labour and birth Bradfield et al., 2019. However, in recent decades, hospital-based birthing has become increasingly medicalised Benyamini et al., 2017.

The current climate

In the United Kingdom, an analysis of the language used around birth and the impacts of describing a birth as 'normal' has been conducted, with collaboration from maternity staff, users of maternity services and others involved in the care and support of pregnant women and families Royal College of Midwives, 2022. Findings highlighted that those working in maternity services need terms that are unambiguous, specific enough to identify differences in mode of labour and birth, and consistently understood Royal College of Midwives, 2022. Consumers of maternity services need terms that are non-judgemental, non-hierarchical and reflective of the lived experience of birth, while being descriptive and technically precise Royal College of Midwives, 2022.

The Nursing and Midwifery Board of Australia's 'Code of Professional Conduct' and 'Midwife Standards for Practice' include woman-centred care as a fundamental element of midwifery practice, with the midwife's role being to promote 'normal physiological birth', and work in partnership with each woman Nursing and Midwifery Board of Australia, 2018.; Nursing and Midwifery Board of Australia, 2008.; however, the Code and Standards do not define physiological birth Nursing and Midwifery Board of Australia, 2018.; Nursing and Midwifery Board of Australia, 2008. Similarly, the International Confederation of Midwives (ICM) and the Nursing and Midwifery Council (NMC) (UK) advocate a midwifery philosophy that favours childbearing as a 'normal physiological process' advocating for non-intervention in normal childbirth, and promoting positive outcomes and prevention of complications International Confederation of Midwives., 2014; Nursing and Midwifery Council., 2019. This, however, provides no insight into which interventions (if any) are congruent with physiological birth.

The challenges

Physiological birth is widely considered to be a healthy outcome for women, birthing people and their infants, and the promotion of normal physiological birth, is fundamental to the role of the midwife Nursing and Midwifery Board of Australia, 2018. The purpose of this paper is to provide an enhanced understanding of physiological birth in the contemporary birthing context where rates of interventions in birthing are increasing Olsen & Clausen, 2023; Rutherford et al., 2019; Benyamini et al., 2017. The goal of the analysis is to provide conceptual refinement to assist health professionals in identifying the boundaries of physiological birth within clinical practice, and to explore how the perspectives of women can be reflected in its defining attributes. This review also examines challenges faced by clinicians in facilitating physiological birth in a hospital setting.

A preliminary search of Medline, CINAHL and the Cochrane Database of Systematic Reviews found no reported or planned systematic or scoping reviews defining 'physiological birth' or 'normal birth' (date: 10/09/2021).

Objective

The objective of this scoping review is to identify what is known about physiological birth among women and care providers.

[2] Use of the word woman/women/mother refers to the person/persons giving birth. The words woman/women/mother in midwifery practice are generally understood to include the woman's/women's baby and may include the partner and family as identified by the woman/women/mother.

Methods

This scoping review was conducted in accordance with the Joanna Briggs Institute (JBI) methodology for scoping reviews and the Preferred Reporting Guidelines for Systematic Reviews and Meta-Analysis extension for Scoping Reviews (PRISMA-ScR) checklist Peters et al., 2020; Tricco et al., 2018; Tricco et al., 2016; Munn et al., 2018. Scoping reviews are an effective way of synthesising a broad range of evidence on a given topic to identify knowledge gaps and develop research priorities that guide policy and decision-making Peters et al., 2020. The JBI methodology was selected due to the extensive guidance given by the JBI Collaboration, explicitly addressing the need for scoping reviews to be 'rigorously conducted, transparent and trustworthy' Peters et al., 2020.

Protocol and registration

This scoping review has a registered protocol in Open Science Framework (date: 29/11/2022, registration number: 10.17605/OSF.IO/B6KTJ, registered website: https://osf.io/b6ktj/) Owen, 2022.

Review questions

This review addresses three questions:

1. How is 'physiological birth' defined in the literature?
2. How is 'physiological birth' perceived among women and care providers (i.e., midwives, obstetricians)?
3. What are the challenges or barriers to providing a physiological birth to women in a hospital setting?

Eligibility criteria

This scoping review focussed on the question 'What is physiological birth?' intending to clarify what constitutes a physiological birth. Using the **P**opulation, **C**oncept, **C**ontext (**PCC**) framework Aromataris, 2020 the eligibility criteria to meet the objectives of the scoping review were identified and agreed upon as an iterative process between the three authors:

Population: women, midwives, obstetricians. Within this paper, 'care providers' encompasses those directly involved in labour and birth, rather than professionals with a support role.

Concept: physiological birth

Context: trends in practice, model of care, modern context

All authors discussed screening and eligibility criteria in keeping with the scoping review methods. The search was limited to January 2013- July 2023, with full-text available, and in the English language. This timescale was chosen to review contemporary studies/articles and gain an understanding of current views in clinical practice. Earlier articles produced from 1997-2012 were discussed by the research team and deemed inappropriate for inclusion to address the above three questions.

Inclusion criteria

All studies published between 2013-2023, in the English language describing physiological birth from the perspective of women and care providers (i.e., midwives and obstetricians) were included. Relevant quantitative and qualitative studies, randomized controlled trials, and systematic and integrative reviews were included. The rationale for this inclusion criteria was to adequately capture the peer-reviewed literature reporting perspectives of physiological birth from the population of interest.

Exclusion criteria

Studies examining postpartum haemorrhage, breastfeeding, nutrition, antenatal appointment attendance, fetal wellbeing in pregnancy, the architecture of birthing suites, pain in labour studies, performance appraisal tools, studies focused on clinical care specialists that are not midwives or obstetricians, studies involving students/educators, or focused on alternative medicine were excluded. The rationale for this exclusion criteria was based on a preliminary search, where these topics were found to have outcomes that were not aligned with the set research questions. Abstracts without full text were excluded.

Search strategy

We followed the three-step JBI method to identify relevant literature Peters et al., 2015. The first stage search was performed in Cumulative Index to Nursing and Allied Health Literature (CINAHL) and ProQuest using 'physiological birth' and 'normal birth' to identify search terms and keywords. Searches were not restricted to definitions of these terms: rather, we sought reports that included either term in describing what is important to women, and what might be considered 'normal' / 'physiological'. A research librarian replicated the search and verified the terms/keywords in Table 1 **Search Terms.**

In the second stage, the keywords were used to identify all pertinent publications in relevant bibliographic databases including PubMed (NLM), Cumulative Index to Nursing and Allied Health Literature (CINAHL, EBSCO), Medline (Ovid) and ProQuest. Boolean operators (AND/OR) were used with the keywords in all searches.

The third stage search included checking references from identified studies and searching Google Scholar, Australian Federal and State/Territory Government Departments of Health, World Health Organization, International Confederation of Midwives, and Nursing & Midwifery Council websites for grey literature about current definitions of physiological birth (policy documents, stakeholder statements). This supplementary literature was considered appropriate to inform the introduction and discussion sections of this paper, and not included in the results of this scoping review.

The search was conducted in November 2022, and updated in July 2023.

Selection of sources of evidence

All studies meeting the keywords and selection criteria were imported into Covidence, a web-based software platform that supports the production of systematic and scoping reviews Pannucci & Wilkins, 2010. Two reviewers independently screened titles and abstracts for eligibility (BH & CE). Studies were excluded if both reviewers deemed they did not meet eligibility criteria. Where consensus regarding inclusion/ exclusion was not reached, further discussion with a third reviewer took place until a decision was made (HG). Full-text screening was undertaken by two authors (BH & CE) with disagreements adjudicated as a team and with input from the third author (HG). Thirty-four studies were included in full-text screening with 10 excluded due to not meeting the inclusion criteria. After all exclusions, 24 studies remained for the final review, with 2 studies added from the updated search in July 2023. (see Fig. 1.

Table 1
PCC/Concept Map.

Population **Concept 1**	**Concept** **Concept 2**	**Context** **Concept 3**
Woman, women, female, females	Childbirth (MeSH)	Midwife attitudes OR midwifery service (MeSH)
Midwifery, Midwife* OR midwives (MeSH exploded)	((natural* OR physiological* OR vaginal*) N2 (birth OR deliver* OR spontaneous OR spont* OR labor OR labour OR parturition))	Model of care
Obstetrician	Physiological birth Delivery, obstetric (MeSH)	Delivery practice Birthing practice

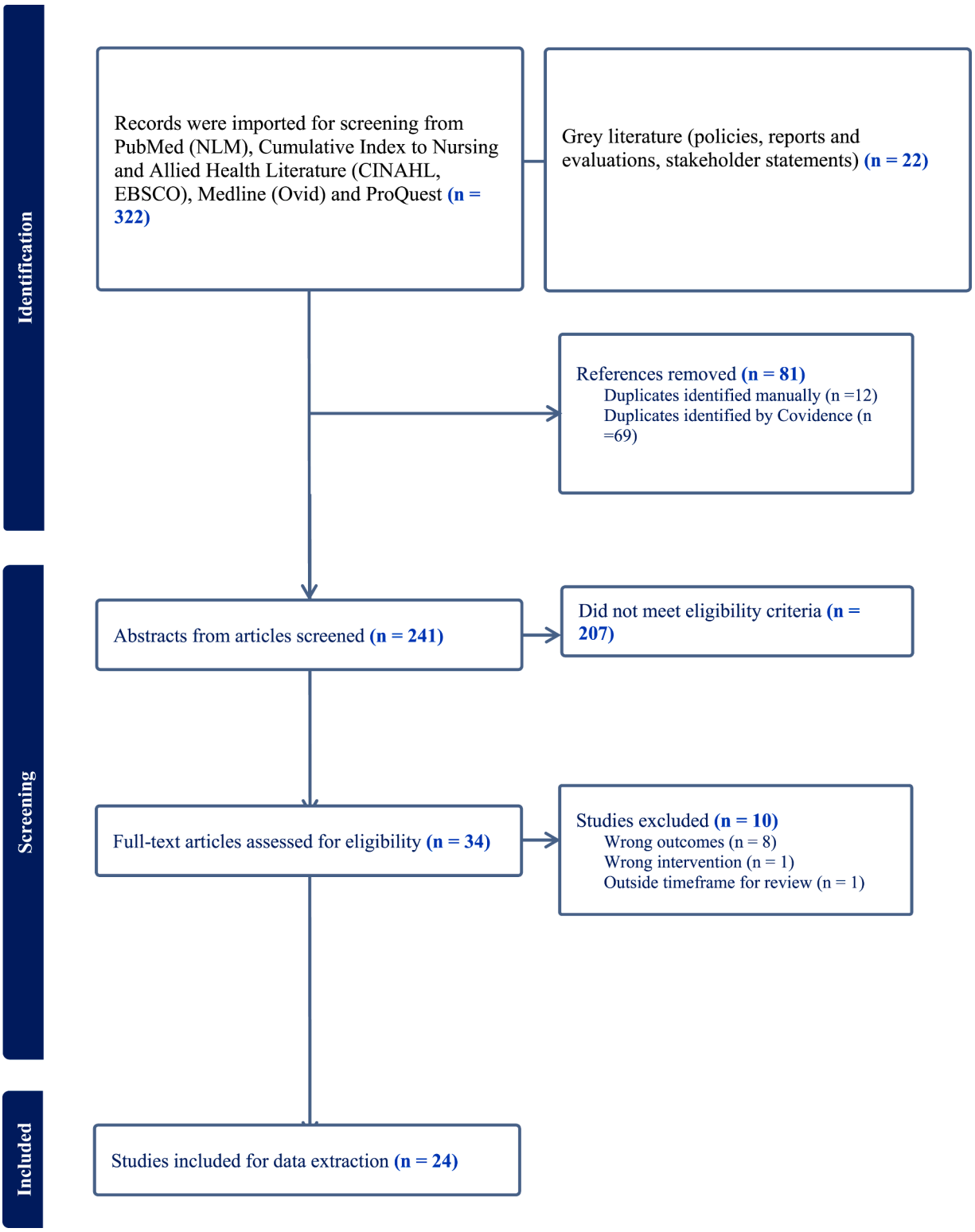

Fig. 1. PRISMA Flow Chart.

PRISMA flow chart).

Critical appraisal of individual sources of evidence

Quality assessment was performed by the lead author (BH), using the Joanna Briggs Institute 'JBI's critical appraisal tools' version dated 2017, to assess the trustworthiness, relevance and results of published studies. Each article was given a JBI Critical Appraisal outcome (percentage of checklist met) score Lockwood, 2015. Each article was assessed with the appropriate tool, according to the type of research (See **Appendix 1: Quality assessment**). All studies were included regardless of methodological quality, to highlight complete transparency of data represented in the scoping review, and to remove selection bias from data inclusion.

Table 2
Analysis of Concepts.

Factors	Physiological birth in a risk-averse system.			Dominant voices in birth.			Lack of exposure to physiological birth				
Subfactors	Defining physiological birth			Uncertainty in birth					Hierarchy	Understanding the psychology of physiological birth	
Coding	Defining physiological birth- what is and what isn't	Women-emotional journey	Women-working with bodies	Midwife's philosophy and understanding of normalcy	Risk surveillance	Birth inherently risky	Fear of the unknown-Anxiety	Lack of exposure	Fear of litigation-impact on midwifery and medical decisions	Workplace culture	Women's perspective of physiological birth
Rydahl, E., Juhl, M., Declercq, E. & Maimburg, R.D. 2021.				X	X	X	X	X	X		
Sadeghzadeh, N., Amiri-Farahani, L., Haghani, S. & Hasanpoor-Azghady, S.B. 2019.	X			X	X	X	X		X		
Coates, D., Donnolley, N. & Henry, A. 2021.	X					X				X	
Dixon, L., Skinner, J. & Foureur, M. 2014.		X	X								X
Hamideh Azimi, L. & Rezaie-Abhari, F. 2019.				X						X	
Wong, C.Y.W., Shorey, S., Liew, K., He, H.G. & Koh, S.S.L. 2018.	X			X		X				X	
Thompson, S.M., Nieuwenhuijze M.J., Low L.K. & de Vries, R. 2016.	X			X							
Skrondal, T.F., Bache-Gabrielsen, T. & Aune, I. 2020.	X	X	X								X
McKenzie, G. & Montgomery, E. 2021.	X	X	X								X
Page, M. & Mander, R. 2014.				X	X	X	X	X	X		
Reed, R., Rowe, J. & Barnes, M. 2016.	X	X		X							
Jafari, E., Mohebbi, P. & Mazloomzadeh, S. 2017.	X	X			X	X	X		X		
Macfarlane, A.J., Rocca-Ihenacho, L. & Turner, L.R. 2014.				X						X	
Hall, H., Fooladi, E., Kloester, J et al., 2022.		X	X	X	X					X	X
Watkins, V., Nagle, C., Street, M. & Hutchinson, A. 2022	X				X	X				X	
Stone, N.I., Thomson, G. & Tegethoff, D. 2023	X			X	X	X					
Healy, S., Humphreys, E. & Kennedy, C. 2016.					X	X	X	X	X	X	
Darling F., McCourt P.C. & Cartwright D.M. 2021.				X	X					X	
Healy M., Nyman V., Spence D., Otten R.H.J. & Verhoeven C.J. 2020.				X						X	
Olza, I., Leahy-Warren, P., Benyamini, Y., Kazmierczak, M., Sigfridur, I. K., et al. 2018.		X	X								X
Olza, I., Uvnas-Moberg, K., Ekström-Bergström, A., Leahy-Warren, P., Sigfridur, I. K., Nieuwenhuijze, M. et al 2020.		X	X								X

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Table 2 (*continued*)

Factors	Physiological birth in a risk-averse system.			Dominant voices in birth.				Lack of exposure to physiological birth			
Subfactors	Defining physiological birth				Uncertainty in birth				Hierarchy	Understanding the psychology of physiological birth	
Coding	Defining physiological birth- what is and what isn't	Women-emotional journey	Women-working with bodies	Midwife's philosophy and understanding of normalcy	Risk surveillance	Birth inherently risky	Fear of the unknown-Anxiety	Lack of exposure	Fear of litigation-impact on midwifery and medical decisions	Workplace culture	Women's perspective of physiological birth
Stjernholm YV, Charvalho PDS, Bergdahl O, Vladic T. & Petersson M. 2021.	X	X	X								X
Masoumi SZ, Kazemi F, Oshvandi K, Jalali M, Esmaeili-Vardanjani A. & Rafiei H. 2016.				X	X	X	X	X			
Edmondson M. 2017.	X	X	X	X							

Charting the data

Data extraction and presentation

A data extraction table was developed using JBI SUMARI (System for the Unified Management of the Assessment and Review of Information), a software package designed to assist in the conduct of JBI systematic reviews Munn et al., 2019. Two reviewers (BH & CE) extracted data from the included studies (See Table 3**: Summarised Results)**. The data extracted included details about the participants, the concept of the study, the context/setting/culture, the study methods and the key findings relevant to the review question**.** Study data were extracted into separate tables, according to the study design. An additional column was added to all tables to give a percentage score of the relevant JBI Critical Appraisal Checklist criteria. Categories and ideas present in the articles were extracted to address the three research questions (as described in Table 2**: Analysis of Concepts**).

Data analysis

Content analysis included the following steps: The first-order interpretation involved reading and re-reading all studies to become familiar with their content. The second step involved the first author (BH) conducting a line-by-line coding of the findings of all included studies. This was done as an iterative process where the categories were determined as a preliminary guide to analysis. Quotes, interpretations and explanations in the original studies were treated as data. As recommended by the JBI scoping review guidance Pollock et al., 2023; Peters et al., 2021 a basic qualitative content analysis was undertaken to analyse both qualitative and quantitative data, mapping key topic areas respectively by searching the findings/and or discussion sections of each paper to identify and categorise repeated concepts to answer the key questions. An inductive approach was favoured, as it is in line with the scoping review aim and appropriate where there is a dearth of evidence on the topic (physiological birth) Elo & Kyngäs, 2008. The third step involved coding ideas by the first author (BH), whereby identified codes among the studies were combined into broader factors to address the three key questions.

Using the framework described by Elo & Kyngäs, 2008 the following 3 phases of basic qualitative content analysis for the results of primary qualitative research were undertaken: i) preparation (as described above using Covidence); ii) organisation of concepts or characteristics into overall topic categories (as described in Table 2**: Analysis of Concepts**); iii) reporting (as described in Table 3**: Summarised results**).

In the fourth and final step, key characteristics and concepts of the selected studies were agreed upon by the research team. A narrative summary of findings presented the data in tabulated form, as presented in Tables 2 and 3.

Reflexivity

Throughout the research process, the authors (all midwives) identified and explored their viewpoints and opinions as possible influences on the decisions taken. This was done because of the subjective nature of qualitative research to protect the methodological rigour of the study. Sharing views and conclusions allowed for thorough discussion among team members and solidified judgment and accurate interpretation of the data. The research group have chosen to participate in the scoping review because of a strong interest in the importance of understanding physiological childbirth.

Results

Characteristics of the included studies

The twenty-four included publications dated from 2014 to 2023. There were seventeen primary research articles originating from Iran (4), the United Kingdom (1), England (1), Scotland (1), The Netherlands (1), Sweden (1), Norway (1), Denmark (1), Singapore (1), New Zealand

Table 3
Characteristics of Included Studies.

Cohort Study

Study	Country	Setting/context	Participant characteristics	Groups	Outcomes measured	Description of main results	Quality Assessment: JBI
Rydahl, E., Juhl, M., Declercq, E. & Maimburg, R. D. 2021.	Denmark	Denmark offers free healthcare, which encompasses antenatal care and birth assistance. Women have the legal option to give birth outside a hospital setting. Throughout a typical pregnancy, birth, and early postpartum period, midwives take on the central role as caregivers. In situations involving complicated births, midwives usually continue as the main caregivers, with oversight from an obstetrician.	Comparing the first (2000/2001) to the final study period (2016/2017), average maternal age increased by 1.1 year. Women were less likely to be married, more likely to have a citizenship other than Danish (from 4.7% to 9.6%, $p < 0.001$). Fewer were smoking (from 19% to 7%, $p < 0.001$), and more were diagnosed with hypertension (1.7% to 3%, $p < 0.001$), diabetes mellitus (1.1% to 4.1%, $p < 0.001$), severe preeclampsia (0.4 to 0.7%, $p < 0.001$) or placenta previa (0.3% to 0.6%, $p < 0.001$). In 2017, 97% of all births in Denmark took place in a hospital.	380,326 nulliparous women with a term, singleton, in the cephalic position who gave birth between 2000-2017.	Induction of labour, epidural analgesia, and augmentation of labour	Found an increasing use of interventions in nulliparous low-risk women, the risk of experiencing more than one intervention increased from 13% to 31%. The most substantial change between 2000 and 2017 was an increase in the induction of labour from 7% to 24%. An increase in induction of labour and use of epidural analgesia was found with a consistently high rate of augmentation of labour.	72.70%

Analytical Cross-Sectional Study

Study	Country	Setting/context	Participant characteristics	Groups	Outcomes measured	Main description of results	Quality Assessment: JBI
Sadeghzadeh, N., Amiri-Farahani, L., Haghani, S. & Hasanpoor-Azghady, S.B. 2019.	Iran	In Iran, a medical model of childbirth, encourages and normalize interventions during the birthing process.	Nidwives working in the labor and delivery wards in some hospitals in Tehran, Iran, from May to July 2018.	200 midwives	midwives' attitudes and beliefs toward physiological childbirth and identify its related factors (level of education and interest in the profession).	'Midwives' Attitudes and Beliefs toward Physiological Childbirth' (MABPC) was significantly correlated with the level of education ($P< 0.001$), work experience ($P= 0.01$), work experience in labour ($P= 0.02$), interest in the profession ($P= 0.01$), and shift work ($P= 0.03$). 16% of the variation in the dependent variable (i.e., MABPC) was justified by the level of education and interest in the profession.	100%

Interpretive and Critical Research

Study	Methods for data collection and analysis	Country	Phenomena of interest	Setting/context/culture	Participant characteristics and sample size	Description of main results	Quality Assessment: JBI
Coates, D., Donnolley, N. & Henry, A. 2021.	Qualitative survey via electronic link, and paper copy. Klein et al., 'Birth Attitude Survey' with three additional questions. Inferential statistics were used to compare Likert scale responses of obstetric versus midwifery staff and 15 years of experience or less versus more than 15 years of experience. Significance was set at 0.05, and adjusted using Bonferroni's correction, setting significance at $P < .001$.	Australia	To investigate the beliefs about labour interventions and birth options held by midwives and obstetric medical staff, and assess how the health care providers' beliefs were associated with discipline or years of experience.	Midwives and obstetric medical staff from 8 Sydney hospitals.	217 midwives, 58 medical staff	Midwives expressed a higher level of agreement with statements supporting less intervention compared to their obstetric colleagues. The responses from 27 out of the 30 items showed statistically significant variations between midwives and obstetric medical staff. Among these items, 20 were of clinical importance, indicating that there was more than a 10% difference in agreement between the two professional groups. The two maternity care disciplines hold different philosophies. Midwives predominantly favoured a normal physiologic approach to childbirth, whereas obstetricians leaned towards a more risk-based technological approach.	100%

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Table 3 (*continued*)

Interpretive and Critical Research Study	Methods for data collection and analysis	Country	Phenomena of interest	Setting/context/culture	Participant characteristics and sample size	Description of main results	Quality Assessment: JBI
Dixon, L., Skinner, J. & Foureur, M. 2014.	An analysis framework requiring three readings of the data (1st reading: overall story as it pertains the dominant view. 2nd reading: reviewing the women's perspective. 3rd reading: looking for social, power and cultural relationships).	New Zealand	To explore, describe and explain the woman's perceptions and experiences of labour as it moved to birth—from the onset of spontaneous labour through to the birth and within the New Zealand model of maternity care.	Canterbury region of New Zealand where women have the choice of place of birth—home, midwifery led setting (primary birthing units) or a large obstetric led hospital (tertiary maternity hospital). All the women in this study received continuity of care from a midwife Lead Maternity Carer (LMC).	18 women who had experienced a spontaneous labour and birth in six months prior to interview.	Participants described labour as a continuous process and one which was defined by their emotions. These emotions ranged from excitement, a state of calm, to the need for intense and inner focus and followed by feeling overwhelmed and fearful or tired and sleepy. The feelings described were consistent.	100%
Hamideh Azimi, L. & Rezaie-Abhari, F. 2019.	Interviewed individually and in a focus group session.	Iran	To explain factors affecting the implementation of "physiologic birth plan from stakeholders" view.	Many pregnant women in Iran are afraid of labour. Reasons for this fear include a lack of information about the process of labour and fear of damage to the fetus.	21 healthcare stakeholders (3 obstetricians and gynaecologists, 6 midwives, 3 managers, 9 women who gave birth under a physiological delivery plan)	Consumers of maternity services often lack sufficient knowledge about labour and birth, leading them to rely heavily on professional decision-making and opinions. The success of a physiological birth plan hinges on various factors such as resource allocation in hospitals, clear definition of tasks and roles, the psychosocial atmosphere, the prevailing delivery culture, and the training provided to the staff.	90%
Wong, C.Y.W., Shorey, S., Liew, K., He, H.G. & Koh, S.S.L. 2018.	Semi-structured interview guide. Thematic analysis was used to analyse the transcribed data. Audio recordings were transcribed verbatim by the primary researcher. First, open coding was performed, writing down short phrases of words which were then used as the initial codes. They were then extracted onto a separate document, and duplicated words or phrases were removed. Next, patterns were identified, and similar ideas were grouped together into different categories.	Singapore	To explore the perceptions of midwives regarding physiologic birth in Singapore and to recommend new strategies that may support midwives as advocates for physiologic birth.	Maternity care in Singapore largely follows a medical model, where most cases of labour are actively managed by obstetricians in the hospital.	10 midwives	Perceived factors supporting physiological birth: Enhancing self-confidence through positive encounters, adopting a supportive role as an advocate for the labouring woman, and creating a positive social and physical birthing environment. Perceived obstacles to physiologic birth: Inadequate antenatal education for the labouring woman, physical and emotional challenges faced by midwives, a non-supportive birthing culture, and constraints within the organization and environment. Various cultural practices and physical disability associated with advanced age was identified as a barrier to physiological birth.	100%
Thompson, S.M., Nieuwenhuijze M.J., Low L.K. & de Vries, R. 2016.	Using the 'Attitude, Subjective Norms and Efficacy' model (ASE) to create semi-structured focus groups. When data collection was complete, the authors used a Braun and Clarke (2006) thematic analysis framework. Themes emerging from the data were identified. This was done visually, utilizing thematic networks (Attride-Stirling,2001).	The Netherlands	To describe Dutch midwives' attitudes toward, and motivations for, the promotion of physiological childbirth and to identify factors associated with those attitudes and motivations	Within the Dutch maternity care system, midwives who work in hospitals are employed on a salaried basis, whereas community midwives are self-employed and operate independently in small group practices.	37 hospital or community-based midwives	Midwives consider safeguarding and promoting physiological childbirth as a fundamental to their role. They define physiological childbirth along a continuum. However, they perceive the hospital culture as a barrier to practices that support physiological birth.	90%
Skrondal, T.F., Bache-Gabrielsen, T. & Aune, I. 2020.	A qualitative approach, with semi structured interviews. The interviews were recorded and transcribed verbatim. The text was analysed using systematic text condensation (STC).	Norway	To gain knowledge regarding how Norwegian nulliparous women experience planned home birth and why they choose this route of giving birth	Norwegian maternity care is organized at two levels. The primary health care service has the responsibility of providing antenatal care, the pregnant woman sees a	10 Norwegian women who had had a successful planned home birth of their first child within the last two years.	Inherent belief in the power of physiological birth served as the foundation for choosing a home birth. Thorough preparation was deemed crucial, while the relationship with the	90%

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Table 3 (*continued*)

Interpretive and Critical Research Study	Methods for data collection and analysis	Country	Phenomena of interest	Setting/context/culture	Participant characteristics and sample size	Description of main results	Quality Assessment: JBI
				community midwife and/or her general physician (GP). Separately, the specialist health care service provides care throughout labour, birth and the immediate postpartum period. Low risk women can choose a freestanding midwifery unit (FMU)/ alongside midwifery unit (AMU) or in an obstetric unit. They may also plan for a home birth.		midwife was built on trust. The home environment was seen as providing the safety needed to facilitate a successful physiological birth.	
McKenzie, G. & Montgomery, E. 2021.	In-depth narrative interviews. Data was analysed using the Voice Centred Relational Method (VCRM), which provides a structured framework for close systematic examination.	United Kingdom	To present insights gained on women's experiences of undisturbed physiological birth.	This study focused on the experiences of women who free-birthed in the UK.	16 women who had free birthed. Demographics not collected.	All women interacted with healthcare providers at some stage. Several women mentioned being in tune with their babies. None of the women opted for pharmacological pain relief during labour. The interviewees expressed overwhelmingly positive and euphoric emotions about their free birth experiences. As women gained more childbirth experience, they tended to prefer less medicalized settings for giving birth.	100%
Page, M. & Mander, R. 2014.	Interviews and focus groups. During this first stage of analysis themes, recurring ideas, similarities and differences emerged. Used a constant comparison technique (Strauss and Corbin, 1998).	Scotland	To explore midwives' perceptions of intrapartum uncertainty when caring for women in low-risk labour	The Scottish government has produced guidelines to stream women into care pathways based on risk factors, with the assumption being that women following a low-risk care pathway will have minimal intervention.	19 midwives practising in a range of maternity settings.	Identified Themes: Intrapartum uncertainty: Recognizing the moment when a labour veers from the expected norm. The normality boundary: Determining what is considered acceptable as normal in a labour. Threshold pressure: The tolerance level between normal and abnormal labour. While active management of labour contributes to predictability, it can lead to increased interventions and unnecessary medicalization of childbirth.	90%
Reed, R., Rowe, J. & Barnes, M. 2016.	Narrative inquiry methodology with face-to-face interviews. Data management and analysis followed four steps, following the phases outlined by Fraser and Rowe. NVivo software was utilized to organize the data. Following the analysis, an explanatory theoretical framework was identified to effectively represent the themes.	Australia	To explore midwifery practice during physiological birth from the perspective of both midwives and mothers	In Australia, women have access to private and public hospitals as well as private homebirth midwives.	10 midwives and 10 women who had experienced or attended an uncomplicated physiological birth.	Rite of passage: Midwives handle distractions and prioritize the woman's needs, embracing a holistic and humanistic approach to childbirth. They play a crucial role in nurturing the mother's self-trust throughout labour. Rite of protection: The rite of protection operates in dual ways, safeguarding both the woman and her baby, and at times, safeguarding the interests of the midwife and the institution.	90%
Jafari, E., Mohebbi, P. & Mazloomzadeh, S. 2017.	Descriptive-analytical study: used a five-part questionnaire for gathering data, including Mackey's Childbirth Satisfaction Rating Scale (CSRS), Satisfaction with birth room setting, Labour agentry scale, Determination	Iran	To address factors related to women's childbirth satisfaction in physiological and routine childbirth groups	In Iran, a medical model of childbirth, encourages and normalize interventions during the birthing process.	340 women who were 24 hours after childbirth	Midwives practices are influenced by their years of experience and the designation of the maternity unit they work (i.e.- midwife led, obstetric led). A safe, quiet and clean childbirth environment, respect for privacy and	80%

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Table 3 (*continued*)

Interpretive and Critical Research Study	Methods for data collection and analysis	Country	Phenomena of interest	Setting/context/culture	Participant characteristics and sample size	Description of main results	Quality Assessment: JBI
	of severity of labour pain using a Visual Analogue Scale (VAS). Data were analysed using Pearson correlation test. Variables were examined in multivariate regression model at the significance level P< 0.05.					avoiding unnecessary medical interventions increase maternal satisfaction. Knowledge of the childbirth process, non-medical pain relief techniques, active involvement and maintaining control in the process of childbirth important for maternal satisfaction.	
Macfarlane, A.J., Rocca-Ihenacho, L. & Turner, L.R. 2014.	Two phase survey. Two questionaries were designed based on Green et al 2003, and Garcia et al, 1998.	England	Assess the impact of opening a freestanding midwifery unit in a multi-ethnic inner-city area by describing and comparing women's experiences of specific aspects of maternity care before and after the opening of the Barkantine Birth Centre.	Tower Hamlets, a deprived inner-city borough in east London, 2007–2010.	259 women in Phase 1: analysis of choice of place to birth and antenatal attendance to classes 361 women in Phase 2: comparison of care of women between a birthing centre and hospital.	Women in the birth centre were more likely to be able to move around in labour, to be told to push spontaneously, and to report that they had been able to choose their position for birth. It indicated that the birth centre model of care lead to greater choice, lower rates of intervention and a better experience for women.	100%
Hall, H., Fooladi, E., Kloester, J et al., 2022.	Individual semi structured interviews. Data was transcribed verbatim and analysed using inductive thematic analysis	Australia	To understand the health system factors that promote a positive childbearing experience.	Majority of women in Australia use free perinatal care through the public system, with the bulk of care provided by midwives with oversight and intervention from doctors when deemed necessary.	36 women who had given birth in Australia in the previous 12 months.	Four main themes: Health care provider attributes, health system attributes, communication and decision making, experience of care. Care that was respectful and individualised with effective communication was seen as important. Access to care that promoted physiological birth was important to women.	100%
Watkins, V., Nagle, C., Streetm M. & Hutchinson, A. 2022	Sequential mixed-method multi-site case study	Australia	To explore the perceptions and experiences of women regarding collaboration and decision-making in care.	Majority of women in Australia use free perinatal care through the public system, with the bulk of care provided by midwives with oversight and intervention from doctors when deemed necessary.	182 postnatal women over the age of 18 years	48.3% indicated a preference for shared decision-making, 35% wanted an active role. 16.7% wanted a passive role, however 24.4% of women experienced a passive decision making role during their care. Women's autonomy was negatively impacted by poor access of midwifery models of care, poor access to continuity of care, poor understanding of their rights, inadequate information about intervention and a bureaucratic style of decision making based on a dominant discourse of risk avoidance, vetoing women's choice.	100%

Systematic Review, Integrative Review and Research Syntheses Study	Review objectives	Descriptions of interventions/ phenomena of interest	Descriptions of outcomes included in the review	Descriptions of contexts included in the review	Search details	Number of studies and participants included	Appraisal instruments used	Description of main results	Quality Assessment: JBI
Stone, N.I., Thomson, G. & Tegethoff, D. 2023	To synthesise existing qualitative research that describes the skills and knowledge of certified midwives at	Explore the literature that describes the specific skills and knowledge of certified midwives to assist physiological birth in home	Main themes: Building trustworthy connections, midwife as instrument and creating an environment conducive to birth.	Qualitative and mixed-methods studies published between 1980-2023	CINAHL, MEDLINE (Ovis) PsychArticles, Web of Science and Global Index Medicus.	13 articles	Each article was scores A-E based on Template for methsynthesis (Downe et al., 2009).	Midwives use their senses and theoretical knowledge to care for labouring women, using a deductive framework	100%

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Systematic Review, Integrative Review and Research Syntheses									
Study	Review objectives	Descriptions of interventions/ phenomena of interest	Descriptions of outcomes included in the review	Descriptions of contexts included in the review	Search details	Number of studies and participants included	Appraisal instruments used	Description of main results	Quality Assessment: JBI
	home births and free-standing birth centres.	births and in free-standing birth centres						for perceiving changes in labour.	
Healy, S., Humphreys, E. & Kennedy, C. 2016.	To synthesise original research that examines how perceptions of risk impact on midwives' and obstetricians' facilitation of care for low-risk women in labour.	Factors affecting midwives' and obstetricians' perceptions of risk when facilitating care for low-risk women in labour and how these perceptions of risk impact on clinical practice and decision-making.	Main theme: an assumption of abnormality in the birthing process leading to unnecessary intervention and surveillance.	Primary qualitative, quantitative studies and systematic reviews published between 2009-2014.	Cochrane Database of Systematic Reviews, EBSCO, EMBASE and Scopous	14 articles	Each article was given a CCAT score (Crowe et al., 2012).	Practice is influenced by an assumption of birth as abnormal and is compounded by issues such as institutional risk management, lack of midwifery responsibility, fear of involvement in adverse outcomes and personal values regarding physiological birth.	100%
Darling F., McCourt P.C. & Cartwright D.M. 2021.	To explore how facilitators and barriers influence the implementation of a physiological approach.	Explore facilitators and barriers (at the level of the organisation, professional groups, and women) to the implementation of a physiological approach to care during labour and birth in obstetric settings.	Facilitators: Enhanced midwifery autonomy, collaborative working, support from senior midwives and women question inappropriate interventions. Barriers: Institutional time, hierarchical decision making, cognitive dissonance and midwifery acquiescence, preoccupation with risk surveillance, erosion of skills and knowledge, women expert and accept intervention.	Empirical studies published between 1990 and Oct 2019. This time frame marked active debate and research in the UK on care delivery in maternity services, instigated by the Changing Childbirth (DOH 1993) document.	CINAHL, Medline, SocIndex and Embase.	27 articles	The results section of each article, including quotations from participants, was imported into NVivo 11 software (QSR International, 2019). Thematic synthesis involves three phases using Thomas and Harden, 2008 method. Grouping descriptive and analytical themes into a working explanatory model, aided to understand the interactive nature of facilitators and barriers.	A risk-based approach informs practice in obstetric units, rather than a physiological approach. Primary research has mainly identified barriers to implementing a physiological approach at a professional level, and these studies are largely from a midwifery perspective. Research gaps across all levels (organisational, professional and women) exist.	90.90%
Healy M., Nyman V., Spence D., Otten R.H. J. & Verhoeven C.J. 2020.	To retrieve evidence that supports high quality intrapartum care during the second stage of labour.	To examine the evidence relating to intrapartum midwifery care, focusing specifically on care during the second stage of labour.	Four themes emerged: Birthing positions, non-pharmacological pain relief, pushing techniques and optimising perineal outcomes.	Birthing positions: limited studies relating to birth position. Non-pharmacological pain relief: transcutaneous electrical nerve stimulation is effective in reducing pain. Pushing techniques: no significant difference in the duration of second stage labour between directed and spontaneous pushing. Optimising perineal outcomes: 'hands-on' and 'hands-off' perineum, showed no clear supporting	EMBASE.com, Cinahl, PsycINFO, PubMed, Maternity and Infant Care Database and The Cochrane Library.	17 studies	To assess risk of bias in RCT, the Cochrane Collaboration tool was used. For all other studies the Critical Appraisal Skills Programme (CASP) criteria was applied. The Grading of Recommendations Assessment, Development and Evaluation (GRADE), was also utilised for the quantitative studies. Confidence in the Evidence from Reviews of Qualitative research (CERQual) was used for grading qualitative studies.	Barriers: Limited time for labouring and professional care to support a physiological approach. Hierarchical decision making led by obstetricians. Obstetric and midwifery risk preoccupation, led to rationalisation of routine use of clinical internment.	90.90%

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Table 3 (*continued*)

Systematic Review, Integrative Review and Research Syntheses Study	Review objectives	Descriptions of interventions/ phenomena of interest	Descriptions of outcomes included in the review	Descriptions of contexts included in the review	Search details	Number of studies and participants included	Appraisal instruments used	Description of main results	Quality Assessment: JBI
				evidence of the incidence of an intact perineum, 1st, 2nd, or 4th degree tears.					
Olza, I., Leahy-Warren, P., Benyamini, Y., Kazmierczak, M., Sigfridur, I. K., et al. 2018.	To synthesise qualitative studies on women's psychological experiences during physiological childbirth.	Psychological responses that emerge during the process of labour and birth.	Factors that facilitate a positive birth experience includes having a sense of control during birth, an opportunity for active involvement, and support and responsive care from others.	Midwives and obstetricians require an understanding of the emotional aspects of childbirth to meet the psychosocial needs of labouring women.	MEDLINE, CINAHL, PsycINFO, PsycARTICLES, SocINDEX and Psychology and Behavioural Sciences Collection.	8 studies included for analysis	Quality assessment was done independently using the Critical Appraisal Skills Programme (CASP) checklist. Studies were synthesised using techniques of meta-ethnography.	'Maintaining self-confidence in early labour', 'Withdrawing within as labour intensifies' and 'the uniqueness of the birth experience' were the emerging themes from the included studies.	90%
Olza, I., Uvnas-Moberg, K., Ekström-Bergström, A., Leahy-Warren, P., Sigfridur, I. K., Nieuwenhuijze, M. et al 2020.	Integrate the findings from two previous systematic reviews, one on maternal plasma levels of oxytocin during physiological childbirth and one meta-synthesis of women's subjective experiences of physiological childbirth.	Propose a new model of childbirth that integrates neuroendocrinological, physiological and psychosocial processes during labour including the subjective experiences of women who have had a physiological childbirth.	Neurobiological processes induced by the release of endogenous oxytocin during birth influenced maternal behaviour and feelings of connection with birth. There is sufficient evidence to increase advocacy for improved maternity care and for promotion of midwifery one-on-one support in labour.	Summarised the findings of the two systematic reviews, and then integrated the ideas to propose an integrative neuro-psycho-social model of childbirth.	Analysis of two independent systematic reviews. (1) Maternal plasma levels of oxytocin during physiological childbirth–a systematic review with implications for uterine contractions and central actions of oxytocin and (2) Women's psychological experiences of physiological childbirth.	2	(1) narrative synthesis for each article, with oxytocin levels during labour extracted and summarized. (2) Meta-synthesis review, involving reviewing and consolidating qualitative research. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses statements informed the meta-synthesis.	Basal oxytocin levels rise during pregnancy. Oxytocin levels increase during labour. Pulses of oxytocin occur with increasing frequency, amplitude and duration from the end of pregnancy towards the end of second stage labour. A four-fold increase in oxytocin occurs in connection with birth.	81.80%

Randomized Controlled Trial Study	Country	Setting/context	Participant characteristics	Groups	Outcomes measured	Description of main results	Quality Assessment: JBI
Stjernholm YV, Charvalho PDS, Bergdahl O, Vladic T. & Petersson M. 2021.	Sweden	To investigate whether continuous labour support by a midwife promotes labour progress among primiparous women.	59 women	Both groups were primiparous women with a singleton pregnancy and spontaneous labour onset. A: Women who received continuous support. B: Women who received standard care during delivery (intermittent support during active labour in periods of 5-15 minutes).	To assess if continuous labour support by a midwife promotes labour progress among primiparous women	The provision of continuous support resulted in shorter active labour. Women in the continuous support group exhibited lower cortisol levels, with low cortisol during the first (p=0.02) and second (p=0.04) stages of labour being associated with shorter active labour. Additionally, the continuous support group had a higher rate of vaginal delivery. Women's satisfaction with delivery did not show significant differences between the groups when assessed before discharge from the hospital.	84.60%
Masoumi SZ, Kazemi F, Oshvandi K, Jalali M, Esmaeili-Vardanjani A. & Rafiei H. 2016.	Iran	Many pregnant women in Iran are afraid of labour. Reasons for this fear include a lack of information about the process of labour and fear of damage to the fetus.	Pregnant women with a single fetus, no chronic disease (such as diabetes, heart and lung chronic diseases) history of infertility, or high-risk pregnancy, or history of psychiatrist visit, no specific drug use, and were 20 weeks' gestation.	Group A (75 women) participated in an antenatal education program aimed about physiological birth, in eight 2-hour sessions. Group B (75 women) had routine prenatal education.	To examine the effect of an educational program on pregnant women's fear of normal vaginal delivery.	Spontaneously labouring women who started labour care at the birth centre, were more likely to use non-pharmacological methods of pain relief than women who started their care at the hospital. Fear of childbirth in Group A was reduced after attendance to classes, whereas in Group B fear of childbirth increased with routine care.	76.90%

Text and Opinion Study							
Study	Type of text	Population represented	Topic of interest	Setting/context/ culture	Stated allegiance/ position	Description of main argument(s)	Quality Assessment: JBI
Edmondson M. 2017.	Opinion piece	Women and midwives experience of water birth.	Studies accessed for related concepts, barriers and guidelines for promoting/ providing water birth.	Practising midwife in the United Kingdom.	Advocating for water-birthing guidelines	Environmental considerations: Water quality and temperature safety needs to be assured before offering a water birth. Safety of water birth: dependent on the provision of safe antenatal care (NICE 2008) and intrapartum care (NICE 2014). Midwife confidence: Fear and uncertainty about the safety of water birth.	18%

(1) and Australia (4). The remaining articles included systematic reviews, integrative reviews research synthesis (6) and opinion pieces (1).

The majority of studies were qualitative (13), and the remainder included systematic reviews (6), randomised control trials (2), cohort study (1), opinion (1), and cross-sectional study (1). From the primary qualitative articles, seven studies reported on interviews with women Dixon et al., 2014; Skrondal et al., 2020; Jafari et al., 2017; Macfarlane et al., 2014; Hall et al., 2023; Watkins et al., 2022; McKenzie & Montgomery, 2021; three studies included registered midwives Wong et al., 2018; Thompson et al., 2016; Page & Mander, 2014, and one study interviewed both women and midwives Reed et al., 2016. One study interviewed midwives and medical staff Coates et al., 2021, and one study involved a mix of healthcare stakeholders (obstetricians, gynaecologists, midwives, managers, and women) Hamideh Azimi & Rezaie-Abhari, 2019.

The twenty-four included articles were assessed for methodological quality using the standardized JBI critical appraisal tool relevant to the type of study. A JBI score higher than 70 % ($n = 23$; 96 %) was classified as high quality, those with a score between 50 % and 70 % as medium quality ($n = 0$; 0 %), and those with a score less than 50 % ($n = 1$; 4 %) as low quality.

Factors from the data

The ambiguous use of the term 'physiological birth' was considered when reviewing all papers. Three factors influencing physiological birth were identified from the selected studies:

(1) Physiological birth in a risk-averse system.
(2) Dominant voices in birth.
(3) Lack of exposure to physiological birth.

Ambiguous use of the term physiological birth

Definitions used throughout the selected literature to articulate what is, and what is not, a physiological birth varied considerably. One systematic review by Healy et al., 2020 utilised the WHO 1997 definition World Health Organization, 1997. A further twelve articles provided a variety of definitions of physiological birth, although none of these outlined why they selected their respective definition Dixon et al., 2014; Skrondal et al., 2020; Jafari et al., 2017; McKenzie & Montgomery, 2021; Hamideh Azimi & Rezaie-Abhari, 2019; Healy et al., 2020; Wong et al., 2018; Edmondson, 2017; Stjernholm et al., 2021; Olza et al., 2018; Darling et al., 2021; Sadeghzadeh et al., 2019. One study defined disruption to physiological birth Rydahl et al., 2021 and another defined positive childbirth Olza et al., 2020. Midwives noted that the term 'physiological childbirth' is more complex than it appears, and also used the term interchangeably with 'normal birth' Thompson et al., 2016. Many midwives found it difficult to define this without reference to an absence of complications Thompson et al., 2016.

None of the definitions of 'physiological birth' were reported from the perspective of women, and women were not asked to define physiological birth; nor were they involved in the development of a definition in any of the included studies.

Physiological birth in a risk-averse system

Uncertainty

Highlighting the uncertainty that midwives face when caring for women, six articles described fear of the unknown and inherent ambiguity of childbirth, fear of litigation, and fear of being both over and under-cautious in care provision Wong et al., 2018; Page & Mander, 2014; Coates et al., 2021; Hamideh Azimi & Rezaie-Abhari, 2019; Masoumi et al., 2016; Healy et al., 2016. An example of this was presented by an independent midwife, responding to the request to 'pop her [a low-risk labouring woman] on a CTG (cardiotocography)'; when

questioning the rationale the midwife was answered with: 'I'm sure there's a policy that says we should be doing them 4 hourly' p 32, Page & Mander, 2014. Rationalising unnecessary intervention in the face of uncertainty without actual indication was linked to clinician anxiety van den Heuvel et al., 2023.

Midwives felt conflict was inevitable if they deviated from protocol, feeling this deviation was necessary to remain in the 'role of advocate' for the woman Copeland et al., 2014. 'Anxiety' or 'being anxious' was cited by midwives assisting birth as an emotional response connected to a fear of 'missing something' and being fearful that the 'right thing to do' might not be clear when promoting a physiological approach to birth Page & Mander, 2014 . In an American study, 10 midwives with experience in both midwifery-led and obstetric-led models of care expressed a general distrust of birth in the hospital setting, reinforced by strict adherence to hospital guidelines Everly, 2012. Subjective factors can underpin midwives' clinical judgements and may include the individual midwife's philosophy, understanding of normality, interpretation of risk, and tolerance of uncertainty Page & Mander, 2014. Viewing the birthing process as a risk-event or 'abnormal' was compounded by external risk factors such as institutional risk management approaches to birth, and personal fears of physiological birth, ultimately impacting clinical practice Healy et al., 2016.

In Australia, midwives had conflicting views of hospital guidelines, seeing them as supportive in times of uncertainty; however, they also found hospital policy restricted and disempowered both midwives and women, leading to increased intervention in physiological birth Healy et al., 2016; Hood et al., 2010. Midwives wanted to be useful in the birthing space by performing tasks such as 'observations and offering drugs' rather than offering a hands-off approach and psychological support Darling et al., 2021. In Australia, midwifery staff generally favoured a physiological approach to labour and birth, compared to medical staff who were more partial to a medicalised approach Coates et al., 2021. Generally, Australian obstetricians felt that the safety of caesarean sections justified continuing this practice without the option of having their decision-making peer-reviewed. By contrast, in Canada, obstetricians were more likely to agree with a proposal to introduce peer review of decisions related to caesarean section Klein et al., 2011.

Fear of litigation and risk surveillance

Fear of litigation was found to increase the use of risk surveillance and technological monitoring during labour and birth. Risk surveillance behaviour amongst midwives was described as 'covering oneself' and 'playing it safe' Healy et al., 2016; Surtees, 2010. This attitude towards uncertainty in birth can result in midwives abdicating an advocacy role that would otherwise encourage women to consider a physiological approach Darling et al., 2021. In a study of stakeholder perceptions of the implementation of a physiologic birth plan, based in Iran, fear of litigation was also found to be a driver of medical intervention, and a barrier to promoting normal birth Hamideh Azimi & Rezaie-Abhari, 2019.

Adopting a risk management approach to labour and birth inherently labels birth as a risky event, indicating that uncertainty impacts clinical practice and shared decision-making with women Coates et al., 2021. Risk culture and an assumption that birth is abnormal are increasingly affecting how maternity services manage birth. Viewing childbirth as a pathologic process may lead women to feel uncertain about their capacity to birth without technological aid Wong et al., 2018.

Dominant voices in birth

Workplace culture and experiences of an institutional hierarchy

Midwives were more inclined to practice according to the cultural norms of their workplaces and to implement clinical interventions considered 'routine' when caring for women during labour and birth Wong et al., 2018. This is highlighted by the disparities between the use of clinical interventions in obstetric-led units compared to midwifery-led units Darling et al., 2021. Some midwives described feelings of inadequacy when faced with the subtleties of a perceived hierarchy in their hospital setting, sensing that individually they could not challenge obstetric or dated practices Thompson et al., 2016.

In Singapore, midwives considered that the women they worked with relied on recommendations made by their obstetricians, and trusted them completely, making it difficult for midwives to advocate for a physiological birth Wong et al., 2018. In Iran, results showed that many women in the study were afraid of labour, mainly due to a lack of information about the process of labour, fear of damage to the fetus, and fear of being unable to tolerate labour pain Masoumi et al., 2016. Women who perceived birth as inherently risky were found to be influenced by social media and had this perception reinforced by friends and peers, before professional input Darling et al., 2021. These fears were reduced among women who attended training in preparation for childbirth, resulting in more women preferring a physiologic birth Masoumi et al., 2016.

In Australia, a woman-centred philosophy is central to healthcare policy in labour and birth, however, the findings of the 'Labouring Together' study indicated that women wanted to participate more in decision-making with clinicians to develop personalised maternity care based on their individual needs and wellbeing Watkins et al., 2022. This study showed that effective collaboration and shared decision-making is not routine practice, hindering women's autonomy by the dominant discourse of risk avoidance, in line with the workplace culture in the hospital setting Watkins et al., 2022.

Women's perspective of physiological birth

Women wanted care that aligned with their aim of physiological birth, regardless of whether natural childbirth was obtained Hall et al., 2023. Natural childbirth from the perspective of women was about being given 'a little bit more control and command of their birth and pregnancy' rather than a specific aid or outcome p 47, Hall et al., 2023. Having access to a private space free of unnecessary interruption in a home-like environment was important to 'feeling safe', to facilitate the acceptance of labour pain, and to trust their bodies to work with the pain p 4, Olza et al., 2018. Women described their desire to have control during labour and to have a caring approach when faced with their vulnerability Dixon et al., 2014; McKenzie & Montgomery, 2021; Olza et al., 2018. Continuity of care and consistency of care providers was pivotal to a positive experience in labour and birth in Australia, as it built a trusting relationship and improved individual satisfaction with the process of birth Hall et al., 2023. Effective communication based on a clear goal was instrumental to shared decision-making, so women felt they 'had a voice' Hall et al., 2023.

Women were also found to describe physiological birth with their emotions, suggesting that their feelings were a measurable indication of labour progress Dixon et al., 2014. Emotions consistently flowed from excitement at the beginning of labour, coupled with self-confidence, to letting go of 'control', and withdrawing within as labour intensified. Some women felt overwhelmed as birth approached, while others felt intensely tired, and dozed between contractions. These descriptions could be helpful when supporting the labouring woman to birth Dixon et al., 2014; Skrondal et al., 2020; Reed et al., 2016; Aune et al., 2015; Hall & Holloway, 1998; Halldorsdottir & Inga Karlsdottir, 1996; Leap et al., 2010; Ng & Sinclair, 2002; Reed et al.; Sjöblom et al., 2006.

Lack of exposure to physiological birth

Clinician education

In Singapore, midwives identified midwifery curricula that prioritise a medicalised approach to birth, and which lacks sufficient emphasis on intrapartum care which supports physiological birth, as barriers to physiological birth care provision Wong et al., 2018. This contributed to a culture in which support for women attempting a physiological birth may be met with resistance and negative attitudes from hospital-based

healthcare providers Wong et al., 2018. Midwife practices may be prejudiced by years of experience and may not be consistent with a physiological approach or best practice Wong et al., 2018.

In the Netherlands, midwives consider a physiological approach to childbirth as fundamental to their role, as Dutch midwives are primarily responsible for care provision to healthy women with uncomplicated pregnancies Thompson et al., 2016. When complications arise, women are referred to an obstetric-led model of care, with such referrals in the intrapartum period increasing; this is potentially due to midwife perceptions of the probability of an adverse event in birth, and variations in clinical patterns of practice Thompson et al., 2016.

In a meta-ethnography conducted in 2023 reviewing the skills and knowledge of midwives in free-standing birth centres and homebirths, midwives integrated their sensorial experiences with their clinical knowledge to support physiological birth and found that the acquisition of skills came through observation and collaboration with other midwives Stone et al., 2023. This exchange of knowledge and reflection on birth was integral to building trust among colleagues, and creating a sense of safety in the care provided to women Stone et al., 2023. When there is a lack of exposure to physiological birth, the skills needed by care providers to assist women and trust the process of birth can stagnate, contributing to an erosion of midwifery skills, and ultimately leading to an acquiescence to intervention Darling et al., 2021.

Discussion

This scoping review focussed on what is known about physiological birth among women and care providers in the contemporary literature. The results provide insight into fundamental differences in the understanding of physiological birth, as a choice or an outcome, and highlight how physiological birth can be influenced by clinical practice and education provided to care providers and women.

A definition without unification

Physiological birth has no agreed universal definition but instead, a range of definitions that focus on medical, midwifery, and biological processes. None of the studies included in this scoping review described or reported how their definition of physiological birth was determined or reached. A lack of consistency in defining the term 'physiological birth' could lead to a miscommunication of care when applied in the modern context and could lead to unmet expectations and reduced satisfaction for labouring women Dixon et al., 2014; McKenzie & Montgomery, 2021; Thompson et al., 2016; Healy et al., 2020; Darling et al., 2021; Rydahl et al., 2021; Olza et al., 2020. Having those who experience physiological birth involved in the terminology used to describe their experience will advocate for a clear, descriptive and unambiguous term, consistent with the findings of the Re: Birth Project Royal College of Midwives, 2022.

A woman's understanding of physiological birth

No women were asked what they thought a 'physiological birth' was in the reviewed papers, however what is important to women in labour and birth showed that a physiological approach to labour and birth was important, regardless of the outcome Hall et al., 2023

With care provision that focuses on a risk management approach to labour and birth, women have been led to feel uncertain about their capacity to birth, without technological aid Yuill et al., 2020. When the woman is central to her experience, supported psychologically and involved in care provision, a sense of self-trust and control in the process of labour and birth can increase maternal satisfaction Bradfield et al., 2019; Skrondal et al., 2020; Reed et al., 2016. Understanding physiological birth from the perspective of women could have the potential to provide a more positive birth, shifting the focus from a fearful and risky event to an experience that promotes empowerment, safety and joy in the achievement of birth Bradfield et al., 2019 Dixon et al., 2014; Skrondal et al., 2020; Jafari et al., 2017; Macfarlane et al., 2014; Hall et al., 2023; McKenzie & Montgomery, 2021; Reed et al., 2016; Stjernholm et al., 2021; Olza et al., 2018.

Care provider's understanding of physiological birth

Many midwives interviewed individually or in a group found it difficult to articulate physiological birth without referencing its opposite Thompson et al., 2016. No studies were identified in which obstetricians were asked what they thought a 'physiological birth' was.

The findings of Healy et al., 2017 present a picture that as birth becomes more medicalised and clinical care practices more risk-oriented there is limited exposure to physiological birth and 'waiting and watching' type of care in obstetric-led units. There is awareness amongst midwives that this has a direct effect on midwifery knowledge and on gaining the experience necessary to become experts in normal birth.

Papers reviewing the care provision in hospital-based settings have found the toll on care providers to be both physically and emotionally demanding, with midwives and obstetricians anxious to provide care that meets the expectations of their workplaces and the needs of their patients Wong et al., 2018; Bingham et al., 2023. The reviewed articles lack a consensus on the term 'physiological birth' which may contribute to inconsistent reporting of the rate of physiological birth.

Challenges to physiological birth

A lack of exposure to physiological birth, medicalisation and insufficient support have highlighted a sense of uncertainty, hindering the provision of clinical care aimed at a physiological approach to birth for both midwives and obstetricians. Key to the clinical judgments made by midwives in the birthing space is the midwife's philosophy of physiological birth Wong et al., 2018; Page & Mander, 2014; Wong et al., 2018; van den Heuvel et al., 2023. Such a philosophy is influenced by an individual's exposure to physiological birth, with both positive and negative experiences having implications for practice Bingham et al., 2023. When medical intervention such as epidural anaesthesia, episiotomy and vaginal examination is commonplace, the normality threshold is shifted towards a medicalised and risk-management approach to birth Watkins et al., 2022; Hoffmann & Banse, 2021.

If the dominant culture in a birthing suite exhibits a hierarchy of medicine, midwifery, then the woman, care provision tends to become aligned with a medicalised model Wong et al., 2018; Thompson et al., 2016; Darling et al., 2021. Whilst it is acknowledged that at all points along this trajectory, the aim (and often the product) is a healthy mother and baby, it also behoves us to consider the conscious and unconscious biases being exerted. Refocusing on physiological birth, where safe and appropriate, may be one option in such reflections.

Significance and implication of the review findings

Encouraging and normalising interventions during the birthing process is affecting how physiological birth is understood, reported and experienced Benyamini et al., 2017 Prosser et al., 2018. Conceptual differences among care providers will affect shared decision-making with women and therefore introduce a barrier to physiological birth.

The findings of this scoping review indicate there is a need for a more supportive workplace culture to enable midwives and obstetricians to promote and facilitate physiological birth Shorey & Ng, 2023. This can be achieved through interprofessional cooperation to share knowledge and role model a physiological approach, rather than a risk-management approach Stone et al., 2023. This could lead to hospital-based clinicians promoting empowerment in birth to women, midwifery advocacy and appropriate clinical intervention Hoffmann & Banse, 2021.

If 'physiological birth' is to remain a significant and defining attribute of midwifery, a definition that unites the philosophy of trusting in a

woman's innate ability to birth and promotes a physiological approach to birth regardless of whether or not the labour and birth remain 'physiological' in response to emerging factors, is needed Hall et al., 2023; Hoffmann & Banse, 2021. Conversely, if 'physiological birth' has become a dated term, birth needs to be described without ambiguity, and midwifery standards will need to be reshaped to reflect the values important to women.

Strengths and limitations of this review

All articles in this scoping review were critically appraised using the Joanna Briggs Institute appraisal tool Peters et al., 2020; Tricco et al., 2018; Tricco et al., 2016. Using the Joanna Briggs Institute methodology and the Preferred Reporting Guidelines for Systematic Reviews and Meta-Analysis extension for Scoping Reviews, the credibility of these findings is strengthened by utilising an existing framework that emphasises transparency. Despite comprehensive searching, some articles may have been missed, and implementing an exclusion criterion that excludes non-English texts may have prevented finding additional research that addressed physiological birth.

Conclusion

Reviewing what is known about physiological birth among women and care providers from articles published in 2013-2023, this scoping review highlights three factors (1) Physiological birth in a risk-averse system, (2) Dominant voices in birth, and (3) Lack of exposure to physiological birth. With no universally accepted definition of physiological birth identified, there is a gap in the literature related to the complexity and contentiousness of defining physiological birth. Reconsidering and contextualising what defines a physiological birth in current practice, with the experience of the woman in mind, may make the philosophy of physiological birth more achievable.

Author Agreement

I declare and agree the following;

- that the article is the author(s) original work
- the article has not received prior publication and is not under consideration for publication elsewhere
- that all authors have seen and approved the manuscript being submitted
- the author(s) abide by the copyright terms and conditions of Elsevier

Ethical Statement

This scoping review was guided by ethical conduct referencing sources and respecting the authorship of the studies included for review.

Funding

Not applicable.

CRediT authorship contribution statement

Brooke I. Henshall: Data curation, Formal analysis, Investigation, Methodology, Project administration, Resources, Software, Validation, Visualization, Writing – original draft, Writing – review & editing. **Heather A. Grimes:** Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Project administration, Resources, Software, Supervision, Validation, Visualization, Writing – original draft, Writing – review & editing. **Jennifer Davis:** Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Project administration, Resources, Software, Supervision, Validation, Visualization, Writing – original draft, Writing – review & editing. **Christine E. East:** Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Project administration, Resources, Software, Supervision, Validation, Visualization, Writing – original draft, Writing – review & editing.

Declaration of competing interest

There are no known competing interests to be declared.

Acknowledgements

The corresponding author of this paper is a PhD student at La Trobe University, Melbourne, Australia. The student receives a scholarship, in the form of a monthly stipend, from this University to pursue a PhD but there is no conflict of interest in the reporting of data. The co-authors are supervisors of this PhD.

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