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Lived experiences of pregnancy and prison through a reproductive justice lens: A qualitative meta-synthesis

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ABSTRACT

As rates with which women are incarcerated have risen around the world, research examining how incarceration affects the health of people who are pregnant, their newborns, and their family members has burgeoned. Lived experience is seldom accounted for in this research, however, highlighting a gap with relevance to advocates, policy makers, researchers, and practitioners seeking to better understand health inequities and redress human suffering. In this paper we present a qualitative meta-synthesis of 31 papers reporting qualitative studies of how people who are incarcerated in prisons and jails around the world experience pregnancy, labour and childbirth, and the postpartum period. Theoretical perspectives from the reproductive justice and prison abolition movements guided our analysis, which identified connectedness (to baby) and disconnectedness (from support) as twinned themes characterizing the lived experiences of navigating pregnancy in a carceral institution. We argue that the conditions of reproductive justice – including self-determination in pregnancy, in parenting, and in managing one's reproductive capacity – are fundamentally irreconcilable with mass incarceration. We conclude by considering the strategic opportunities for health practitioners and researchers to support the movement for prison abolition by mobilizing health-focused arguments for decarceration.

1. Introduction

Global rates of incarceration of women in jails, prisons, and immigration detention facilities are rising: since 2010, the female prison population has grown by 17% (Reform International, 2021). There has been a corresponding rise in the number of women who are incarcerated while they are pregnant. In the United States, home to the world's largest prison population (Fair and Walmsley, 2021), approximately 3% of women admitted to jails (Sufrin et al., 2020) and 4% of women admitted to federal prisons (Sufrin et al., 2019) are pregnant when they are taken into custody. Many already have children: most women who are incarcerated in the United States are parents to children under the age of 18 (Shlafer et al., 2019; Maruschak et al., 2016). Structural forms of marginalization, including racism, colonization, and poverty reflect and reinforce which communities are most affected by mass incarceration (Roth et al., 2017), evidenced by incommensurate rates of incarceration amongst people who are Black, Indigenous, Latinx and/or living in poverty (Kajstura, 2019; Western and Pettit, 2010).

The health status of people who are incarcerated and pregnant, their newborns, and children they may be separated from are amongst the subjects of a growing body of carceral health research. Recent studies in this field have found that women who are incarcerated while they are pregnant have more risk factors for adverse pregnancy outcomes (Knight and Plugge, 2005; Fogel, 1993), are less likely to receive adequate prenatal care (Carter Ramirez et al., 2020a; Walker et al., 2014), face substantial barriers to accessing abortion (Sufrin et al., 2021; Roth, 2004), and are more likely to suffer adverse pregnancy outcomes when compared with the general population (Carter Ramirez et al., 2020b; Testa et al., 2020). They have also found that infants born to incarcerated women have lower birth weights (Testa et al., 2020; Dowell et al.,

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2018), and that older children with incarcerated mothers experience higher rates of a wide range of negative mental and physical health sequelae (Lee et al., 2013; Turney, 2014). Accounting for broader community health inequities, however, the specific role of birthing parents' incarceration in shaping these health outcomes is harder to parse. In one 2020 study, the association between incarceration and a range of poor maternal health outcomes was attenuated to statistical non-significance when researchers used comparison groups in the community facing stressors common to women who are incarcerated, including financial insecurity and intimate partner violence (Testa et al., 2020). A spate of research with similar findings in the 1990s (Knight and Plugge, 2005; Cordero et al., 1992; Egley et al., 1992; Martin et al., 1997) fueled speculation amongst health researchers and policy makers about "thera-punitive" – or positive health – effects of incarceration for women facing economic and social barriers to healthcare and healthy pregnancy outside of carceral settings (Carlen and Tombs, 2006). Absent from this vein of scholarship and still missing from much of contemporary carceral health research, however, are the lived experiences of people navigating carceral spaces while they are pregnant. Although paradigmatic shifts have led to "service user" involvement across all stages of inquiry in the health sciences, ethical, methodological, and pragmatic challenges unique to penal contexts have severely limited how people who are incarcerated are involved in health research (Awenat et al., 2018; MacInnes et al., 2011). This review seeks to better understand how people who are incarcerated experience pregnancy, and how their experiences are represented in research.

Pregnancy is not the sole providence of women: trans and gender non-conforming (TGNC) people with uteri also get pregnant and give birth, sometimes while navigating incarceration. These experiences pass largely unaccounted for in empirical carceral health research, mirroring the limited literature that addresses and describes incarceration of the trans community more broadly. TGNC people are criminalized, over-policed, and over-represented in prisons (Reform International, 2021). This particularly true of racialized TGNC people, who face "the compounding effects of multiple forms of discrimination" throughout their lives (James et al., 2015). The "hyper-gendered" nature of sex segregated carceral institutions (Tarzwell, 2006; Pemberton, 2013) contribute to the invisibility of TGNC people who are incarcerated in much of carceral research, and to the inhumane conditions of confinement TGNC people face. This includes incarceration in sex segregated institutions according to one's assigned sex at birth rather than gender identity, increased time in spent in protective custody, decreased access to recreational and educational programming, and policies that withhold gender affirming health care, clothing, and commissary goods (Lamble, 2012). This analysis is interested in the experiences of *all* birthing people who are incarcerated; the terms "women" and "mother" are used in with reference to the language used in the studies we cite.

Our approach to this work is informed by several connected theoretical commitments that take root in Black feminist thought. Our understanding of lived experience as a central "criterion of credibility" in research that addresses the health of incarcerated pregnant people grows from Black feminist epistemologies in which experientially connected, dialogic, and empathic processes of knowledge production are accorded primacy of place (Hill Collins, 2000). Our framing of experiences of incarcerated pregnancy as shaped by intersecting racialized, gendered, and classed systems of dominance is rooted in reproductive justice, a framework for understanding, inquiry, and activism around reproduction that transcends a narrow focus on access to abortion to demand safety, dignity, and full self-determination in fertility management, pregnancy, and parenting for all birthing people (Ross and Solinger, 2017). Finally, our accounting of the harms and health impacts of incarceration are grounded in a "prison abolitionist ethic" (McLeod, 2015), that seeks to upend the seeming inevitability of carceral punishment systems and the racial subordination they perpetuate (Davis, 2011). It is our contention that these interlocking theoretical frames, largely absent from much of contemporary carceral health research (Paynter et al., 2022), can help to illuminate critical impacts of incarceration for people who are experiencing it, as well as for their families and communities, and gesture towards opportunities for repair.

2. Methods

Design: To address our research questions, we conducted a qualitative meta-synthesis, (PROSPERO registration number: CRD42020154345). Qualitative meta-synthesis is an approach to integrating and interpreting qualitative primary research studies that address a common topic (Sandelowski and Barroso, 2006). Starting with an a priori research question and sensitized by salient theoretical concepts, qualitative meta-synthesis moves beyond description to produce new integrative interpretations of a body of literature (Saini and Shlonsky, 2012). The research question that guided our work was "what are the lived experiences of pregnancy, childbirth, and the postpartum period amongst people who are incarcerated?". We used reproductive justice as an imported framework (Ludvigsen et al., 2015) to guide our analysis. As articulated by SisterSong, the national women of colour collective that has helped lead and organize the movement for reproductive justice in the US since it was founded in 1997, reproductive justice describes connected rights to "maintain personal bodily autonomy, have children, not have children, and parent the children we have in safe and sustainable communities" (SisterSong, 2022a, 2022b). This includes access to the means to manage one's reproductive capacity, "information, resources, services and personal safety while pregnant", and conditions that are socially, politically, culturally, and environmentally supportive and safe in which to parent (Solinger, 2007).

Our research team included clinicians and health researchers at different stages of training, with different relationships to the experiences and systems of dominance discussed in this paper. Our research team included clinicians who have provided healthcare to pregnant people experiencing incarceration, including while working directly in a carceral system; it also included team members with their own experiences of managing their reproductive capacity, of pregnancy, of childbirth, and of parenting. Some of the authors of this study are racialized, but most are not; none of the authors of this study are Indigenous or Black. None of the members of our research team have lived experience of incarceration.

Search Strategy: Given the dearth of qualitative research we found while in the process of formulating our research question, we developed a broad search strategy. We performed our search of the literature using six databases indexing research reports from across the health and social sciences: OVID Medline, PsycINFO, Embase, ProQuest Sociological Abstracts and Social Science, and EBSCO Cumulative Index to Nursing and Allied Health Literature (CINAHL). Terms related to pregnancy and to incarceration were combined (see Appendix 1) and then used to search each database from inception until May 1, 2022. A health research librarian reviewed our search strategy to ensure relevant data sources and search terms were included. The study abstracts returned by our search were imported into Covidence, a web-based platform that facilitates abstract review, data extraction, and critical appraisal for systematic reviews.

Eligibility Criteria: Studies were eligible for inclusion if they a) reported primary empirical qualitative research findings; b) were published in peer-reviewed journals; c) were accessible in English; and d) addressed the lived experiences of people who were incarcerated while they were pregnant or up to six weeks postpartum. Studies were deemed ineligible if they reported only secondary or non-empirical analyses, did not report qualitative findings, were unpublished, were not available in English, did not report participants' lived experiences, or did not address pregnancy and incarceration. Although a number of peer-reviewed books and book chapters have addressed experiences of people who are pregnant and incarcerated (Sufrin, 2017; Solinger et al., 2010), our focus for this study was on synthesizing findings from peer-reviewed research *papers*. We understood "lived experience" to refer to

subjective understandings and first-hand knowledge stemming from individuals' direct experiences of being incarcerated while they were pregnant. We included studies that reported participants' experiences with pregnancy and the postpartum period, defined as the six weeks following childbirth. Studies were eligible for inclusion if participants experienced incarceration in prisons, jails, police lock-ups, juvenile detention centres, or in immigration detention facilities. We did not include studies that addressed psychiatric incarceration, on the basis that the medical – and medicalizing – context of a carceral setting connected to a healthcare institution would likely shape a significantly different lived experience of pregnancy than for those incarcerated in penal settings. We did not apply any geographical or temporal exclusion criteria.

Study Selection Process: Working independently in Covidence, two review authors (two of AC, FK, JL, KS, MV, or TS) screened the title and abstract of each study identified through our initial search to determine whether inclusion criteria were met. During this stage, each article was read in full by two study authors (two of AC, FK, KS, or TS) to assess eligibility for inclusion; disagreements were subsequently discussed by the reviewers until a consensus was met. Where a full text of an article could not be accessed through our universities' library systems or via interlibrary loan, we endeavoured to contact each article's first author using information gleaned from a Google search. Through this process, full texts were obtained and reviewed for all articles (Pallotti, 2015).

Quality Appraisal: Each of the articles we identified for inclusion was independently appraised by two study authors (two of AC, JG, KS, or TS) adapting the Critical Appraisal Skills Programme (CASP) Qualitative Checklist (Critical Appraisal Skills Programme, 2018) (Table 1). This checklist consists of questions that assess different methodological aspects of qualitative research, including the appropriateness of the research design, consideration of relevant ethical issues, and the rigour of the presented analysis. Although we used these appraisals to inform our discussion of the relevance and the quality of the articles we reviewed, we did not exclude any studies based on our findings. This is in keeping with common practice across several qualitative review methodologies (Barnett-Page and Thomas, 2009), in which standardized critical appraisal tools are understood as ill-equipped to fairly evaluate research that is, by design, both context-bounded and partial in its perspective (Melia, 2010; Majid and Vanstone, 2018).

Data Extraction and Analysis: General characteristics of each study,

Table 1
Summary of Critical Appraisal Results for Included Articles.

	1. Was there a clear statement of the aims of the research?	2. Is a qualitative methodology appropriate?	3. Was the research design appropriate to address the aims of the research?	4. Was the recruitment strategy appropriate to the aims of the research?	5. Was the data collected in a way that addressed the research issue?	6. Has the relationship between researcher and participants been adequately considered?	7. Have ethical issues been taken into consideration?	8. Was the data analysis sufficiently rigorous?	9. Is there a clear statement of findings?
Abbott [2016]	yes	yes	can't tell	can't tell	can't tell	no	no	can't tell	yes
Abbott [2017]	yes	yes	can't tell	can't tell	can't tell	no	no	can't tell	yes
Abbott & Scott [2019]	yes	yes	yes	can't tell	yes	yes	yes	yes	yes
Abbott et al. [2020]	yes	yes	yes	yes	yes	can't tell	can't tell	yes	yes
Abbott et al. [2021]	yes	yes	yes	yes	yes	can't tell	can't tell	yes	yes
Arshad et al. [2018]	yes	yes	yes	yes	yes	no	yes	yes	yes
Braga & Angotti [2015]	yes	yes	can't tell	can't tell	can't tell	no	no	can't tell	yes
Chambers [2009]	yes	yes	yes	yes	yes	no	can't tell	yes	yes
Clarke & Adashi [2011]	no	can't tell	can't tell	can't tell	can't tell	no	can't tell	can't tell	no
do Carmo Leal et al. [2016]	yes	yes	can't tell	yes	no	no	can't tell	yes	yes
Dalenogare et al. [2022]	yes	yes	yes	yes	yes	no	can't tell	yes	yes
Deboscker et al. [2021]	yes	yes	can't tell	can't tell	yes	no	no	yes	yes
Ferszt & Erickson-Owens [2008]	no	yes	can't tell	yes	no	can't tell	no	no	yes
Fritz & Whiteacre [2016]	yes	yes	yes	yes	yes	no	can't tell	yes	yes
Huang et al. [2012]	yes	yes	yes	yes	yes	no	yes	yes	yes
Hutchinson et al. [2008]	yes	yes	yes	yes	yes	yes	yes	yes	yes
Kwarteng-Amaning et al. [2019]	yes	yes	yes	yes	yes	no	yes	yes	yes
Liauw et al. [2021]	yes	yes	yes	yes	yes	yes	yes	yes	yes
Ogrizek et al. [2022 A]	yes	yes	yes	yes	yes	no	yes	yes	yes
Ogrizek et al. [2022 B]	yes	yes	yes	yes	yes	no	yes	yes	yes
Rahmah et al. [2014]	yes	yes	can't tell	yes	yes	no	can't tell	can't tell	yes
Rodriguez [2019]	yes	yes	yes	yes	yes	no	can't tell	yes	yes
Sawasdipanich et al. [2018]	yes	yes	yes	can't tell	yes	no	yes	can't tell	yes
Schroeder & Bell [2005 A]	yes	yes	yes	yes	yes	no	no	can't tell	yes
Schroeder & Bell [2005 B]	yes	yes	yes	yes	yes	no	no	yes	yes
Shelton & Gill [1989]	yes	yes	yes	can't tell	yes	no	no	yes	yes
Suarez [2021]	no	yes	can't tell	can't tell	can't tell	yes	yes	yes	yes
Sufrin [2018]	yes	yes	yes	can't tell	can't tell	yes	can't tell	yes	yes
Thomson [2022]	yes	yes	yes	yes	yes	yes	yes	yes	yes
Williams & Schulte-Day [2006]	yes	yes	yes	yes	yes	no	no	yes	yes
Wismont [2000]	yes	yes	yes	can't tell	yes	no	no	yes	yes

including research question, methods, study setting, and population, were identified and extracted using a standard template. A codebook was developed, structured around each of the three related categories of conditions of reproductive justice (AC) and then trialed (AC, JG, KS), and revised (AC) to ensure clarity and consistency of use amongst coders. Subsequently, at least two reviewers (AC, JG, KS, or TS) coded each article line-by-line and met on a bi-weekly basis to discuss areas of dispute and consensus, as well as to identify concepts to add, remove, or combine in the codebook. After a first round of coding was complete, code descriptions were drafted (AC) and circulated to the entire study team for input, at which point final analytical themes were negotiated and refined. Data were managed through QSR NVivo software (QSR International Pty Ltd, 2020).

3. Results

Our initial literature search returned 4275 records; after duplicates were removed, 2905 studies remained. Titles and abstracts were screened, and 123 articles were identified for full text screening. Ultimately, 31 articles presenting the results from 25 unique research studies were included in our meta-synthesis, summarized in Table 2. An overview of our selection process is depicted in Fig. 1. Nearly half of the studies we identified were conducted in prisons or jails in the United States (n = 15); others were carried out in prison settings in the United Kingdom (n = 7), Brazil (n = 3), France or a French overseas territory (n = 3), Canada (n = 1), Indonesia (n = 1), and Thailand (n = 1). Methodologically, a wide-range of studies met our inclusion criteria, including ethnographies (n = 6), phenomenological inquiries (n = 5), and program evaluations (n = 5); the majority of the studies we included incorporated participant interviews (n = 27) as a mode of data collection. All the studies we reviewed described their participants as "women", and we adopt that language in the analysis that follows. In total, data addressing lived experiences of incarceration and pregnancy from approximately 705 women were included in our synthesis.

The antenatal period (before childbirth), childbirth, and the postpartum period (up to 6 weeks after childbirth) were each characterized by distinctive relationships to themes of "connectedness" and "disconnectedness" summarized in Table 3. During the antenatal period participants described strong feelings of connection with their fetuses, in contrast with the ambivalent connections or disconnectedness they felt with other people who were incarcerated, from health services they sought to access, from their cultural practices, and from family and supports on the "outside". Childbirth was experienced as a sudden disruption to the connection that characterized the antenatal period: labour and birth were traumatizing for many women, exacerbated by intersecting carceral policies and clinical practices that disregarded their bodily autonomy and their role as mothers. Experiences of the postpartum period diverged and were shaped by whether women were separated from their newborn or not. Incarcerated women who were separated from their infants described experiencing immense grief and loss, while women who remained with their newborn babies in the context of a prison mother-baby unit described feelings of connectedness with their infants, but intensified disconnection and scrutiny in other aspects of their lives. Each of these phases is described in turn below.

Experiences Before Birth: Pregnant people who were incarcerated explicitly described and implicitly defined their antenatal experiences in terms of "affective connectedness" with their fetuses (Wismont, 2000). This connection was expressed in a range of ways, including the language that study participants used to describe their pregnancies; eleven of the studies we reviewed included quotes from incarcerated women while they were still pregnant referring to their fetus as "my baby" or "my child" (Wismont, 2000; Abbott, 2016; Abbott and Scott, 2018; Abbott et al., 2020a, 2021; Chambers, 2009; Ferszt and Erickson-Owens, 2008; Huang et al., 2012; Fritz and Whiteacre, 2016; Hutchinson et al., 2008; Liauw et al., 2021; Rodriguez Carey, 2019; Shelton and Gill, 1989). Studies described incarcerated women singing, talking, and reading to their fetuses (Wismont, 2000; Chambers, 2009; Abbott et al., 2021), thinking about their baby "constantly" (Hutchinson et al., 2008), or frequently returning to images taken during an ultrasound (Ferszt and Erickson-Owens, 2008). This connectedness was emotional, but participants also conceptualized this connection along physical dimensions, reflected in their expressions of concern about how in utero exposure to unsafe and unhealthy prison conditions (Abbott et al., 2020a; Huang et al., 2012; Schroeder and Bell, 2005a, 2005b; Arshad et al., 2018) might affect fetal wellbeing: "The guilt that [my baby] had to go through it with me, and having no control over the environment … your life or your pregnancy" (51). Connection with their "unborn babies" was a source of companionship, strength, and resolve for many women who were incarcerated and pregnant (Wismont, 2000; Hutchinson et al., 2008), providing a link in some participants' eyes to other children they were separated from and to their role as mothers (Chambers, 2009; Abbott and Scott, 2017). The maternal bond was an impetus for hopefulness and optimism about the future for many incarcerated women, despite the pain of being separated from their other children: "My children are what helped me, what keeps me going. If I didn't have my children, I wouldn't be thinking the way I'm thinking now. … So I have to do it for them" (67). Maintaining this connection after birth, despite challenges related to being incarcerated, was a central priority for many women who were incarcerated and pregnant (Huang et al., 2012; Rodriguez Carey, 2019).

The connection and attachment that incarcerated women felt towards their pregnancies lies in contrast with the disconnectedness that participants described in other aspects of their experience of pregnancy while incarcerated. Anticipation of being separated from their newborns after birth loomed as a dominating fear during the antenatal period. Women reported modulating their behaviour and masking their emotions as part of their efforts to "earn" their place on mother-baby units where they were available, understanding the opportunity to remain connected to their babies as contingent on remaining in the good graces of prison staff (Abbott et al., 2021; Dalenogare et al., 2022; Sufrin, 2018). For women who knew they would not have places on a mother-baby unit, determining custody arrangements and visiting plans for newborns was a consuming concern. Four studies included at least one participant who described trying to manage the emotional dimensions of impending separation after birth by seeking to distance or dissociate themselves from their pregnancies (Wismont, 2000; Hutchinson et al., 2008; Abbott et al., 2021; Williams and Schulte-Day, 2006); in one, a "mother who had another child at home cited her plans for adoption as the reason for her intentional lack of connectedness" referring to the fetus as "it" throughout her interviews (Wismont, 2000). Other sources of disconnectedness stemmed from challenges incarcerated women faced accessing healthcare, interactions with mercurial staff, feelings of ambivalence about socializing with other people who were incarcerated, and barriers to engaging in cultural and religious practices. In terms of healthcare, women experienced difficulty accessing prenatal vitamins and other medications (Liauw et al., 2021; Arshad et al., 2018; Sawasdipanich et al., 2018), challenges getting staff to take their health issues seriously (Fritz and Whiteacre, 2016; Schroeder and Bell, 2005a; Arshad et al., 2018; Suarez, 2021), and had frustratingly few opportunities to speak with healthcare providers about their pregnancy questions and concerns (Fritz and Whiteacre, 2016; Arshad et al., 2018; Sawasdipanich et al., 2018). Although positive interactions with prison staff were described in several studies (Dalenogare et al., 2022; Ogrizek et al., 2022a), officers' discretionary power to enforce rules and unpredictability in their treatment of pregnant women undermined the possibility that staff might serve as a reliable source of connection or support (Suarez, 2021; Ogrizek et al., 2022b). Relationships with other people who were incarcerated were also complicated: although some studies described pregnant women who were incarcerated finding solace, support, and connections to culture and community with other people who were incarcerated (Liauw et al., 2021; Schroeder and Bell, 2005a; Ogrizek et al., 2022a, 2022b; Rahmah et al., 2014; Thomson

Table 2
Summary of Included Articles Acronyms: mother baby unit (MBU); United States (US); United Kingdom (UK).

AUTHORS		CITATION	YEAR	LOCATION	PARTICIPANTS	CARCERAL SETTING(S)	METHODOLOGY	DATA COLLECTION
Reporting Same Dataset	Abbott	Abbott (2016)	2016	UK	1 formerly incarcerated woman	prison with MBU	ethnography/case study	semi-structured interviews, participant observation
	Abbott & Scott	Abbott and Scott (2017)	2017	UK	28 incarcerated or formerly incarcerated women	prisons	not stated	semi-structured interviews
	Abbott & Scott	Abbott and Scott (2018)	2019	UK	22 currently incarcerated women; 6 formerly incarcerated women	3 prisons: closed prison w/o MBU; closed prison w/ MBU; open prison w/MBU)	ethnography	semi-structured interviews, participant observation
	Abbott et al.	Abbott et al. (2020b)	2020	UK	22 currently incarcerated women; 6 formerly incarcerated women	3 prisons: closed prison w/o MBU; closed prison w/ MBU; open prison w/MBU)	ethnography	semi-structured interviews, participant observation
	Abbott et al.	Abbott et al. (2021)	2021	UK	13 pregnant women and 15 new mothers with experience of incarceration	3 prisons	ethnography	semi-structured interviews, participant observation
Arshad et al.		Arshad et al. (2018)	2018	UK	4 migrant women formerly held in immigration detention while pregnant	immigration detention centres	hermeneutic phenomenological approach	in-depth interviews
Braga & Angotti		Braga and Angotti (2015)	2015	Brazil	~50 detainees	10 prisons, 2 MBUs, and 2 prison nurseries	not stated	semi-structured focus groups & interviews, participant observation
do Carmo Leal et al.		do Carmo Leal et al. (2016)	2016	Brazil	241 mothers who gave birth after being imprisoned	MBUs in 24 states	census	structured interviews, review of health records and related materials
Chambers		Chambers (2009)	2009	US	12 incarcerated postpartum mothers	prison hospital	constructivist inquiry	semi-structed interviews
Clarke & Adashi		Clarke and Adashi (2011)	2011	US	1 incarcerated pregnant woman	jail	case report	not specified
Dalenogare et al.		Dalenogare et al. (2022)	2022	Brazil	7 formerly incarcerated women who were pregnant and gave birth while incarcerated	penitentiary in Southern Brazil	exploratory, grounded in theory	in-depth interviews
Deboscker et al.		Deboscker et al. (2021)	2021	French Guiana	14 women	women's ward of a prison	not stated	semi-structured interviews
Ferszt & Erickson-Owens		Ferszt and Erickson-Owens (2008)	2008	US	9 pregnant and incarcerated women	state correctional facility	program evaluation	participant observation
Fritz & Whiteacre		Fritz and Whiteacre (2016)	2016	US	27 formerly incarcerated women who gave birth while in prison	prison (before and after MBU implemented)	not stated	semi-structured interviews
Huang, Atlas & Parvez		Huang et al. (2012)	2012	US	20 pregnant and incarcerated women	municipal jail	grounded theory	semi-structured interviews
Hutchinson et al.		Hutchinson et al. (2008)	2008	US	21 pregnant incarcerated women; 4 incarcerated women who gave birth while in prison	state correctional facility	mixed methods, phenomenology	semi-structured interviews
Kwarteng-Amaning et al.		Kwarteng-Amaning et al. (2019)	2019	US	41 past program participants	out-of-prison nursery program	exploratory, descriptive	surveys
Liauw et al.		Liauw et al. (2021)	2021	Canada	21 women of reproductive age	provincial prison	factist	semi-structured focus groups
Reporting Same Dataset	Ogrizek et al.	Ogrizek et al. (2022b)	2022A	France	25 mothers and 5 pregnant women incarcerated in French prisons	13 prisons with an MBU	phenomenology	semi-structured interviews
	Ogrizek et al.	Ogrizek et al. (2022a)	2022B	France	25 mothers and 5 pregnant women incarcerated in French prisons	13 prisons with an MBU	phenomenology	semi-structured interviews
Rahmah et al.		Rahmah et al. (2014)	2014	Indonesia	69 incarcerated women	6 prisons, 1 detention centre	grounded theory	observation, focus groups, in-depth interviews, semi-

(*continued on next page*)

Table 2 (*continued*)

AUTHORS	CITATION	YEAR	LOCATION	PARTICIPANTS	CARCERAL SETTING(S)	METHODOLOGY	DATA COLLECTION
							structured questionnaire
Rodriguez-Carey	Rodriguez Carey (2019)	2019	US	35 women who were once pregnant and incarcerated in prisons	prisons in the US	grounded theory	in-depth interviews
Sawasdipanich et al.	Sawasdipanich et al. (2018)	2018	Thailand	30 incarcerated mothers; 30 incarcerated pregnant women	prisons in Thailand	quality improvement project	questionnaires, focus groups, in-depth interviews, public hearings
Reporting Same Dataset Schroeder & Bell	Schroeder and Bell (2005a)	2005A	US	14 program participants	urban jail	program evaluation	in-depth interviews, fieldnotes, satisfaction surveys
Schroeder & Bell	Schroeder and Bell (2005b)	2005B	US	14 program participants	urban jail	program evaluation	in-depth interviews, fieldnotes, satisfaction surveys
Shelton & Gill	Shelton and Gill (1989)	1989	US	26 incarcerated women in their last trimester of pregnancy	2 correctional centres	modified ethnography	semi-structured interviews
Suarez	Suarez (2021)	2021	US	18 pregnant or postpartum incarcerated women	maximum-security state prison	not stated	in-depth interviews
Sufrin	Sufrin (2018)	2018	US	unspecified number of incarcerated women	women's jail	ethnography	observation, semi-structure interviews
Thomson	Thomson et al. (2022)	2022	UK	3 pregnant and 1 postpartum incarcerated women	2 all-female closed prisons	exploratory program evaluation	observation, semi-structured interviews, feedback forms
Williams & Schulte-Day	Williams and Schulte-Day (2006)	2006	US	120 women who had recently given birth while incarcerated	state prison	exploratory research design	structured interviews, inventory
Wismont	Wismont (2000)	2000	US	12 pregnant incarcerated women	state prison	phenomenology	journal entries, semi-structured interviews

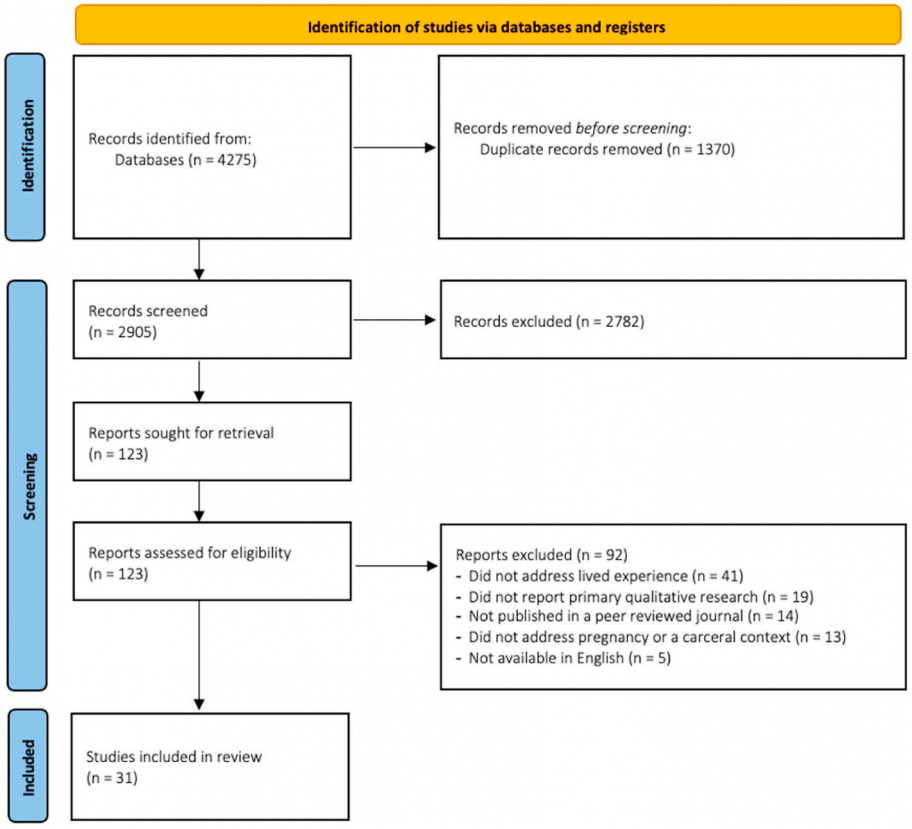

Fig. 1. Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) flow diagram describing selection process.

Table 3
Summary of key synthesis findings regarding the lived experience of incarceration and pregnancy.

	Key Themes	
Before Birth	*Connection* •Connection with pregnancy expressed through singing, talking and reading, looking at ultrasounds, and thinking about baby; •Concerns around connection causing harm to pregnancy through in-utero exposure to prison environment; •Connection to pregnancy and other children as an impetus for hopefulness about the future; •Adhering to behavioural expectations as necessary to be allowed maintain connection after birth. *Disconnection* •Disconnection because of anticipated separation after birth as a dominating fear; •Purposeful disconnection from pregnancy as a coping strategy; •Disconnection from healthcare providers as source of frustration and stress, compounded by unpredictability of staff; •Variable accounts of dis/connection to other incarcerated people – both stigma and support; •Disconnection from community and family members as disrupting connection to culture.	
During Birth	*Rupture* •Birth as a period of abrupt transition forcing confrontation with reality of how incarceration circumscribes plans for parenting; •(Re)-traumatization related to past experiences of violence, stigmatization related to being marked as a "prisoner" •Labouring conditions as dehumanizing and degrading, shaped by medical and carceral policies that disregard autonomy	
After Birth	***Enforced separation***	***Allowed to co-habit***
	Connection •Breastfeeding as a strategy for maintaining connection with newborn, and hopefulness for the future.	*Connection* •Connection with newborn maintained, but heavily surveilled and perceived as contingent on continued adherence to behavioural norms.
	Disconnection •Disconnection experienced as agonizing loss; •Distractions sought in the face of reminders of disconnection and grief.	*Disconnection* •Variable accounts of dis/connection to other incarcerated people and prison life – contingent on organization of facilities

et al., 2022), others described participants' mistrust or experiences of being stigmatized or shamed for being pregnant in prison (Ferszt and Erickson-Owens, 2008; Hutchinson et al., 2008; Rodriguez Carey, 2019). Finally, incarceration served to disconnect pregnant people from their communities, "disrupt [ing] family transmission of cultural beliefs" and practices, and keeping incarcerated women from engaging in deeply meaningful traditions (Ogrizek et al., 2022b).

Experiences During Childbirth: Childbirth and the period directly thereafter were experienced as a markedly "violent" (Abbott et al., 2021) and "traumatic" (Fritz and Whiteacre, 2016) rupture in the connectedness most incarcerated women described during pregnancy. Childbirth represented an abrupt "transition point from a time of happiness to a time of sadness" for women who faced painful realities about how their incarceration would circumscribe their plans and goals for parenthood regardless of whether they were to remain with their babies or not (Chambers, 2009). It also produced multiple instances of distress and re-traumatization related to past experiences of sexual violence or victimization (Schroeder and Bell, 2005b; Abbott and Scott, 2017; Dalenogare et al., 2022). Participants' experiences of childbirth and the hours that followed were recounted in visceral, emotional terms: "Susan was sobbing in a corner outside of the new-born intensive care unit (NICU); she wanted to 'just go back to the NICU's doorway [to be closer to her new-born].'" (61). The trauma of imminent separation engendered by these experiences was heightened by the "degrading" and "dehumaniz [ing]" conditions in which many incarcerated women described labour and delivery (Dalenogare et al., 2022; Leal et al., 2016). Being marked as a "prisoner" on the labour and delivery ward by virtue of the use of restraints or the presence of correctional staff, created feelings of deep shame and stigma that made some women feel "less than human" (60): recounting her experience going to hospital accompanied by correctional officers, one participant recalled, "I carry big babies and was ready to drop; I was in handcuffs, the most degraded I have ever felt" (51). Dehumanizing behaviour from correctional staff exacerbated these feelings for some participants, who described being ignored and mocked while they laboured (Suarez, 2021). Even women who reported neutral or positive feelings about their births interpreted their experiences through a lens of how badly they feared they could have been treated:

> "I wasn't treated differently at the hospital. I was grateful, really, for the nurses and the doctors that I had. Even the officers were telling me, "Thank God you have these nurses that are so kind," because they'd been there other times with other pregnant women. And I guess other women had been treated really unfair." (Clarke and Adashi, 2011)

Carceral policies and clinical practices both served to structure experiences in which labouring women had very little control over their bodies, birth, or babies. Five studies we analyzed included accounts of women labouring in shackles because of guards' refusal to remove their restraints (Fritz and Whiteacre, 2016; Schroeder and Bell, 2005a; Dalenogare et al., 2022; Abbott et al., 2020b; do Carmo Leal et al., 2016); one study described a participant's experience giving birth in their cell after prison clinical staff disregarded her repeated appeals that she needed attention from a midwife (Abbott et al., 2020b). Other studies described instances where prison policies contributed to delays in receiving clinical care (Wismont, 2000; Fritz and Whiteacre, 2016; Arshad et al., 2018; Clarke and Adashi, 2011) or obstructed or prohibited support from a birthing companion (Abbott, 2016; Fritz and Whiteacre, 2016; Shelton and Gill, 1989; do Carmo Leal et al., 2016). One participant described being scheduled and transported to hospital to give birth without knowing what was about to happen: "Since I had a C-section, they had already planned when I was going to go in. They don't tell you when, just so you can't tell people on the outside, and they were like "well you are going to the doctor." Right. It's like a big surprise." (57) Experiences of common clinical practices served to further erode labouring women's sense of autonomy and agency in making decisions: "I felt like a guinea pig, all those students and male student doctors. It was like all the time it was someone, knock, knock, knock, you know, 'I'm the whoever, here to do whatever.' Every doctor that came in had 2 to 3 students with him" (Schroeder and Bell, 2005a).

Experiences After Birth: In the studies we synthesized, incarcerated women's postpartum experiences hinged on whether they would remain with their infants, either by being released shortly after giving birth, or being incarcerated at an institution with a prison nursery or a mother baby unit. Women who were separated from their babies described the experience as harrowing, emphasizing the grief (Wismont, 2000; Chambers, 2009; Ferszt and Erickson-Owens, 2008; Hutchinson et al., 2008; Abbott et al., 2021; Schroeder and Bell, 2005a, 2005b), rage (Wismont, 2000; Rodriguez Carey, 2019; Shelton and Gill, 1989; Abbott and Scott, 2017; Sufrin, 2018), emptiness (Wismont, 2000; Chambers, 2009; Schroeder and Bell, 2005a, 2005b), and loneliness (Wismont, 2000; Chambers, 2009; Hutchinson et al., 2008) they felt. No amount of preparation was sufficient to soften the blow, or to mitigate the distress (Fritz and Whiteacre, 2016; Abbott et al., 2021). In the days and weeks after birth, both lactation and the process of physically recovering after labour served as painful reminders of the loss of the connection with their infants (Abbott et al., 2020a; Fritz and Whiteacre, 2016; Schroeder and Bell, 2005a, 2005b; Abbott and Scott, 2017). To cope, incarcerated mothers sought what distractions were available to them:

> "After returning to prison Florence said that she felt anxious and needed either to keep busy constantly or go to sleep. She did not want to think about anything and kept herself involved in everything

except what was bothering her. She thought that if she could get through the first month, then she would deal with the pain of mother-infant separation. Florence initially said she did not like to talk about her infant. She then amended that statement. 'I like to talk about her. I don't like to talk about her not being around'" (Shelton and Gill, 1989).

Some mothers who were incarcerated without their babies endeavoured to breastfeed by pumping breastmilk and giving it to their child's caretaker in community for feeding. For many, breastfeeding was thwarted by a lack of privacy in the prison setting, mistrust of the prison environment and breastmilk storage system, and logistical challenges for caregivers on the outside (Huang et al., 2012; Fritz and Whiteacre, 2016; Abbott and Scott, 2017). Choosing to breastfeed despite these obstacles was framed by some breastfeeding incarcerated women as an "act of motherhood", a means of maintaining their connection with their babies, and broader evidence of the new paths they wanted to forge in their lives: "being pregnant and planning to breastfeed represented the hope that they would return home and have the opportunity to carry out their maternal duties" (Huang et al., 2012).

Incarcerated mothers who returned to prison, from hospital, with their infants, described their experiences in varied, but still ambivalent terms. The experience of being incarcerated with a newborn was described differently across the studies we synthesized, reflecting the diverse approaches to implementing mother-baby units around the world. Women in one American study seeking to evaluate a new mother-baby unit where mothers and infants co-habited, and had access to parenting lessons, childcare, and emotional supports, felt it was "successful and helpful" (Fritz and Whiteacre, 2016). By contrast, participants in a multi-prison Brazilian study where mothers and infants also co-habited but had access to fewer resources, lamented the disconnection they felt from other aspects of life in prison: "Removal from daily prison life generates not only isolation and feelings of solitude, but also the end of work activities, of the possibility of a remission of their sentence and of continuing with schooling" (Braga and Angotti, 2015). Participants in a study in Indonesia, where new mothers and babies remain with the general prison population after childbirth, expressed gratitude for informal support networks organized by other incarcerated women, who provided assistance with childcare and other tasks (Rahmah et al., 2014). Cutting across the studies we synthesized were women's perceptions of their parenting as heavily surveilled and scrutinized, and subject to disciplinary action should they be deemed to be in contravention of their prisons' exacting rules (Abbott et al., 2021; Dalenogare et al., 2022; Sufrin, 2018; Ogrizek et al., 2022a, 2022b): "Any little thing that happens, they say that you're going to have to give up your child. We live under constant pressure" (Braga and Angotti, 2015). This intense scrutiny worked to amplify feelings of cultural disconnection described by participants in one French study, which forced them to forgo or adapt their traditional practices to conform with prison rules predicated on the norms of the dominant culture (Ogrizek et al., 2022a).

4. Discussion

This qualitative meta-synthesis identified connection and disconnection as core features of the lived experience of people who navigated pregnancy and incarceration at the same time. Across the studies we synthesized, participants found ways to preserve or to manage feelings of connectedness to their pregnancies, to their newborns, and to their other children in the face of enforced separation; they simultaneously navigated social and structural disconnectedness that characterized the prison environment and separated them from services and other sources of support.

The findings of our synthesis resonate with other accounts (Roth et al., 2017; Hayes et al., 2020; Hayes and Gomez, 2022; Messing et al., 2020) of mass incarceration as fundamentally irreconcilable with the encompassing vision of self-determination advanced by the reproductive justice movement. Our focus on lived experiences helps to vivify conditions described in previous theoretical writings and underscores the emotional toll of navigating incarceration while pregnant; it also highlights the strategies pregnant people used to maintain or manage their connectedness with their pregnancy and with their culture in the face of carceral oppression. Our abolitionist frame underscores how carceral policies and practices alienate people who are incarcerated from the conditions, and constitutive rights, of reproductive justice; it also frames the act of strategizing around connectedness as practice of self-determination and resistance in the face of the carceral state. In what follows, we consider our findings in the context of literature examining three related conditions of reproductive justice – rights in pregnancy, rights as parents, and rights in managing reproduction.

Rights in Pregnancy: Conditions of reproductive justice in pregnancy include physical and environmental safety, access to safe, respectful, clinically appropriate care in pregnancy and labour, and bodily autonomy and the right to freely decide between pregnancy and birthing options free from coercion (Solinger, 2007). None of the conditions of reproductive justice in pregnancy were routinely met in the studies we analyzed: in both social and environmental terms, carceral settings were perceived by women who were incarcerated as unsafe and unhealthy places to be pregnant; women faced stigma and barriers while connecting with care and with service providers in and out of carceral institutions; they had limited or no control over the conditions in which they laboured; and hospital and prison policies and staff contributed to shaping birth experiences that were experienced as distressing, degrading, and disenfranchising.

These lived experiences contrast with findings from some carceral health researchers who have described salutary impacts of incarceration and carceral environments for people who are pregnant (Knight and Plugge, 2005; Cordero et al., 1992; Egley et al., 1992; Martin et al., 1997). Even studies we synthesized that included participants who described positive aspects of incarceration – for example, as the impetus for pursuing a "clean start" going forward – described the mental and physical tolls of carceral institutions and (anticipated) separation from newborns in overwhelmingly negative terms. Our findings about the challenges incarcerated women faced accessing health and social services also trouble narratives about carceral settings as one of ever fewer sites in which services might be accessed without a waitlist or private payment: although six of the studies we included evaluated specific programs for incarcerated pregnant women, participants still described their broader needs for health and social services as largely unmet.

Rights as Parents: Conditions of reproductive justice in parenting centre around the freedom to choose to parent, enabled by safe and supportive social, political, economic and environmental conditions that allow that choice to be freely made (Solinger, 2007). Our analysis resonates with accounts of "mass incarceration as explicitly undermining the values of reproductive justice" (Brinkley-Rubinstein and Cloud, 2020) related to parenting in several converging ways. In our analysis, most women who were incarcerated while they were pregnant had other children; being incarcerated meant that they were separated from these children and faced a wide range of barriers to maintaining parental contact and connection. This disconnectedness created deeply felt emotional distress for women that we saw across all the papers we analyzed. This distress anticipated and fueled the feelings of anxiety and dread about childbirth that many pregnant women described. In the absence of a spot in a mother-baby unit, childbirth was shortly followed by separation, often with an unclear end-date or understanding of when or whether connectedness would resume. For women who remained with their newborns, connectedness was a subject of stress and fear as well, in view of correctional policies that closely governed their parenting behaviour, and threatened separation if exacting standards were not met. These findings reflect, and add further nuance to, research literature describing the detrimental effects experience can have on attachment between children and their parents experiencing

incarceration (Shlafer and Poehlmann, 2010; Byrne et al., 2010; Enos, 2001).

Beyond the immediate scope of time spent in carceral institutions, and therefore of this synthesis, criminalization and incarceration also threaten conditions of reproductive justice related to parenting. For example, between 2006 and 2016, an estimated 5000 parents in the United States had their parental rights terminated related to their incarceration (Hager and Flagg, 2018); in Canada, it is the policy of the federal Border Services Agency to either detain child migrants with their criminalized parents, thereby breaching the United Nations Convention on the Rights of the Child (Human Rights Watch and University of Toronto's International Human Rights Program, 2020), or to separate children from their family members, placing them into the custody of other relatives or of child protection services (Gros and Song, 2016). Even when incarceration does not directly threaten custody, it also threatens conditions of reproductive justice related to parenting by impeding formerly incarcerated people from obtaining and keeping employment: for example, in the United States, where more than 27% of formerly incarcerated people are unemployed, people with a criminal record face stigma and discrimination from employers (Couloute and Kopf, 2018) and statutory bans on employment in many sectors of the labour market. These barriers to economic security work to preclude people who have been incarcerated from being able to freely choose whether or not to parent.

Rights in Managing Reproduction: Conditions of reproductive justice related to managing reproduction include the choice whether or not to become and to stay pregnant; they also encompass access to safe, respectful, and accurate sexual and reproductive health information and services. None of the studies we synthesized centred the lived experiences of incarcerated people whose pregnancies ended in termination, and our analysis therefore does not extend to understanding how this dimension of reproductive justice is shaped by incarceration. Access to postpartum birth control, however, was a focus or a recommendation across several of the studies we examined, raising questions beyond the scope of this inquiry about how the carceral environment works to shape and structure how incarcerated people make decisions about both temporary and permanent forms of birth control. As described elsewhere, "sub-legal restraints and pressures" play an important role in shaping reproductive and sexual health decision-making in and out of carceral institutions (Ahrens, 2015) where policies and practices, and stigmatizing norms and ideologies related to reproductive control are pervasive (Winters and McLaughlin, 2019). Well-publicized cases of coerced sterilization in the California prison system between 2006 and 2010 (Johnson, 2013) represent a vivid contemporary permutation of sterilization abuse that has an enduring history in and adjacent to carceral institutions in the United States (Winters and McLaughlin, 2019; Roth and Ainsworth, 2015) and Canada (Marques et al., 2020). While accessible reproductive and sexual health services, including birth control, are core conditions of reproductive justice, the lived experience of accessing and receiving this care cannot be either tacitly or explicitly coercive for these conditions to be met.

Lived Experience and Professional Positionality: Although our study is rooted in an understanding that lived experiences of people navigating carceral spaces while they are pregnant must be centred in related carceral health research, the positionality of researchers (both the members of the study team responsible for this analysis, and the authors of the articles we analyzed) is worthy of consideration as well. None of the studies we analyzed included authors who were explicitly identified as having lived experienced of incarceration; most of the studies (n = 24) included at least one author with an academic appointment to a school of nursing, midwifery, or public health, or with a professional degree associated with a health profession. Professional interests that might attend those professional affiliations could be seen as reflected in many of the ways that authors framed and constructed their research questions, carried out inquiry, analyzed their findings, and in the meanings and recommendations they emphasized to readers. Indeed, while making suggestions to redress the inhumane conditions, dehumanizing treatment, and barriers to care that their studies identified, many of the authors of articles we synthesized identified programming that would embed or expand health services – led by members of their own professions – within carceral settings.

This is consistent with the reformist impulse observed in much of health research related to incarceration that serves, at once, to legitimize and normalize incarceration as an inevitable reality through even well intentioned processes of mitigating its specific harms (Paynter et al., 2022). Recommendations to reform carceral conditions – to improve access to services or better the conditions in which incarcerated people can labour – are motivated by a desire to redress health inequities and human rights violations; they also largely work without dismantling the carceral state, and consequently without advancing the vision of empowered, embodied freedom that unites movements for reproductive justice and abolition. Abolitionist reforms, also called non-reformist or transformative reforms, gesture towards one way to thread this needle, rooted in a commitment to policies that ultimately work to "unravel rather than widen the net of social control through criminalization" (Gilmore, 2007). Decarceration strategies, or "abolition by attrition" (Knopp, 1976), seek to depopulate carceral institutions by releasing or diverting people from prisons and jails, and instead "shift [ing] resources from punishment to education, housing, health care, and other public resources and services" (Davis and Rodriguez, 2000). In the context of the COVID-19 pandemic, depopulating carceral settings was recognized as an important strategy for mitigating viral transmission given the high proportion of incarcerated people who are "medically vulnerable" and overcrowding conditions in carceral settings that make other efforts to halt infection and illness difficult, nigh impossible (National Academies of Sciences E et al., 2020). This example speaks to the strategic value that arguments about health, from healthcare providers, can have in advancing abolitionist ends. Advocacy framing depopulation and decarceration as necessary for "health promotion" offers one path forward for policymakers and practitioners wishing to work to address conditions of reproductive injustice reflected in the lived experiences of people who are incarcerated while they are pregnant.

Limitations: The limitations of this account of the lived experience of navigating prison and pregnancy relate, on one hand, to the studies that formed our dataset and, on the other, to the broader methodological conceits underpinning this work. The studies we included in our synthesis were in English only and a plurality examined US prisons; as such, our findings reflect the norms and policies of US carceral contexts. In the context of pregnancy, this is especially important to note, as mother-baby units are less common in the US than elsewhere in the world (Carlson, 2018) and rates of maternal mortality are higher than in comparable high-income countries (Douthard et al., 2020). As well, these studies disproportionately focused on the experiences of people who were incarcerated in prisons, in contrast with more transitory forms of incarceration such as jails or police lockups. Given that women are disproportionately incarcerated in local jails (Kajstura, 2019), and that jails are generally less resourced than longer-stay carceral institutions, concern is warranted that pregnant people incarcerated in jails may experience even greater disconnectedness from services and supports than what has been described in this synthesis. Moreover, the specific experiences and health concerns of pregnant people who are incarcerated in juvenile detention centres or immigration detention facilities are also absent or underrepresented in this work. Additionally, the studies we identified did not address the experiences of people who were incarcerated who contended with pregnancy loss or decided to terminate their pregnancies; given that 10–20% of birthing people are estimated to experience pregnancy loss in their lifetime (Kuehn, 2021; Dissanayake et al., 2020), and that challenges gaining access to abortion are particularly heightened for incarcerated people (Sufrin et al., 2021), the absence of these experiences in our analysis represent a noteworthy gaps. Finally, although many articles we analyzed included demographic data or were framed with reference to the disproportionate

rates of incarceration that racialized women experience, few of the articles explicitly addressed racism as a part of their analyses, highlighting a final, critical limitation of the data that informed this work.

From a methodological perspective, we wish to highlight that during critical appraisal, our reviewers determined that most of the studies we identified did not adequately address how the carceral context of the research shaped the relationship between researchers and participants (n = 18). As well, in almost two thirds of the studies (n = 20), issues related to the context of the research were either not described in sufficient detail to assess whether ethical standards were maintained, or not addressed at all. In part, these results can be explained by the specific power dynamics and attendant ethical considerations that structure research in carceral contexts; in appraising articles, members of our team found that few studies described procedures in enough depth to evaluate.

Finally, another limitation of this synthesis stems from its very conceit: despite our commitment to centering and amplifying the lived experiences of people who navigated incarceration in their pregnancies, by undertaking a synthesis of previously published studies, our article, in some ways, quiets the voices of people who are incarcerated by filtering their experiences through our own analytical frame. Moreover, none of the members of our team had lived experience of incarceration. This limitation resonates with critiques of the value and power accorded to synthesis and review methodologies within hierarchies of evidence in the health sciences and beyond (Suri, 2013; Goldenberg, 2006; Mykhalovskiy and Weir, 2004). It is imperative for future inquiries addressing experiences of incarceration and pregnancy to centre people with lived experience through all stages of the research process, from formulating questions, to designing ways to answer them, to analyzing data and making recommendations on their basis.

5. Conclusion

Wherever there are prisons, conditions of reproductive injustice flourish. This synthesis has added to literature characterizing health inequities affecting people who are pregnant and incarcerated by bringing together studies describing their lived experiences. Using reproductive justice as an analytical frame, we identified connectedness and disconnectedness as twinned themes that characterized the felt experience of navigating pregnancy in carceral institutions. To realize the promise of reproductive justice for all, the experiences and needs of people who are incarcerated must be uplifted and work towards the abolition of prisons must continue.

Authorship Statement

TS and AC conceptualized the study with support from JL, MV and FK; AC, TS, and KS developed and implemented the search strategy that constituted data collection; AC led analysis with KS and JG, and input from TS, JL, MV and FK; AC authored the original draft of the manuscript; all the authors contributed substantively during a process of edit and review.

Data availability

No data was used for the research described in the article.

Appendix 1. Detailed Overview of Literature Terms

Database	Terms
Medline	1 childbirth.ti,ab,kf.
Embase	2 birth*.ti,ab,kf.
PsychInfo	3 (prenatal or antenatal).ti,ab,kf.
	4 (post-deliver* or post-natal or postnatal).ti,ab,kf.
	5 childbearing.ti,ab,kf.
	6 reproductive.ti,ab,kf
	7 exp Pregnancy/
	8 exp Obstetrics/
	9 exp Prisons/
	10 detaine*.ti,ab,kf.
	11 jail*.ti,ab,kf.
	12 imprison*.ti,ab,kf.
	13 (incarcera* not hernia).ti,ab,kf.
	14 carceral.ti,ab,kf.
	15 prison*.ti,ab,kf.
	16 inmate*.ti,ab,kf.
	17 correctional.ti,ab,kf.
	18 penitentia*.ti,ab,kf
	19 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8
	20 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18
	19 AND 20
CINAHL	1 AB childbirth
	2 AB birth
	3 AB "(prenatal or antenatal)"
	4 AB (post-deliver* or post-natal or postnatal)
	5 AB childbearing
	6 AB "reproductive"
	7 MH Pregnancy
	8 MH Obstetrics
	9 S1 OR S2 OR S3 OR S4 OR S5 OR S6 OR S7 OR S8
	10 (MH "Correctional Facilities") OR (MH "Correctional Health Services")
	11 (MH "Prisoners")
	12 AB jail*
	13 AB detaine*
	14 AB imprison*
	15 AB (incarcera* not hernia)
	16 AB carceral

(continued on next page)

(*continued*)

Database	Terms
	17 AB prison*
	18 AB inmate*
	19 AB correctional
	20 AB penitentia*
	21 S10 OR S11 OR S12 OR S13 OR S14 OR S15 OR S16 OR S17 OR S18 OR S19 OR S20
	S9 AND S21
Sociological Abstracts	(TI (detaine* OR jail* OR imprison* OR incarcera* OR prison* OR carceral OR prisoners OR inmate* OR correctional OR penitentia*) OR AB (detaine* OR jail* OR imprison* OR incarcera* OR prison* OR carceral OR prisoners OR inmate* OR correctional OR penitentia*)) AND (TI (childbirth OR birth* OR prenatal care OR obstetric* OR pregnan* OR post-natal OR post-delivery OR antenatal OR childbearing OR reproductive) OR AB (childbirth OR birth* OR prenatal care OR obstetric* OR pregnan* OR post-natal OR post-delivery OR antenatal OR childbearing OR reproductive))
Social Science	(AB (Childbirth OR Birth* OR Prenatal care OR obstetric* OR pregnan* OR post-natal OR post-deliver* OR antenatal OR childbearing OR reproductive) AND AB (detaine* OR Jail* OR Imprison* OR incarcera* OR Prison* OR carceral OR inmate* OR correctional OR penitentia*)) OR (TI (Childbirth OR Birth* OR Prenatal care OR obstetric* OR pregnan* OR post-natal OR post-deliver* OR antenatal OR childbearing OR reproductive) AND TI (detaine* OR Jail* OR Imprison* OR incarcera* OR Prison* OR carceral OR inmate* OR correctional OR penitentia*))

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