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Review Article

Perinatal mental health and women's lived experience of the COVID-19 pandemic: A scoping review of the qualitative literature 2020-2021

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ABSTRACT

Background: The COVID-19 pandemic resulted in global physical distancing restrictions and lockdown orders. Despite the clear documentation of increased mental distress amongst adult populations during the pandemic, there is limited evidence about the mental health challenges of people in the perinatal period (pregnancy, birth and postpartum). The aim of this review is to summarise the qualitative research about women's lived experience and emotional wellbeing during the COVID-19 pandemic.
Methods: A comprehensive search strategy was developed. Twenty peer-reviewed qualitative research articles published in English from January 1, 2020, to December 15, 2021, were included. Data synthesis outlined the evidence from common themes in a narrative format.
Results: Themes during pregnancy included: (1) information seeking: anxiety and fear; (2) experiencing isolation and disruptions to my social support; (3) 'Going it alone' in pregnancy care; (4) anticipatory grieving and despair; (5) finding 'silver linings' in social restrictions. One key theme during birth was "birthing in a crisis". Themes during postpartum included: (1) isolating 'Early motherhood is much like lockdown'; (2) breastfeeding: triumphs and tribulations; (3) facing disruptions during postpartum care; (4) 'Affecting us for years to come' - COVID-19 was not the only trauma; (5) 'silver linings' during postpartum care.
Conclusions: This review provides important insights into how experiences of isolation, decreased social support and adaptions to maternity services affect women's mental health. Maternity services should consider how perinatal mental health support may be integrated into the care of women who may still be required to isolate or have reduced visitors during their perinatal care.

Statement of significance

The restrictions and disruptions to maternity care due to the COVID-19 pandemic were likely to impact the mental health of women in the perinatal period (pregnancy, birth and postpartum). What is already known is that public health measures due to COVID-19 increased the prevalence of common perinatal mental disorders (CPMDs) and exacerbated common risk factors for CPMDs (i.e., poor social support). What this paper adds: The qualitative research with women in the perinatal period during the pandemic provides unique insights into how these events impacted perinatal mental and emotional health. In particular, the ways that global physical distancing measures and maternity care adaptations contributed to women's feelings of distress, isolation, and depression/despair. Silver linings such as more uninterrupted time with immediate family were also identified.

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Introduction

The context of the COVID-19 pandemic

Global physical distancing restrictions (e.g., lockdowns) implemented during the COVID-19 pandemic (World Health Organization, 2022) have led to mental distress within general populations, patients with COVID-19 infections, and health professionals (Wang et al., 2020; Xiang et al., 2020; Slama et al., 2021), and created unprecedented challenges for most healthcare systems (Keil et al., 2022). A co-ordinated analysis of eleven longitudinal studies in the United Kingdom reported a sustained decline in mental health throughout the pandemic (during strict lockdowns and when restrictions eased), and women experienced much higher distress levels and a more severe deterioration in mental health than men (Patel et al., 2022). In Australia, health problems in the adult population (depression, generalised anxiety, and thoughts of being "better off dead") were at least twice as prevalent in the first month of the pandemic than in non-pandemic times (Fisher et al., 2020). Despite the clear documentation of increased mental distress amongst adult populations during the pandemic, there is limited evidence about the mental health challenges of women in the perinatal period (pregnancy, birth and postpartum).

CPMDs

The term "common perinatal mental disorders" (CPMDs) refers to non-psychotic mental disorders such as anxiety and depression when experienced throughout pregnancy and the first year postpartum (Fisher et al., 2012). In the early stages of the COVID-19 pandemic, two online surveys reported the prevalence of antenatal depression as 44% in China (n = 19,515) (Yang et al., 2021) and 37% in Canada (n = 1987) (Lebel et al., 2020). The available evidence suggests that the prevalence of postpartum depression increased globally, with a pooled prevalence estimate of 34% (95%CI 21–46%) (Chen et al., 2022). In Brazil, the prevalence of postpartum depression rose from 3.1% in 2019 to 28.4% during the first wave of the pandemic (May-July 2020), and 30.6% during the second wave (July-December 2020) (Loret de Mola et al., 2021). In Canada, maternal depression and anxiety rose from 14-19% and 12–28% respectively pre-pandemic to 35% (depression) and 31% (anxiety) in May-July 2020 (Racine et al., 2021). Overall, such evidence indicates a significant international increase in the prevalence of CPMDs since the pandemic begun.

CPMDs and disruption to maternity services

Most countries implemented some level of restrictions on maternity services during the pandemic, including replacing face-to-face appointments with online or telehealth services, visitor limits in antenatal clinics and birthing suites, reduced choices for childbirth and changes to continuity of care (Flaherty et al., 2022). These necessary measures for mitigating the transmission of COVID-19 disrupted mothers' usual support during the perinatal period (Matsushima and Horiguchi, 2020; Tsuno et al., 2022; Bottemanne et al., 2022). In addition to the reduction of antenatal and postnatal services, women also chose to opt out of regular antenatal appointments due to limited transport, fear of being infected by the virus, and to adhere to lockdown regulations (Motrico et al., 2020). Delayed antenatal care may result in pregnancy complications and negative birth outcomes, which are often associated with CPMDs (Fisher et al., 2012).

What this scoping review adds

A growing collection of quantitative research (generally derived from online surveys and summarised above) has outlined the impact of the COVID-19 pandemic on the prevalence of CPMDs (Yang et al., 2021; Lebel et al., 2020; Chen et al., 2022; Loret de Mola et al., 2021; Racine et al., 2021). Qualitative findings can extend understanding as to why the prevalence of CMPDs increased during the pandemic and convey rich insights into the personal impact of COVID-19 on women's emotional wellbeing. To date, there has been no systematic synthesis of the qualitative research exploring the mental and emotional wellbeing of women in the perinatal period during the first two years of the COVID19 pandemic. This scoping review aims to summarise qualitative research on how women described the emotional impact of living through the COVID-19 pandemic whilst pregnant, birthing, or postpartum.

Methods

A comprehensive search strategy was developed in collaboration with a university subject librarian to find relevant sources for the scoping review. Two sets of keywords were identified (Appendix 1), and used for a database search of Scopus, Discover and Web of Science covering Medline/Pubmed/EMBASE/CINAHL/PsychInfo. Literature published in English from January 1, 2020, to December 15, 2021, were included. Search results were assessed for inclusion (Fig. 1). A hand search of reference lists from published studies found through the database search was undertaken, and additional systematic, rapid, and scoping reviews were checked for additional articles for inclusion. Publications within the above timeframe from two major journals: *Women and Birth, and Midwifery*, were both manually searched.

Inclusion and exclusion criteria

Inclusion criteria was based on the populations, concepts, and contexts (PCC) outlined in Table 1. Only peer-reviewed qualitative research articles were included. Research with a mixed method design (e.g., online survey containing open-ended questions) was excluded, as there was an insufficient amount of qualitative data available from open-ended questions.

Three steps were involved in selecting sources:

1. *Article Screening:* Two authors independently screened all titles and abstracts to determine eligibility based on the inclusion criteria. The titles were labelled with "included" "maybe" or "excluded". The authors then met and discussed articles labelled as "maybe" and reached consensus on whether they met the inclusion criteria (Appendix 2).
2. *Critical Appraisal:* A formal critical appraisal of the quality of each included article was performed using the 2019 CASP qualitative research checklist (Noyes et al., 2018). Each article was assessed as to whether the qualitative methodology was appropriate; whether the recruitment strategy and data collection addressed the research questions; whether data analysis was sufficiently rigorous, whether interpretation of findings and discussions were sufficiently explicit. A summary of the CASP checklist results for each selected article is included in Appendix 2. The detailed selection process is outlined in the PRISMA diagram (Fig. 1).

Data synthesis

Data was synthesised based upon the findings sections and raw quotes included in published articles. Data were grouped by stage in the perinatal journey (pregnancy, birth, postpartum). If studies included data from across the perinatal period, the findings were separated according to stage and included in the synthesis as appropriate. The aim of data synthesis was to outline the evidence from common themes for each perinatal stage in a narrative format (Tricco et al., 2018). As we were working with qualitative

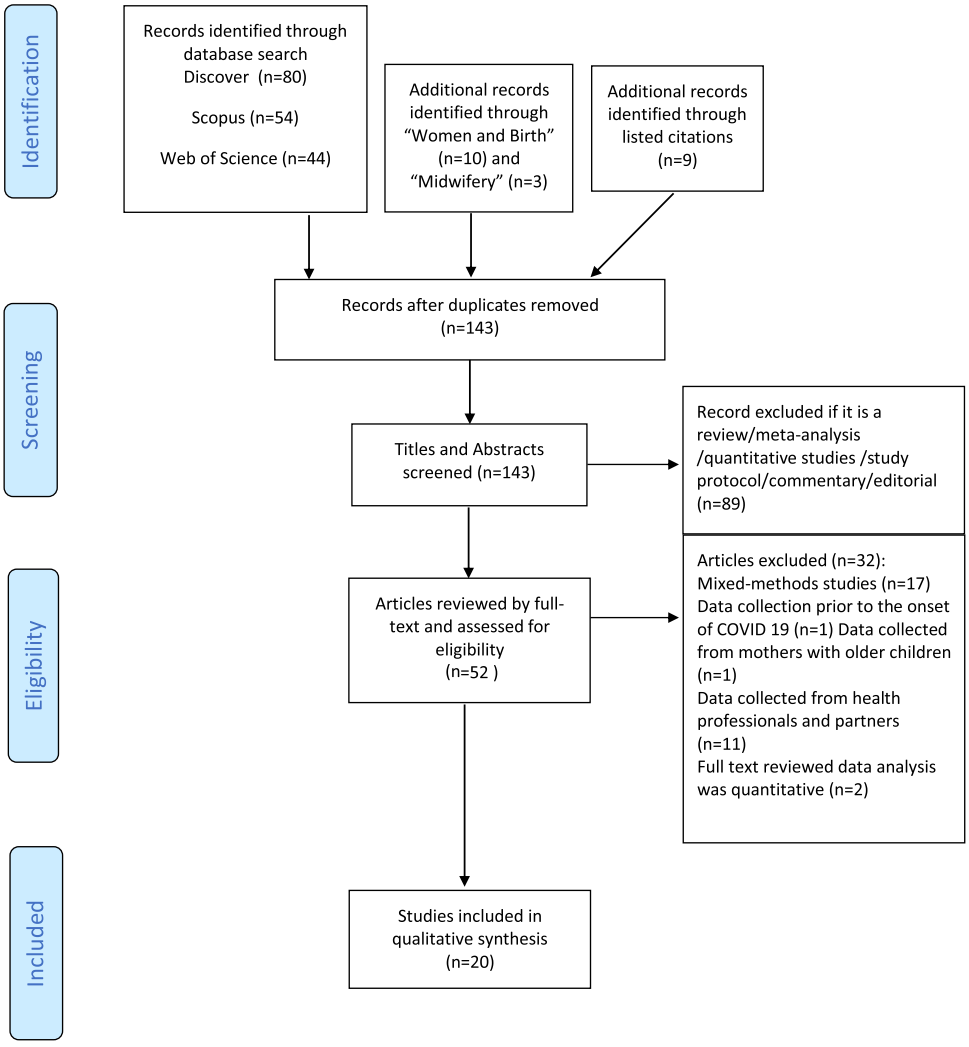

Fig. 1. PRISMA Flow Diagram (Moher et al., 2009).

Table 1
A population, concept and context for inclusion criteria.

Populations	Women during the perinatal period (from pregnancy to the first year postpartum)
Concept	Phenomenon of interest: Women's maternity care experiences, perceptions, emotional needs, coping strategies, social support, and mental health
Context	The COVID-19 pandemic globally between 1st November 2019 and 15th December 2021

findings, the intention was not to pool or synthesise "counts" of the results of included sources (e.g. stating how many times a particular word or theme occurred) (Peters et al., 2020). Rather, the analysis involved basic description of the findings of included studies, as "utilizing a thematic or meta-aggregative approach is not within the remit of a scoping review" (Peters et al., 2020, p.2125).

Findings

Characteristics of included articles (Appendix 3)

Twelve studies explored pregnant women's experiences throughout the pandemic. Nine studies collected their data between early and mid-2020, three collected data between October 2020 to April 2021. Four studies were from Australia (Atmuri et al., 2021; Sweet et al., 2021a, 2021b; Chivers et al., 2020), three studies were from the UK (Anderson et al., 2021; John et al., 2021; Riley et al., 2021), two from Brazil (Freitas-Jesus et al., 2021; Rossetto et al., 2021), the rest were from Ireland (Keating et al., 2021), Sweden (Linden et al., 2021), and Turkey (Mizrak Sahin and Kabakci, 2020).

Three studies documented the experiences of women giving birth throughout the pandemic (Fumagalli et al., 2021; Goyal et al., 2022; Silverio et al., 2021). Of these studies, two collected data between early and mid-2020 (Fumagalli et al., 2021; Silverio et al., 2021) and one study collected data between August 2020 and January 2021 (Goyal et al., 2022). One study was from Northern Italy (Fumagalli et al., 2021), one from the UK (London) (Silverio et al., 2021) and one recruited Asian American women in the US (Goyal et al., 2022).

Eleven studies reported lived experience described by postpartum women throughout the pandemic. Nine studies collected data during early and mid-2020, and two studies collected data between October 2020 to February 2021 (John et al., 2021; McKay et al., 2021). Five studies were from the UK (John et al., 2021; Riley et al., 2021; Silverio et al., 2021; Jackson et al., 2021a, 2021b), two from Australia (Sweet et al., 2021a, 2021b), two from Ireland (Keating et al., 2021; Panda et al., 2021), and one from Canada (Ollivier et al., 2021), one study collected data from Twitter accounts (McKay et al., 2021).

Pregnancy

Information seeking: anxiety and fear

The 'infodemic' (an over-abundance of information and tragic news on COVID-19) in mainstream and social media was a source of fear and anxiety for pregnant women. Inconsistent information about what being "at risk" meant for pregnant women and their foetuses amplified feelings of uncertainty and insecurity (Atmuri et al., 2021). All included studies found that pregnant women experienced distress when trying to appraise information about COVID-19. Mizrak Sahin and Rossetto described "fear of the unknown" (Mizrak Sahin and Kabakci, 2020, p.164) and women's struggles to keep up with rapid changes in information (Rossetto et al., 2021). "*we were so scared whether we heard it on social media or on television and talking to friends, you know, everyone was spreading all this hearsay nonsense information…*" (Mizrak Sahin and Kabakci, 2020, p.165). One Australian participant stated: "*you've got to decipher through what's true and what's not…Is that actually having a positive influence on me, and my mental…health"* (Sweet et al., 2021a, p.4). Participants reported difficulties trying not to be constantly worried about COVID-19, and the "infodemic" compounded existing worries about managing their pregnancy (Atmuri et al., 2021; Chivers et al., 2020; Freitas-Jesus et al., 2021; Linden et al., 2021; Mizrak Sahin and Kabakci, 2020). "*A "fear of the unknown… was the worst, hard enough, just in normal life, let alone being pregnant*" (Riley et al., 2021, p.3).

Experiencing isolation and disruptions to my social support

In Anderson et al. (2021) study, women reported feeling "*low*", and suffering a loss of joy when isolating at home, and this was particularly acute if they were living alone or fully 'shielding' (staying at home during their pregnancy) (Anderson et al., 2021). Reduced visitors and a loss of social support exacerbated a sense of "aloneness", and the mental health of women in socially vulnerable environments was disproportionately affected (Sweet et al., 2021a; Linden et al., 2021). One participant in Sweden reported *"I was locked up during my pregnancy… you do not get support from the family either [makes] you feel isolated, and you feel like 'I have no friends, we have nothing, how are we going to cope with this'…"*(Linden et al., 2021, p.4).

Participants viewed pregnancy as a time when women would normally seek out connection with others (friends/family/other pregnant women), therefore reduced social contact was acutely felt as a loss (Anderson et al., 2021). Furthermore, women attributed their isolation to symptoms of depression: *"I hope I won't be going through with depression because of less people around. Sometimes you just need family support or even a friend's support, just to help you out a little bit."* (Atmuri et al., 2021, p.5). Women from Brazil and the UK reported a range of ambiguous feelings: in some ways, women felt loved and supported by friends and networks such as church, who kept connection despite the restrictions (i.e., via meal drops); while unanticipated conflicts with friends and family members over interpretations of physical distancing rules also arose, which sometimes led to estrangement after restrictions eased (Chivers et al., 2020; Anderson et al., 2021).

'Going it alone' during pregnancy care

In many settings globally, women had to attend antenatal services alone, via telehealth, or had reduced appointments. This intensified women's feelings that they had to go through a life-altering experience alone (Linden et al., 2021). Women valued the companionship of a partner or support person in antenatal visits. Attending alone meant they were not able to share joyful events such as routine ultrasounds. Conversely, participants worried they would be alone if they received bad news (Atmuri et al., 2021; Sweet et al., 2021a). "*I just felt quite alone, I'm sitting in this hospital waiting to make sure that my baby's okay, and I have nobody to support me*" (Sweet et al., 2021a, p.2).

Anticipatory grieving and despair

Feelings of anticipatory grief (sadness, anger and a sense of loss related to a future event) and despair about missing out on sharing important life milestones (pregnancy and birth) were described in many of the studies (Atmuri et al., 2021; Chivers et al., 2020; Linden et al., 2021; Mizrak Sahin and Kabakci, 2020). One Turkish participant expressed: *"I am alone now, and there will be no one at [the] birth. My mother would support me but she stayed there in Istanbul"* (Mizrak Sahin and Kabakci, 2020, p.167). Grief was also connected to disruption of the "normal" pregnancy experience and the loss of opportunity for bonding rituals they had expected around pregnancy and birth. Participants struggled with the fact that their pregnancies would not be experienced by their extended family in the way they had hoped (Linden et al., 2021). "*I don't think many people have even seen me showing…you miss all that part of pregnancy a bit because were locked down"* (Atmuri et al., 2021, p.5).

Finding 'silver linings' in social restrictions

As well as the negative consequences of lockdown restrictions on perinatal mental health, some "silver linings" were supported. In the UK and Ireland some women reported more time to rest, and had their partners at home due to social restrictions (Atmuri et al., 2021; Keating et al., 2021). This allowed them to enjoy their pregnancy and be closer to family members in a way they may not have otherwise and gave them time to reflect on the future and their family values (Rossetto et al., 2021, p.4). *"My family is united and our bonds have grown stronger"*. Asian American women described partners being home and more available: "*It was kind of nice because my husband was able to work from home…at the very end of my pregnancy. …I figured when I go into labour, he'll be there*." (Goyal et al., 2022, p.4).

Birth

Birthing in a crisis

In many global settings partners or support people were unable to attend births due to infection control measures. Hence women experienced an unexpected perinatal journey with feelings of sadness and disappointment, or a birth experience unrelatable to previous births (Goyal et al., 2022). Silverio et al. (2021) noted labour and birth preferences and plans had to be changed, with intrapartum care services being reconfigured constantly throughout the pandemic. Whilst this was communicated well to some women, others experienced uncertainty or did not feel supported when they accessed birthing care: "*There was a definite 'this is a crisis, take the choices you have on the table, don't complain about it', attitude*." (Silverio et al., 2021, p.5). Coping with unmet expectations, dealing with chaos and uncertainty, and family separation and reunification were common themes within women's birth experiences. "*I arrived at the emergency department, and I had to say goodbye to my husband and go in on my own…He saw her (baby) only on video*" (Fumagalli et al., 2021, p.7). One woman recounted "*Look, 'I'm getting really panicky; I need to…speak to my husband. I need to go outside' and she (the midwife) had to go out and ask…a senior midwife is it alright if she goes out for 20 min to the car park. And I was a bit like 'hang on, I'm not a prisoner*." (Silverio et al., 2021, p.6). Pre-pandemic, it was well established that women's satisfaction with their birth experience is impacted by feelings of being in control, and the words and actions of their caregivers (usually doctors and nurses) (Simkin, 1991). The quotes from our review illustrate how the context of giving birth during the COVID-19 pandemic dramatically impacted women's feelings of being in

control during their birth and changed the nature of their interactions with caregivers. The described feelings of uncertainty and more limited/regulated experiences of care exacerbated negative feelings about their birth experience.

Postpartum

Isolating: 'Early motherhood is much like lockdown'

Participants in the UK expressed how early motherhood was "much like lockdown" and was accompanied by a similar feeling of loss of self-identity, and restrictions to independence (Jackson et al., 2021a, 2021b). "*Being in lockdown is exactly like being a, being a new mum to a new-born and how it was…. a double whammy of like restriction on life* (Jackson et al., 2021a, p.6)." Having less access to others to guide them through early motherhood added to women's feelings of isolation (Ollivier et al., 2021). "*I think week two to four was peak tiredness…. that's the point where I'd really loved either my mum, my mother-in-law, or my own family to sort of step in and be able to help out a bit more*" (Jackson et al., 2021b, p.4). Similar to other perinatal stages, such isolation was mixed with a sense of grief over not sharing a life milestone with others (Jackson et al., 2021b; Ollivier et al., 2021). "*My family is missing all of her milestones…I don't have anyone to share the little joys with like her first taste of a new food or the first time she rolls over. It's heart breaking.*" (Ollivier et al., 2021, p.4). Olivier et al. (2021) found that new mothers in Canada had constant worries about their mental health. Participants felt "*depressed, abandoned, lost, drained, irritable, sad, angry and anxious*" and such feelings were attributed to the accumulating nature of stressors relating to the pandemic: "*My mental health is okay but not great, everyday feels like a struggle, my postpartum anxiety has come back full blown…"* (Ollivier et al., 2021, p.3).

Breastfeeding: triumphs and tribulations

Accessing breastfeeding services, which had often gone online, was seen as daunting and frustrating (Panda et al., 2021). Women described being sent breastfeeding booklets and links to websites, but not all women had adequate access to the internet. Riley et al. (2021) reported the struggle for women to obtain breastfeeding support upon returning home. Breastfeeding services attempted to support new mothers in other ways through "*zoom calls*", but "*having someone look at it through a camera… just didn't cut it*" (Riley et al., 2021, p.4). "*Especially with breastfeeding, there's nothing better than someone saying, 'let me show you'….*" (Jackson et al., 2021b, p.8). Whilst some online support was offered, the response was mixed: "*The lactation consultant…is more important with COVID. Because you don't have your mum or your granny…around you…to…help and correct you, you're on your own. It's hard to…zoom…with private lactation consultants*" (Panda et al., 2021, p.4).

Facing disruptions during postpartum care

Globally, participants reported feeling that they and their babies had '*slipped through the net*' in terms of lack of access to postpartum support (Jackson et al., 2021a; Ollivier et al., 2021). Canadian participants used the term "*dumped*" to signify the end of a significant trusted relationship that should be reliable, consistent, and available. Without consistent valued support from health care providers, mothers felt forgotten, abandoned, and vulnerable. In addition, a study involving first-generation immigrants to Scotland stated they had experienced accent bias due to having non-British accents, and this was exacerbated when health services pivoted to telephone consultations (John et al., 2021). Whilst all but one participant could speak English fluently, they noted that language barriers occurred between themselves and health professionals, which could result in inappropriate decisions regarding their health care (John et al., 2021).

Table 2
Summarised findings from all included studies.

Perinatal periods	Main themes
Pregnancy	• Information seeking: anxiety and fear • Experiencing isolation and disruption to my social support • 'Going it alone' during pregnancy care • Anticipatory grieving and despair • Finding the 'silver linings' in social restrictions
Birth	• Birthing in a crisis
Postpartum	• Isolating 'Early motherhood is much like lockdown' • Breastfeeding: triumphs and tribulations • Facing disruptions during postpartum care • 'Affecting us for years to come' - COVID-19 was not the only trauma • 'Silver linings' during postpartum care

'Affecting us for years to come' - COVID-19 was not the only trauma

Additional visiting restrictions in hospitals affected how much women could see their preterm or hospitalised newborns. Whilst the reasoning for restrictions were understood, such restrictions heightened rather than alleviated the distress parents felt at being separated from their infants (Keating et al., 2021; McKay et al., 2021). "*Parents of sick and small newborns must not be treated as visitors, they are #caregivers and must have unrestricted access to #NICU*" (McKay et al., 2021, p.6). Women tweeted about how their mental health had suffered, and that their difficulties taking care of premature babies were compounded by the fear of them contracting COVID-19, stating that "*COVID-19 was not the only trauma*" (McKay et al., 2021, p.4). Participants in the UK and Ireland reported loneliness after their birth as partners and family could not bond with their baby in the first days of life (Riley et al., 2021; Panda et al., 2021). "*You just expect to be all excited with your partner and have your family come and visit, as if being in hospital…wasn't bad enough, but to be stuck there [by] yourself*" (Riley et al., 2021, p.4). In Riley's study, this led some participants to discharge themselves early rather than waiting until breastfeeding was established.

'Silver linings' during postpartum care

A "silver lining" of social distancing regulations were that new mothers were freed from social obligations and had more support from partners who were based at home. "*We can literally adapt our lives around the baby's schedule…. without worrying about "oh I'm getting up for work*" (Jackson et al., 2021a, p.7). Parents appreciated being able to settle into their role without distraction or social pressures (Keating et al., 2021; Panda et al., 2021). "*The whole experience of not having…gangs of…. visitors coming in and out…it was just so pleasant.*" (Panda et al., 2021, p.6). Participants came up with creative solutions to promote their own mental health and opportunities for socialisation e.g., online support groups (Ollivier et al., 2021), virtual technologies were widely used to make memories and celebrate babies' milestones. During the postnatal hospital stay women drew comfort and support from each other both emotionally and practically due to restricting visitors (Panda et al., 2021).

Discussion

The studies included in this review highlight women's own descriptions of how living through the nexus of the pandemic and the perinatal period affected their emotions and mental health (Table 2). As such, important insights about the situations that increased women's mental distress or promoted mental health can

be identified. In qualitative studies, diagnostic categories for common perinatal mental disorders (CPMDs) are not foregrounded, and summaries of prevalence studies relating to CPMDs during the pandemic are available elsewhere (see Iyengar et al., 2021; Hessami et al., 2022).

Isolation and limited support

Internationally, women described experiences of isolation, fear, and anxiety throughout their pregnancy, birth and postpartum. Lockdown orders and the re-orienting of many maternity services to online/telehealth resulted in the reduction or denial of physical, psychological, and social support that many women were expecting (Anderson et al., 2021; Sweet et al., 2021b; Linden et al., 2021). Some studies in this review conceptualised this as an exacerbation of the feelings of loneliness and isolation that many new mothers routinely describe (Jackson et al., 2021a, 2021b). Loneliness has been identified as a sensitive indicator of mental wellbeing in studies from pre-pandemic times (Kent-Marvick et al., 2022). Given the strong evidence that social support in pregnancy and postpartum is protective against depression, anxiety and self-harm (Bedaso et al., 2021; Milgrom et al., 2019), the impact of increased isolation during the perinatal period is a serious issue to consider.

Adaptation of maternity services

When accessing maternity services, in addition to being alone, inconsistent information made women unsure if attending such services put them at risk of infection (Anderson et al., 2021). Frequently used words by women in one study included: worrying, risk, anxiety, concerns, stress, struggling and scared (Chivers et al., 2020). The finding that pregnant women experienced heightened feelings of distress during the early stages of the pandemic due to the perception that external environments (e.g., maternity services) were now higher risk is important in terms of how access to care impacts women's mental health. This echoes the reported findings from quantitative studies that service adaptations burdened the emotional wellbeing of women during their perinatal period (Ceulemans et al., 2020; Zanardo et al., 2020). Moving to digital and remote services reduced preventive help-seeking behaviour and limited aspects of perinatal care (i.e., breastfeeding support and infant health visits) for many, and exacerbated health inequalities (Howard and Khalifeh, 2020). Our review indicates this led to women feeling let down ("dumped") and forgotten by services, which contributed to feelings of grief and sadness that their expectations of care had not been met (Fumagalli et al., 2021).

Finding 'Silver linings'

Possible "silver linings" that are protective to mental health were identified. First, the benefits of having uninterrupted time at home just with partners was described in many studies internationally. This positive lesson from the COVID-19 pandemic may have implications for policies around parental leave and working arrangements for families expecting a child or with a newborn. For example, the Australian government has announced a plan to slowly increase paid parental leave from 12 to 26 weeks (ABC news, 2022) (14 October 2022), and the retirement commission in New Zealand suggesting that parental leave should not be tied to the birthing partner (Stuff, 2022) (22 September 2022). Second, whilst the necessary shift to telehealth maternity services was disruptive for many, women did report using social media to connect with other new mothers and create online peer support groups (Sweet et al., 2021a; Farewell et al., 2020). Ways that such peer support can be sustainably maintained and integrated with maternity services should be considered.

Limitations

This scoping review has several limitations. First, only data available in the published version of the included articles was synthesised, as authors were not contacted about access to original datasets. Synthesising the complete original data from included studies would have added nuance to the description of the resulting themes. However, this must be balanced by the concern that despite ethical requirements, additional detail about the circumstances of individual women's stories may inadvertently identify participants (Saunders et al., 2015). Second, the research synthesised is predominantly from high-income countries and included participants who were available to be part of a convenience sample during the pandemic. Therefore, the experiences of women from low-and-middle income countries, and those with marginalised identities or who had barriers to service access within high income countries are under-represented. Whilst one included study identified that migrant women accessing telehealth services faced barriers such as accent bias (John et al., 2021), further research into the maternity experiences of women in diverse contexts is recommended.

Conclusion and recommendations

Whilst compulsory lockdowns and physical distancing regulations are being repealed across the world, the COVID-19 pandemic still cannot be spoken about in past-tense. In many settings, women may still have to self-isolate if they or their family members are unwell during pregnancy/postpartum, and health services across the world are still under intense pressure due to the additional burden of the pandemic (Sarría-Santamera et al., 2021). Therefore, the findings of this review highlight how the known risk of low levels of social support to women's perinatal health are exacerbated by additional requirements to isolate, although "silver linings" that are protective to mental health were identified. Further research investigating how accessing breastfeeding support via telehealth affected women's emotional health and breastfeeding duration is also required. In addition, maternity services should consider how perinatal mental health support, such as peer support groups, may be integrated into the care of women who may still be required to isolate or have reduced visitors during pregnancy, birth or a hospital stay.

Ethical approval

Not applicable.

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Declaration of Competing Interest

None declared.

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Appendix 1 – literature search strategies and key words

Set 1 keywords:

("COVID-19" OR covid-19 OR coronavirus OR "SARS co*") AND (Parturition OR perinatal OR pregnan* OR postpartum OR post-partum OR post-natal OR postnatal OR Puerperium OR intrapartum OR intra-partum OR maternity OR maternal) AND (mental OR psychological OR psychiatric) AND (seek* OR find*) AND (help OR assistance OR support OR information) AND (health* OR well-being OR well-being) AND (Qualitative OR "mixed method*" OR "grounded theory" OR phenomenolog* OR ethnograph* OR "focus group*" OR semi-structured OR "case stud*" OR "in-depth interview*" OR "content analysis" OR "Narrative research" OR "historical research")

Set 2 keywords:

("COVID-19″ OR covid-19 OR coronavirus OR "SARS co*") AND (Parturition OR perinatal OR pregnan* OR postpartum OR post-partum OR post-natal OR postnatal OR Puerperium OR intra-partum OR intra-partum OR maternity OR maternal) AND (mental OR psychological OR psychiatric) AND ("self-referral*" or "self-car*" OR "self-help*" OR "self-administrat*") AND (Qualitative OR "mixed method*" OR "grounded theory" OR phenomenolog* OR ethnograph* OR "focus group*" OR semi-structured OR "case stud*" OR "in-depth interview*" OR "content analysis" OR Narrative research" OR "historical research")

Appendix 2 – Appraisal checklist – tick box

Article	CASP Appraisal Question								
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9
Anderson et al. 2021	Y	Y	U	Y	Y	Y	Y	Y	Y
Atmuri et al. 2021	Y	Y	Y	Y	Y	Y	Y	Y	Y
Chivers et al. 2021	Y	Y	Y	Y	Y	N	Y	Y	Y
Frietas-Jesus et al. 2021	Y	Y	Y	Y	Y	U	Y	Y	Y
Fumgalli et al. 2021	Y	Y	U	Y	Y	Y	Y	Y	Y
Goyal et al 2021	Y	U	Y	Y	Y	Y	Y	Y	Y
Jackson et al. 2021a	Y	Y	Y	U	Y	Y	Y	Y	Y
Jackson et al. 2021b	Y	Y	Y	Y	Y	U	Y	Y	Y
John et al. 2021	Y	Y	Y	Y	Y	Y	Y	U	Y
Keating et al. 2021	Y	Y	U	U	Y	U	Y	Y	Y
Linden et al. 2021	Y	Y	Y	Y	U	U	Y	Y	Y
McKay et al. 2021	Y	U	Y	U	Y	N	Y	Y	Y
Ollivier et al. 2021	Y	Y	Y	Y	Y	Y	Y	Y	Y
Panda 2021	Y	Y	Y	Y	Y	U	Y	Y	Y
Riley et al. 2021	Y	U	Y	U	Y	Y	U	Y	Y
Rossetto et al. 2021	Y	U	U	Y	Y	U	Y	U	Y
Mizark Sahin et al. 2021	Y	U	U	Y	Y	U	Y	Y	Y
Silverio et al. 2021	Y	Y	U	Y	Y	U	Y	Y	Y
Sweet and Bradfield et al. 2021	Y	Y	U	Y	Y	N	Y	Y	Y
Sweet and Wilson et al 2021	Y	U	U	Y	Y	U	Y	Y	Y

Keys: Y = Yes; U = Unsure/Can't tell; N = No

Questions 1–9

Q1. Was there a clear statement of the aims of the research?
Q2. Is a qualitative methodology appropriate?
Q3. Was the research design appropriate to address the aims of the research
Q4. Was the recruitment strategy appropriate to the aims of the research?
Q5. Was the data collected in a way that addressed the research issue?
Q6. Has the relationship between researcher and participants been adequately considered?
Q7. Have ethical issues been taken into consideration?
Q8. Was the data analysis sufficiently rigorous?
Q9. Is there a clear statement of findings?

Appendix 3 – Summary Table of Selected Study Characteristics

Authors (Publish year)	Countries	Lockdown situations	Study periods	Participants (n)	Number of pregnancies
Pregnant					
Anderson et al. (2021)	UK (Bristol)	A nationwide social distancing 'lockdown' strategy – only four reasons to leave home: shopping for necessities like food and medicine, to take exercise once per day only, for medical reasons or for essential work	24 April – 4 May 2020	31 pregnant women recruited from the communities - Covid negative	Primiparous: 20
Atmuri et al. (2021)	Australia (Melbourne)	Stay-at-home restrictions with key mandates being face-covering, closure of all non-essential businesses and limited travel permitted	1 June – 19 June 2020	15 pregnant women recruited from a secondary level public hospital – Covid negative	Primiparous: 10
Chivers et al. (2020)	Australia	Stay-at-home restrictions with key mandates being face-covering, closure of all non-essential businesses and limited travel permitted	27 January –12 May 2020	Public discourse of a perinatal cohort participating a leading Australian online forum	Not provided
Freitas-Jesus et al. (2021)	Brazil	School and workplace closure, cancellation of public events, restriction of gathering size, and restrictions on internal movement and international travel.	15 June - 18 August 2020	22 pregnant women recruited from a tertiary teaching hospital - Covid positive with nine hospitalised	primiparous: 4
John et al. (2021)	UK	Initial easing of social distancing restrictions since 11 May 2020; second national lockdown comes into force in England since 5 November 2020; England entered third national lockdown since 6 January 2021	December 2020 - January 2021	9 pregnant and *[7 postpartum women within 6 months of delivery]*	Primiparous: 6
Keating et al. (2021)	Ireland	Initial lockdown on 12 March 2020 affecting schools, childcare facilities and cultural institutions, and non-essential travel and contact with others were banned on 27 March	April- July 2020	8 pregnant (13 to 39 weeks) and *[6 postpartum (2 to 12 weeks) women]* recruited from one tertiary-level maternity unit serving in Dublin	Primiparous: 9
Linden et al. (2021)	Sweden	The first wave between mid- March to mid- July 2020 and the second wave between mid-October 2020 to mid-February 2021 – no official recommendation of masque wearing outside of health care settings, and pregnant women were recognised as at-risk group from February 2021	March - April 2021	14 pregnant women recruited from three hospitals	Primiparous: 8
Riley et al. (2021)	UK	Gradually removing the national restrictions in England, but maternity care restrictions remained	July – August 2020	5 pregnant and *[20 postpartum (average 20 weeks) women]* recruited from the ones who took part in an online survey	Primiparous: 15
Rossetto et al. (2021)	Brazil	Between February and July 2020, physical distancing, suspension of business activities, and restricted access to certain urban areas	October 2020	12 pregnant women recruited via people in the virtual culture circle	Not provided
Mizrak Sahin and Kabakci (2020)	Turkey	Closing schools, restricting intercity travel, not leaving the house unless mandatory needs, even curfew since 11 March 202 (the first case detected in Turkey)	March – May 2020	15 pregnant women recruited from local communities where the researchers were resident	Primiparous: 12
Sweet et al. (2021a); and Sweet et al. (2021b)	Australia	Non-essential businesses and activities were closed, limit non-essential travels; 1.5 m physical distancing; most health care services moved to online or with restricted access for support people	June 2020	9 pregnant women recruited from the communities by social media.	Primiparous: 3
Birth					
Fumagalli et al. (2021)	Northern Italy	The first case was diagnosed on the 21st of February 2020, remotely delivered services for visits and childbirth classes. Strict lockdown was placed between March and mid-April 2020 and then in mid-October 2020	Mid to end of June 2020	22 women who gave birth between March and April 2020 Recruited from a Northern Italy maternity hospital	Primiparous: 7

(*continued on next page*)

(*continued*)

Authors (Publish year)	Countries	Lockdown situations	Study periods	Participants (n)	Number of pregnancies
Silverio et al. (2021)	UK (London)	National lockdown with mandated and enforced stay-at-home orders from March 2020, only when seeking medical care or travelling to hospital to give birth till 24 July 2020	March - August 2020	23 women who gave birth between March and August 2020 recruited from a South London maternity hospital	Primiparous: 13
Goyal et al. (2022)	America	Nationwide social distancing and sheltering in place mandates, moved to the telehealth and limited presence of partners at obstetric visits and the birth and postpartum periods	12 August 2020 - 31 January 2021	38 Asian American women recruited from the communities via social media	Not provided
Postpartum					
Jackson et al. (2021a) and Jackson et al. (2021b)	UK	Initial social distancing guidelines imposed on 23 March 2020 (a nationwide 'lockdown' (stay-at-home order) and initial easing of social distancing restrictions since 11 May 2020	T1 – 22 April 2020 T2 – 10 June 2020	T1 – 12 postpartum women T2 – 12 postpartum women	T1: Infant ages ranged 2 to 13 weeks – five having their first baby T2: Infant ages ranged 6 to 14 weeks – seven having their first baby
John et al. (2021)	UK	Initial easing of social distancing restrictions since 11 May 2020; second national lockdown comes into force in England since 5 November 2020; England entered third national lockdown since 6 January 2021	December 2020 - January 2021	*[9 pregnant]* and 7 postpartum women within 6 months of delivery	Primiparous: 6
Keating et al. (2021)	Ireland	Initial lockdown on 12 March 2020 affecting schools, childcare facilities and cultural institutions, and non-essential travel and contact with others were banned on 27 March	April- July 2020	*[8 pregnant (13 to 39 weeks)]* and 6 postpartum (2 to 12 weeks) women recruited from one tertiary-level maternity unit serving in Dublin	Primiparous: 9
McKay et al. (2021)	Tweets	The mix of Covid −19 restrictions and World Prematurity Day (17 November)	24 October - 30 November 2020	3161 tweets	Not applicable
Ollivier et al. (2021)	Canada	First wave March-June 2020	May-June 2020	68 new mothers having a new-born aged 0–12 months	Primiparous: 32
Panda et al. (2021)	Ireland	Full lockdowns from March to 18 May 2020, and then second and third state-wide lockdowns were imposed in October 2020 and January 2021	July – August 2020	19 women who gave birth between 20 April and 11 May 2020 in an urban tertiary -referral maternity care centre	Primiparous: 8
Riley et al. (2021)	UK	Gradually removing the national restrictions in England, but maternity care restrictions remained	July – August 2020	*[5 pregnant]* and 20 postpartum (average 20 weeks) women recruited from the ones who took part in an online survey	Primiparous: 15
Silverio et al. (2021)	UK (London)	National lockdown with mandated and enforced stay-at-home orders from March 2020, only when seeking medical care or travelling to hospital to give birth till 24 July 2020	March - August 2020	23 women who gave birth between March and August 2020 recruited from a South London maternity hospital	Primiparous: 13
Sweet et al. (2021a); and Sweet et al. (2021b)	Australia	Non-essential businesses and activities were closed, limit non-essential travels; 1.5 m physical distancing; most health care services moved to online or with restricted access for support people	June 2020	18 postpartum women recruited from the communities by social media.	Primiparous: 13

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