BMC Pregnancy and Childbirth

RESEARCH

Open Access

Precarious perinatal care: experiences of incarcerated individuals in Ontario, Canada

Xaand Bancroft[1*], Amy McGee[2], Audrey Ferron Parayre[3], Lisa Morgan[1] and Wendy E. Peterson[4]

Abstract

Background Incarcerated pregnant individuals face substantial barriers to timely and appropriate perinatal care, which may contribute to poorer maternal and newborn health outcomes compared to the general population. Their experiences, both during incarceration and post-release, offer critical insight into systemic obstacles affecting access to care. This study explores the perspectives of individuals who were pregnant while incarcerated in Ontario, Canada, examining their perinatal experiences and the factors contributing to adverse health outcomes for them and their newborns.

Methods We undertook a qualitative study employing a descriptive design. We conducted virtual, semi-structured interviews with individuals who previously experienced incarceration while pregnant. Participants were recruited through purposeful and snowball sampling, and were eligible to participate if they had experienced incarceration in Ontario, Canada while pregnant. We conducted individual interviews to ensure confidentiality and encourage open discussions. We used thematic analysis to guide our identification and development of themes and subthemes.

Results Eight participants were interviewed. *Precarious perinatal care* was identified as an overarching theme, encapsulating the instability and systemic challenges of perinatal care in carceral settings. Five main themes were identified: *Carceral constraints to health and social supports*, *Mistreatment*, *Crystallization of pregnancy*, *(Im)personal care of pregnancy*, and *Parenting from the inside out*. Participants described how power dynamics within carceral facilities affected access to perinatal care, expressed concerns about their own and their child's health, and shared fears about reintegration post-release.

Conclusion Participants described their perinatal experiences during incarceration, providing insight into the systemic and multifaceted barriers they encountered. This study enhances understanding of the complexities surrounding perinatal care access, illustrating how administrative processes and power dynamics within carceral facilities limit timely and appropriate care. These findings can inform the development of policies, procedures, and transitional resources during incarceration and post-release. Such interventions may improve perinatal experiences and contribute to better health outcomes for incarcerated pregnant individuals and their infants. Future research should explore perinatal care from the perspective of correctional officers working with incarcerated pregnant individuals. Additionally, examining policies governing carceral health and social service provision would help inform evidence-based reforms and improve care delivery.

*Correspondence:
Xaand Bancroft
xbanc048@uottawa.ca

Full list of author information is available at the end of the article

Keywords Health services for prisoners, Incarceration, Perinatal care, Pregnancy, Healthcare, Ontario, Human rights, Policy, Women prisoners

Background

Although Canada's universal healthcare system and publicly funded perinatal services generally support safe pregnancies and childbirth, inequities in outcomes persist, particularly among structurally marginalized populations. Miao et al. conducted a large population-based study comparing perinatal outcomes between Black and White individuals in Ontario [1]. Their findings indicate Black pregnant individuals face significantly higher risks of adverse perinatal outcomes compared to White pregnant individuals. For instance, the risk of preterm birth (< 37 weeks) is 41% higher among Black pregnant individuals (adjusted relative risk 1.41, 95% CI 1.37–1.44) and their stillbirth rates are disproportionately higher than those of their White counterparts (0.83% vs. 0.37%, $P < 0.0001$) [1]. In a scoping review of Indigenous maternal health and health services in Canada, Bacciaglia et al. describe how Indigenous communities continue to experience elevated rates of adverse birth outcomes and infant mortality compared to non-Indigenous populations [2]. These disparities are attributed to the ongoing effects of colonization, including mechanisms such as the Indian Act, which disrupt the transmission of traditional knowledge and practices related to pregnancy, birth, and maternal and child health [2].

Carter-Ramirez et al. conducted retrospective cohort studies using ten years of Ontario health administrative data to compare pregnancies between individuals incarcerated during pregnancy or prior to pregnancy with those in the general population [3, 4]. Their findings show individuals incarcerated during pregnancy faced significantly higher odds of preterm birth (odds ratio [OR] = 2.7, 95% CI = 2.2–3.4), low birth weight (OR = 3.1, 95% CI = 2.4–3.9), and other adverse perinatal outcomes compared to the general population [3]. Incarceration was also associated with reduced access to antenatal care. Among those incarcerated during pregnancy, the odds of attending a first-trimester appointment (OR, 0.11, 95% CI, 0.09–0.13), receiving eight or more antenatal visits (OR, 0.16, 95% CI, 0.14–0.19), or undergoing a first trimester ultrasound (OR, 0.43, 95% CI, 0.36–0.50) were lower when compared to the general population [4]. These risks are likely influenced by the complex life circumstances associated with incarceration [3].

These antenatal care findings intersect with other risk factors, including higher rates of substance use during pregnancy among individuals exposed to incarceration [5]. Testa, et al. found women who experienced incarceration, either personally or vicariously through a partner, during pregnancy had higher odds of opioid use compared to women with no carceral exposure (OR = 1.746, 95% CI = 1.161, 2.626) [5]. Non-prescribed opioid use, in particular, is associated with neonatal abstinence syndrome (NAS), infant mortality, and increased NICU admissions [6, 7]. Unstable substance use disorders, characterised by frequent relapses or poor adherence to treatment plans, are also associated with delayed prenatal care, incomplete clinical assessments, and a greater risk of child welfare apprehension [8]. Additional research has underscored the limited availability of reproductive care and unmet health needs among incarcerated women, pointing to systemic deficiencies in provincial institutions [9]. These structural inequities help explain the persistently poor maternal and neonatal outcomes experienced by this population.

Although there is a growing interest in carceral perinatal care, the body of Canadian literature exploring the lived experiences of incarcerated pregnant individuals remains limited, particularly when compared to countries with similar carceral systems [10]. Ethical constraints, institutional restrictions, and the logistical challenges of conducting research in custodial settings present significant barriers to engagement. Even when participation is permitted, individuals may withhold information due to fears of confidentially breaches, coercion, or reprisal [11, 12], further narrowing the scope of available narratives. Without direct accounts, efforts to improve care risk overlooking the complex realities of pregnancy in correctional settings.

Narratives from formerly incarcerated individuals who experienced pregnancy offer vital insight into the consequences of these systemic gaps. Their accounts reveal how institutional processes and power dynamics influence access to care. This study explores the perinatal experiences of individuals incarcerated in Ontario, Canada during pregnancy, with particular attention to structural and procedural barriers undermining timely, appropriate, and dignified care.

Terminology

This article uses gender-inclusive terminology, acknowledging pregnancy is not limited to individuals who identify as women; however, the term "women" is utilized when referring to published data using this language. This article does not examine social, and healthcare services provided to transgender individuals within incarcerated settings. As it pertains to participants, the pronoun "she" is used when they self-identified as women and "they" is used when the participant self-identified as non-binary.

Methods

Positionality statement

Incarceration during pregnancy is an ethically complex topic which brings forth discussions about bodily autonomy, reproductive rights, and motherhood. Given the sensitive and traumatic nature of this topic, as researchers, we must reflect on our positionality. Our research team is comprised of a diverse group of professional and academic women. XB is a Black woman pursuing her PhD. She has experience participating in various advocacy and prevention of sexual violence committees. She also has extensive experience in policy analysis. AM and LM are midwives with experience providing care to incarcerated pregnant individuals, while AFP is a law professor whose research focuses on informed consent and reproductive health. WP is a registered nurse whose research centres on maternal-newborn health and the healthcare experiences of pregnant and postpartum individuals from marginalised communities. Although none of our team members have experienced incarceration during pregnancy or otherwise, most are mothers. Informed by our professional engagement with perinatal care and carceral systems, our team members view incarceration during pregnancy as a barrier to both continuity and equity of care. We believe perinatal care provision should be individualised and meet the highest standards of evidence-based care. Our positionality shaped our approach to exploring the lived experiences of individuals who were incarcerated while pregnant.

Study design

We used a qualitative descriptive design as it prioritizes participants' direct accounts with minimal interpretation. This method captures the nuanced realities of a marginalized population in a clear, accessible way. It supports practical, actionable findings grounded in lived experience [13]. This qualitative research is part of a larger case study project exploring care delivery to pregnant individuals incarcerated in Ontario, Canada.

Participant recruitment

Participants were recruited using purposeful and snowball sampling strategies. The principal investigator (XB) used emails to contact law offices, community organizations, health and social service provider organizations, and individuals in her professional network. Some law offices and members of XB's network shared recruitment information with potential participants. XB also posted recruitment notices on social media. One community-based midwifery practice provided recruitment support by sharing information about the study with potential participants. Participant recruitment continued until the data set was considered sufficient to provide meaningful insight contributing to answering the research question [14, 15].

Eligibility criteria

Eligibility included having been formerly incarcerated in Ontario, Canada, while pregnant between January 2012 and July 2024. Participants could have been held in federal or provincial facilities, with no restrictions on facility type (e.g., jail, prison, correctional centre, treatment centre) or duration of incarceration. Individuals were eligible if they were at least 18 years old, fluent in spoken English or French, and no longer incarcerated at the time of the interview.

Interview guide

The interview guide was developed based on the American College of Obstetricians and Gynecologists' Reproductive Health Care for Incarcerated Pregnant, Postpartum, and Nonpregnant Individuals [16], the Guidelines for the Implementation of Mother-Child Units in Canadian Correctional Facilities [17] and the Quality of Care for Maternal and Newborn Health: A Monitoring Framework for Network Countries [18]. The authors selected these documents for their relevance, providing guidelines on healthcare for incarcerated pregnant individuals, best practices for mother-infant support in correctional settings, and frameworks for monitoring maternal and newborn health. Prior to data collection, XB piloted the interview guide with a researcher specializing in the lived experiences of incarcerated mothers. Co-authors AM and WP also provided feedback, AM drawing on midwifery expertise in caring for incarcerated pregnant individuals, and WP as a registered nurse specializing in maternal-newborn health research and the healthcare experiences of marginalized pregnant and postpartum women. Based on their input and XB's observations, minor revisions were made to the guide. Examples of interview questions are shown in Table 1.

Data collection

Data collection occurred between October 2023 and May 2024. XB, who has extensive experience in qualitative research, conducted eight semi-structured interviews lasting 36 to 93 min, with a median duration of 52 min. Before each interview, participants received an email from XB confirming the scheduled date and time, along with the consent form as an attachment. Interviews were digitally recorded using Microsoft Teams or Zoom. Following each session, XB downloaded the auto-generated transcript in Word and edited it while listening to the interview recording to ensure an exact verbatim representation. Simultaneously, transcripts were pseudonymized by replacing identifiable information related to locations, organizations, facilities, institutions, clients,

Table 1 Examples of interview guide questions

Topic	Questions
Experience of pregnancy	To begin, tell me the story about your experience of being pregnant while incarcerated.
	Can you give me an example of care that you received which was well provided/made you feel good about yourself?
Access to care	What was the process for receiving prenatal care while incarcerated?
	What modifications were made to your daily routine when you were pregnant? How did these modifications compare to when you were not pregnant?
	While you were pregnant and incarcerated, which of your needs were not met?
Prenatal care	How would you describe your interactions with the social service providers and healthcare providers/medical staff you saw throughout your pregnancy, while incarcerated?
	How would you describe your interactions with the correctional officers/facility staff throughout your pregnancy?
	How did the care you received from the correctional officers/facility staff throughout your pregnancy make you feel?

Table 2 Sociodemographic characteristics of study participants ($N=8$)

Characteristics	*N* (%)
Self-identified gender	
Female	7 (87.5)
Non-binary	1 (12.5)
Self-identified race/ethnicity	
Caucasian	5 (62.5)
Latina	1 (12.5)
Multiracial	1 (12.5)
(Visible minority)	1 (12.5)
Age at time of interview	
20–29	1 (12.5)
30–39	4 (50)
40–49	3 (37.5)
Relationship status	
Single	3 (37.5)
In a relationship (not common law)	2 (25)
Common law[a]	2 (25)
Married	1 (12.5)
Age at time of incarceration[b]	
20–29	3 (37.5)
30–39	5 (62.5)
History of substance use disorders	
Yes	6 (75)
No	1 (12.5)
Unknown	1 (12.5)

[a]"Common law" reflects participants' terminology and may differ from the legal definition under Ontario law

[b]Refers to the participant's age at the time of the incarceration period during which they experienced their first eligible pregnancy, as defined by the study's inclusion criteria. Some participants experienced multiple pregnancies while incarcerated

and providers. Finalized transcripts were stored on the university's password-protected server, accessible only to XB and WP. Participants were not provided with transcripts for review or comment.

Data analysis

We used Braun and Clarke's [15] reflexive thematic analysis framework to systematically analyze the data. This six-phase, iterative approach involves data familiarization, initial coding, theme identification, theme review, theme naming and definition, and the development of a comprehensive report linking themes. It enables the identification, organization, and interpretation of participants' narratives. NVivo 14 was used to manage data, code verbatim transcriptions, and extract relevant quotations. XB coded all transcripts, and WP coded a subset of these transcripts. XB and WP met weekly to discuss codes, themes, subthemes, and thematic relationships.

Ethical considerations

This study received approval from University of Ottawa Research Ethics Board (H-01-23-8376). Before each interview, participants provided their verbal consent to participate. Participants were informed their participation was voluntary, they were not required to answer any questions, and they could withdraw from the interview at any time. As interviews were conducted virtually, participants were able to select a private and comfortable setting. Each participant received a $50 CAD Interac e-Transfer as a token of appreciation for their time and contribution.

Findings

Participants

Table 2 summarizes participants' sociodemographic characteristics. The sample included eight individuals formerly incarcerated during pregnancy in Ontario carceral facilities, with a mean age of 35.5 years. All participants chose to complete their interview in English.

Table 3 presents the trimester of pregnancies and duration of incarceration during pregnancy for the study participants. All eight participants experienced incarceration in provincial facilities, spanning five distinct institutions across Ontario. Six were incarcerated at the same institution on separate occasions, and one experienced multiple instances of incarceration across different facilities. Three participants were aware of their pregnancies prior to incarceration, and three had their pregnancies confirmed while incarcerated. Two participants, who experienced multiple pregnancies during different periods of

Table 3 Pregnancy trimester and duration of incarceration (*N* = 12 pregnancies)

Pregnancy during incarceration	*N*[a] (%)
Trimester of pregnancies while incarcerated	
First (weeks 1–12)	6 (50)
Second (weeks 13–27)	4 (33.3)
Third (weeks 28–40)	1 (8.3)
Unknown	1 (8.3)
Duration of incarceration	
< 1 month	4 (33.3)
1–6 months	7 (58.3)
> 6 months to 1 year	0 (0)
> 1 year	1 (8.3)

[a]Two participants reported three pregnancies during distinct periods of incarceration, resulting in a total of 12 pregnancies (*N* = 12)

incarceration, reported awareness of some pregnancies prior to confinement, while other pregnancies were confirmed during incarceration. Additional details regarding their reproductive and carceral histories are presented in Table 3.

Incarceration and pregnancy outcomes

Participants described their lifetime reproductive histories, which included 20 live births, 37 miscarriages, ectopic pregnancies, one neonatal death, and one pregnancy termination. Two participants were pregnant at the time of their interviews.

Table 4 summarizes pregnancy outcomes in relation to incarceration status at the time of each outcome. All miscarriages and one ectopic pregnancy were experienced during incarceration. Four of the five live births took place post-release. Two participants were pregnant at the time of their interviews. Therefore, their pregnancy outcomes and incarceration status during the remainder of their pregnancies are unknown.

Formerly incarcerated individuals' perinatal experiences

This study explored the experiences of formerly incarcerated individuals who were pregnant during incarceration. Using thematic analysis, we identified *Precarious Perinatal Care* as the overarching theme, encompassing five main themes: (1) *Carceral constraints to health and social supports,* (2) *Mistreatment,* (3) *Crystallization of pregnancy,* (4) *(Im)personal care of pregnancy*, and (5) *Parenting from the inside out*. Table 5 presents the main themes and corresponding subthemes. The following sections describe each theme and sub-theme, with supporting verbatim quotes from participant interviews.

Overarching theme: precarious perinatal care

Participants described their perinatal experiences during incarceration, highlighting uncertainty about whether basic medical needs would be met and what, if any, care would be accessible in an emergency. Administrative processes within carceral facilities were cumbersome and unreliable, creating significant barriers to perinatal services. All participants provided examples of these barriers, underscoring the precarious nature of perinatal care in carceral settings. As a result, we identified *Precarious Perinatal Care* as the overarching theme.

Theme 1: carceral constraints to health and social supports

Carceral constraints to health and social supports restrict access to perinatal care for incarcerated individuals. Participants who experienced perinatal incarceration described how administrative processes contributed to these barriers, which are reflected in four subthemes: *administrative hurdles*, *understaffed and underserved*, *without a plan*, and *carceral authority over access to support*.

Administrative hurdles

Participants described how carceral facilities' administrative processes affected their access to services. One participant with a substance use disorder described how incarceration disrupted her methadone treatment:

> *"It took about a week for me to get on it [methadone] and they needed to contact the methadone clinic that I was on to get the prescription that I was on. But then I did end up getting it. […] And then also, like with the methadone, like I could have lost my baby being in withdrawals for a week. So, like that definitely could have been done a little quicker." (PI06)*

Table 4 Pregnany outcomes and incarceration status at time of outcomes (*N* = 12)

Pregnancy Outcome	Incarceration status at time of pregnancy outcome			Total
	Incarcerated	Not Incarcerated	Unknown	
Live birth	1	4	0	5
Miscarriage	4	0	0	4
Ectopic	1	0	0	1
Unknown	0	0	2	2
Total	**6**	**4**	**2**[a]	**12**[b]

[a] Two participants were pregnant at the time of their interviews; their pregnancy outcomes and incarceration status during the remainder of pregnancy are unknown

[b]Two other participants reported three pregnancies during distinct periods of incarceration, resulting in a total of 12 pregnancies (*N* = 12)

Table 5 Themes and subthemes identified in interviews with formerly incarcerated and pregnant individuals

Themes	Sub-themes
1. Carceral constraints to health and social supports	• Administrative hurdles
	• Understaffed and underserved
	• Without a plan
	• Carceral authority over access to support
2. Mistreatment	• Lack of informed consent
	• Neglect
	• Dehumanization
3. Crystallization of pregnancy	• A positive sign
	• Clarity amidst confinement
	• Managing substance use disorder
	• Unspeakable joy
4. (Im)personal care of pregnancy	• Yard time
	• Food fetters
	• Hardly restful sleep
	• (Un)hygienic practices
	• Emotional and mental distress
5. Parenting from the inside out	• Bonding barriers
	• Multigenerational mothering

Another participant recounted a similar experience of receiving consistent methadone treatment in the community, only to have this schedule interrupted upon incarceration:

> *" […] so when you go into jail, you typically, if you're on methadone or tryin' to start, you can't [continue your treatment] for sometimes three to seven days because they [carceral staff] have to reach out to the methadone doctor outside of the jail, get it approved and then send it here [to the jail] and sometimes this takes… so it took four days or something like that." (PI04)*

Five of the eight participants discussed the "Inmate Request Form," a key paper-based tool for requesting items or accessing services. The "Inmate Request Form" (request form) is provided to the incarcerated individual upon request [19]. Submitted requests may or may not be 'approved' by the correctional officers on duty. Participants reported using the form to request visits from individuals outside the facility, including contact visits with newborns, access to a telephone, clothing, dietary adjustments, and medical staff care.

Participants identified several factors affecting request form processing times, including correctional officers. One participant explained, *"[…] everything's done through request form and they're [correctional officers] taking their timeline. It's like it could be done a lot quicker, but it just depends on the people behind that glass." (PI04).* Several participants believed request forms were not a priority for carceral staff. One participant described an interaction with a correctional officer: *"There's an area that you can't pass like in front of the glass, and they'd just be like 'Back up. Go over the line. Write a request form and when it gets filled it gets filled'" (PI04).* Another participant reflected on why the processing of requests were often delayed: *"It just felt like everybody is so busy and short-staffed and they don't have time, and you have to put in a request for anything and it could take weeks." (PI02).*

The prioritization of administrative processes, including the request form system, hinders access to timely essential services and fulfillment of basic needs. Per participants' accounts, staff shortages were also identified as a contributing factor.

Understaffed and underserved

Participants described staffing shortages in carceral facilities as a significant barrier to accessing social and healthcare services. One participant explained how understaffing throughout the facility restricted movement, hindering their ability to engage in self-care and contributed to missed appointments:

> *"And, you know, often the jails are short staffed because people just call in sick all the time. They don't show up. And short staff means nobody has yard, nobody has access to the shower, no, we're locked in the cell all day. So that also means if there's appointments, there's nobody to bring you." (PI08)*

Correctional staff are responsible for transporting incarcerated individuals to appointments. Participants described how staffing shortages resulted in delayed or missed court dates and medical visits. One participant recalled missing two prenatal appointments due to staffing limitations:

> *"I had a couple of appointments scheduled and they got cancelled due to the guards not being available or being too late for my appointment. So, I'd missed a couple appointments. One was a blood work appointment to make sure the baby didn't have Down syndrome or any defects, and unfortunately, I missed it. And by the time they were going to take me, I was too far along to even do the test anymore. So that was my only concern when it came to the scheduling and stuff like that because obviously, I'm inside [the carceral facility]. I have no control over what goes on and like, you know, getting to my appointments and stuff." (PI07)*

This participant described feeling powerless with respect to attending appointments, highlighting how the

imbalance of power inherent in carceral settings creates barriers to perinatal care.

Without a plan

Limited staffing and administrative barriers impeded participants' ability to prepare for release, leaving them without coordinated plans to support their transition into the community. Participants described how the absence of discharge planning left them uncertain about where they would live and how they would manage once released. This lack of preparation heightened their risk of housing insecurity and relapse, especially for those navigating pregnancy, early parenting, or recovery.

Since some participants' pregnancies were confirmed during incarceration and others gave birth while in custody, securing appropriate accommodations after release was a priority. One participant described the challenges of finding shelter while pregnant following her release:

> *"So, my lawyers really didn't want me to stay in there [the carceral facility] and they were trying every way possible. They asked my parents if I could move in with them because this is my first time actually being incarcerated, ever, and my only time being incarcerated, but so they were trying to ask my family and stuff if I can move in with them. And then they [family] were hesitant on it because they didn't think that I was gonna get out and do good. They kind of thought I was just gonna go down the same path that I was already on. So then they [lawyers] kind of spoke with [midwife] to figure out if there was any resources that could help me. And then that's when they ended up figuring out for [community organization]. But then I had to wait for a bed to be open at [community organization] because it's very popular for teenage girls. So, then they ended up actually having a bed not too long after, so I ended up going there." (PI06)*

In the following example, a participant recalled her concerns about what she would do and where she would go after being released, as no plan was in place. At the time, her mother was caring for her newborn son, but did not trust the participant:

> *"I was pretty sure I was not staying [in the carceral facility] that long. I mean, they didn't, but they didn't know for sure, but they still didn't talk to me about it [the release]. I just feel like there was nobody there to say, 'This is the plan. How can we help you? What are your needs?', you know? What if I was giving birth there [in the carceral facility]? Or like I'm a pregnant woman struggling with drugs? What if I do get out? Where, where am I gonna go? What am I gonna do? Cause the… like in my head, the only thing I know to do is to go out and use [substances] like I didn't have a place to stay. My family didn't trust me, like… so this… the only thing I know is I'm going out to use [substances] like they didn't try to set up a plan. There was no plan being set up. There was [no plan] for me to deliver in there, and then the baby to go somewhere, or if I got out, so… Like their job is to "take care" of you while you're there [in the carceral facility] pretty much and that's it." (PI02)*

One participant was released following severe mistreatment in the carceral facility, where their well-being was neglected as they miscarried alone in their cell without medical attention. A judge, upon learning of the incident, encouraged them to seek medical care and provided a taxi voucher for transportation home. Still experiencing withdrawal symptoms, they instead travelled approximately one hour and 45 min to their substance dealer's location. They explained:

> *"The facility had given me a taxi voucher to take [me] wherever I needed [to go], and I used my taxi voucher to go back to [city name], Ontario to my dealer's house because I was in such heavy withdrawal and pain that it was the only thing I could think of. And then once I finally went to hospital, I had already passed everything [had the miscarriage]." (PI05)*

These examples illustrate how systemic gaps in discharge planning and service coordination hindered participants' access to essential healthcare and social supports during their transition out of custody. Uncertainty surrounding the timing of their release, compounded by the absence of a structured plan, left participants deeply concerned about housing and health beyond the facility walls.

Carceral authority over access to support

Carceral environments are fraught with power imbalances. Participants described instances in which correctional officers exercised authority, restricting access to services and support. These actions had repercussions, disrupting the experiences of other incarcerated individuals and staff throughout the facility. The resulting consequences often extended beyond the immediate context, compounding existing challenges within the facility and increasing barriers to social and healthcare services.

One participant described how correctional officers' control over request forms impacted the workload of medical staff within the facility. She also described inconsistencies in how these forms were processed, noting variations depending on the guard on duty:

> *"Then there's the ones that come in there and take their time, let the [request form] box fill up and don't empty it for a day or two and then take it to fill it out and then you have like twenty people who need to see the doctor. So, you're not on the doctor list that day, you're on the doctor's list the third day because they should have did [processed the request forms] every day instead of making it [the box] fill up, right. But it all depends on the person behind the glass and how they're doing things, right?" (PI04)*

Another participant described how correctional officers exercised power in a hospital setting. Following a caesarean section (C-section), she was initially denied visits from her mother and the father of her child, despite prior arrangements. She recounted the distress caused by their absence during this critical period: *"First day was the worst because they wouldn't let anybody come. I had to give birth by myself, like it was horrible." (PI03).* The prioritization of carceral authority restricted her access to essential support. In response, the participant's mother and midwife contacted the carceral facility to request visitation approval. Subsequently, her mother was granted access, and the midwife arranged for the father to visit as well.

While incarcerated, individuals were often required to advocate for themselves or develop strategies to navigate the imbalance of power between themselves and carceral staff. One participant described consistently advocating for herself and others, which led to retaliation from staff: *"I would send letters out to my kids, my kids would never get them, like, you know? So, it's like you can't even stand up for your basic human rights without being punished," (PI08).* Another participant explained how she navigated interactions with staff to make her stay more tolerable: *"I was always nice and polite because at the end of the day, they're controlling me, right. […] If I'm rude and obnoxious, they can make my life a living hell in there." (PI04).*

These examples illustrate how power imbalances create barriers to accessing services and contribute to mistreatment, compromising the safety and dignity of incarcerated individuals. The theme *Carceral constraints to health and social supports* highlights how administrative hurdles, staffing shortages, and power dynamics between incarcerated individuals and carceral staff restrict access to perinatal services.

Theme 2: mistreatment

Participants described numerous experiences of mistreatment, categorized into three subthemes: *lack of informed consent*, *neglect*, and *dehumanization*.

Lack of informed consent

Participants recalled instances during incarceration when they did not receive sufficient information to make an informed decision about their treatment. For example, one participant described receiving a "cocktail" of medications, not knowing the specifics of the medications or their purposes:

> *"And then, the medication I get, they remove the Gravol 'cause it's just not good for pregnant [people]. They call it the cocktail. It's like clonidine, Imodium… I don't even know exactly. It's things that maybe help you just calm down if you're not on any prescribed anything because they can call your pharmacy and like send it over and whatnot. So, I… I had nothing [no prescriptions]. They just gave me that [cocktail]." (PI01)*

Another participant described requesting sleep medication, which was prescribed by a carceral physician who failed to inform her of any potential side effects:

> *"So, he [carceral physician] gave me this medication but… this medication really fucked with me after. I gained like… so, I went up to like 220 pounds after just from this medication. I struggled to get off it. It was actually an antipsychotic. There should be more… what… 'This is the risks of this medication. This is the side effects. This is…' like there should be an option, 'this medication does this or this,' but anyways so […] he didn't tell me all that. He just told me it would help me sleep and that's what I was looking for." (PI02)*

Neglect

Participants described neglect as a barrier to meeting basic and medical needs in carceral settings. One participant described feeling unsafe while incarcerated and pregnant, fearing she would not receive proper medical care:

> *"It's scary whenever you have anything going on there [carceral facility] because you know you're not gonna get proper medical care. And for someone like me, who has high-risk pregnancies because of the amount of nausea and vomiting I have, it's um… Yeah, it's scary 'cause it's like, you know, if something happens, they're not gonna take me to the hospital. They're not gonna call an ambulance. They're gonna wait 'till the last minute. You know, I like I… yeah. No, they just really um… they really don't uh… don't do anything to make you feel safe whatsoever." (PI08)*

Reinforcing the previous participant's apprehension, another participant described having a miscarriage after a correctional officer dismissed her medical concerns, instructing her to submit a request form instead of providing immediate assistance:

> *"A couple of times I told them, 'My stomach hurts. I'd like to see a doctor. I think I'm having a miscarriage.' And they're like, 'Wait. Write a request form and see the doctor.' And I was like, 'What do you mean request form?' I've had like bad period cramps were like, I knew I was having a miscarriage and they'd be like 'Write it on the request form.' It's not their problem." (PI04)*

Following the miscarriage, she was taken to the carceral medical office.

One participant recounted being confined in a negative pressure room, typically used to isolate clients suspected of having infectious diseases. Isolated from others, they experienced four days without staff monitoring their well-being. During this time, no one acknowledged their presence, and they received no meals:

> *"They [carceral staff] had come and they had dropped off food to me, but the food that they, so I'm plant-based. I don't eat meat. I don't eat cheese. I don't eat animal products, and they had brought me up items that I couldn't eat, and so I was refusing some of the food that they had provided me and after I had refused three meals, they just basically stopped bringing meals." (PI05)*

The same participant described another instance of neglect involving medication they had been prescribed and were using prior to incarceration:

> *"Nobody came with any medications. I was never given the antibiotics I was on. I was never given the methadone that I was prescribed. I was… I wasn't given any of the creams that normally I have when I have like lesions and sores on me." (PI05)*

Dehumanization

Participants described experiences where they were stripped of dignity and autonomy, both in hospital and within carceral facilities. One participant recalled attending medical appointments at various locations, including a private ultrasound clinic and a hospital, while in custody:

> *"You have to be shackled and pushed in a wheelchair by the guards, and you have everybody staring at you. Even, you know, your hands are cuffed, and they'll be like, 'OK, so just go pee in this cup.' while your hands are cuffed! Like, you know how… First of all, how mortifying it is to have to squat down and pee in front of a guard, and to try to pee in a cup and pull your pants down and all that while your hands are cuffed together, like it's just… and then if you say like, 'Can you at least, you know, take one cuff off?', they'd be like 'Oh, you better not try anything!' What am I gonna try, like you know what I mean, in this environment." (PI08)*

Another participant recounted experiencing a miscarriage alone in their cell. The toilet had stopped functioning, and after notifying staff, they were given a bucket instead of having the toilet repaired:

> *"[…] I had complained about the fact that my toilet didn't work, they brought me a bucket and told me to sit on a bucket […]. So, my toilet had plugged from everything I was passing [due to a miscarriage] and they brought me a bucket. Like they didn't even fix my toilet." (PI05)*

All but one participant characterized their overall incarceration experiences during pregnancy as negative. These examples of mistreatment raise important concerns regarding how incarcerated pregnant individuals are treated and whether their fundamental rights are upheld.

Theme 3: crystallization of pregnancy

Upon admission to the facility, participants were asked whether they were pregnant or believed they might be, and were given the option to undergo a pregnancy test. Six of the eight participants had at least one pregnancy confirmed during incarceration. For some, pregnancy offered renewed hope and a sense of motivation. Others experienced challenges related to substance use disorder and emotional and mental distress. We use the term *crystallization of pregnancy* to describe the moments through which participants came to recognize their pregnancy as an irrefutable truth, shaped by the constraints and conditions of incarceration. This conceptualization reflects the realization and acceptance of pregnancy while incarcerated, as illustrated through four subthemes: *a positive sign*, *clarity amidst confinement*, *managing substance use disorder* and *unspeakable joy*.

A positive sign

Some participants had suspected, but not confirmed, they were pregnant prior to incarceration. One participant, who learned of her pregnancy at approximately 26 weeks of gestation, described her experience as follows:

"I thought I was pregnant, but I kept taking a pregnancy test like at my methadone clinic, and they were coming back negative. Um… and then so like a few days after me being in there [the carceral facility], I guess like just not being on anything [substances] kind of like let my hormones say like 'Hey, like I'm gonna, I'm gonna give you that positive pee test.' So, then I ended up getting the positive pee test." (PI06)

Another participant who learned of her pregnancy while incarcerated was at 16 weeks of gestation. She described her experience as one of excitement:

"I'd asked for a pee test, and they did three, three tests until they finally pulled me out and they said, 'Yes, you're pregnant.' Now it was a huge shock to me. […] I seen the ultrasound, though, it was like it was so real to me. I was like, 'Oh my gosh, this is a little baby.' And I was really excited." (PI07)

Among a range of emotions, the reality of pregnancy evoked both excitement and uncertainty, as participants faced decisions regarding their pregnancy. These decisions were influenced by various factors; some were within their control, while others were dictated by external circumstances.

Clarity amidst confinement

Substance use and instability in the community often delayed participants' awareness of pregnancy and disrupted engagement with care. Incarceration marked a turning point where participants, previously disengaged, began to acknowledge their pregnancies and consider next steps, often later in gestation. The structure of incarceration, along with withdrawal and medical assessments, contributed to a shift in self-awareness.

One participant—the same individual quoted earlier who described learning of her pregnancy at 26 weeks—reported substance use prior to incarceration, during which time repeated pregnancy tests returned negative results. Upon admission, she met with a midwife to discuss her options:

"She kind of, she talked to me about how I was feeling, how I was feeling about being incarcerated and pregnant, and what I wanted my outcome to kind of look like. She also gave me a few pamphlets to kind of like read up on being pregnant. Also, like different options of, you know, giving up for adoption or finding a family member to take it [the newborn], or if I was gonna keep it, and then resources too for like when I was out, and she gave me a handout for that. I was probably with her for about an hour, so she was very insightful." (PI06)

Another participant explained how, while living in the community, she experienced homelessness, used substances, and was unaware she was pregnant. Upon incarceration, she began to feel physically better and became more attuned to changes in her body. She explained:

"I was there for about a month and I, my body obviously started feeling different, I wasn't too sure why that was. I thought maybe it was just because I was, you know, getting better, getting healthier. Umm, but then I noticed some like fast weight gain and I noticed other things going on. So, I walked — we have a nurse that comes every morning and every night. Umm, so the nurse was there, and I walked up to her and I said, 'I know this is a strange question,' but I said, 'is there any way that we could do a pregnancy test cause something's different with my body. And I'm not too sure what's going on.'" (PI07)

Her pregnancy test was positive, but the participant believed the gestational age of the fetus limited her options. She explained: *"[…] by the time I found out I was already four months. So, whether I wanted to terminate the pregnancy or not, it was too far along, but I had no intentions to terminate the pregnancy." (PI07)*

In these examples, incarceration created conditions for participants to begin weaning off substances, confirm their pregnancies, and consider next steps. It also allowed time for information gathering and late-stage decision-making.

Similar to the above example, other participants recounted their experiences navigating the intersecting challenges of substance use disorder, incarceration and pregnancy. However, substance use disorder involves physiological factors which have significant implications for pregnancy, particularly within the constraints of incarceration.

Managing substance use disorder

Of the eight participants in this study, one reported no substance use, while another's substance use status remained unknown. The remaining six participants disclosed a history of substance use disorder and were either using or receiving opioid agonist treatment at the time of admission to a carceral facility. Four participants described serious challenges accessing treatment, with delays receiving medication ranging from two to seven days. One participant recounted the difficulties she encountered upon entering the facility, where she sought to resume methadone treatment. Due to administrative delays, she did not receive methadone for approximately

four days, resulting in withdrawal symptoms and increased concern for her pregnancy:

> *"[…] because I had to restart again, because I had missed three doses because I was out on the street using, you only start at 30 [milligrams]. So here I am in my head thinking — well, the doctor told me the last time that if you're in withdrawal, like you, your baby's at risk and nobody's there monitoring the baby. And I'm sitting four days in withdrawal, and because I'm just restarting [treatment], they're starting me at such a low dose that it's gonna take the edge off, but I'm still in withdrawal, so I'm like… so it's like you're in panic." (PI02)*

Another participant described the challenges she faced during a month-long period of withdrawal, while incarcerated and unaware of her pregnancy. She stated:

> *"So, when I first came in, it was really hard. I was using crack and fentanyl, which is, everybody knows, is not a good drug. I'd basically given up at that point in my life […]. And when I came in [to the carceral facility], I was coming down really bad and I just, I didn't wanna get up. I didn't wanna get out of bed. I stayed in bed. I didn't go out to meet anybody. […]. But I stayed in my cell for eight days straight. I didn't leave the cell. I just stayed in there. I was sick to my stomach. I slept for days. They offered me methadone. I took it two days, but I just, I was so… my body was so drained and so sick that I just, I didn't even wanna get out of bed to go and get it [the methadone], so I ended up refusing it and on top of that, right, I was pregnant. But I didn't know. So, it was coming off that and dealing with pregnancy all at the same time, and it was probably the worst thing that I went through." (PI07)*

These accounts highlight the challenges of managing substance dependence within a carceral environment, where access to adequate and timely care, and structured withdrawal management were limited. This systemic lack of support compromised their physical and mental well-being.

Unspeakable joy

Despite accepting the pregnancy, managing substance use addiction, and feeling excited about their future with a child, participants were not always able to share their joy and the news of their pregnancy with others. Of the eight participants, five reported circumstances preventing them from disclosing their pregnancy and expressed how this affected them emotionally.

One participant was discouraged from sharing news of her pregnancy with other incarcerated individuals. She recounted carceral staff advising her not to disclose her pregnancy, stating: *"[…] when you find out you're pregnant in jail, they [carceral staff] tell you not to tell anybody, which is really fucked up. Every time that I found out that I'm pregnant, they've told me not to share with other people on range." (PI05)*

Two participants discussed being unable to inform the father of their child about the pregnancy. In one case, the father was also incarcerated, which impeded their communication:

> *"[…] because my son's dad was arrested at the same time as me and he was in jail at the same time. And I'm pregnant. We're not allowed to communicate. Like we weren't… I couldn't even send a letter to him. And then like mail for it to come back and like they're not, we are not allowed to because he's in jail too. Um, and it was like he didn't… he couldn't know anything about the pregnancy." (PI02)*

Another participant could not share the news with the father of her child because she was in segregation. She explained: *"I got depressed. Mostly because I had like good news that I wanted to share with, you know, with my, I call him my husband […]" (PI01)*

A participant shared the emotional challenges she faced while incarcerated and pregnant, contrasting this experience with being pregnant while in the community. She reflected:

> *"I mean not really having anybody to talk to and like finding out I was so far along. It was kind of like a… it was a shock. And then just sitting in a cell with my own thoughts and having them run through my head was probably one of the worst things that can happen with somebody coming off I guess so many drugs and it was just… I don't know… With my other two pregnancies, it was like, you know, I was at home. I was able to talk to everybody. I couldn't just like go and call someone when I wanted to [while incarcerated], like, I had to call them only when we were going out [of the cells] for lunch or dinner. So, I just… I couldn't just talk to people that I needed at the time, or even talk to anyone at the time, and when I did need them." (PI06)*

The emotional toll of incarceration while pregnant was highlighted by several participants who expressed feelings of isolation and sadness due to their inability to share the joy of their pregnancy. Factors such as carceral restrictions, lack of communication with loved ones, and institutional discouragement prevented them from

openly disclosing their pregnancy, intensifying their emotional and mental distress. These experiences underscore a need for comprehensive emotional support for incarcerated pregnant individuals.

Theme 4: (Im)personal care of pregnancy

Personal care involves activities individuals practise to maintain or to enhance their health and well-being, including exercise, nutrition, sleep, hygiene, and mental and emotional health. However, participants described how the restrictive nature of incarceration limited their ability to engage in personal care, including activities recommended for maintaining a healthy pregnancy. Their experience of (im)personal care while incarcerated and pregnant is captured in the following subthemes: *yard time*, *food fetters*, *hardly restful sleep*, *(un)hygienic practices*, and *emotional and mental distress*.

Yard time

Participants identified "yard time" as their designated period for physical activity. One participant described her experience during yard time as follows:

> *"[…] so we get yard time, so it's 20 minutes outside, and sometimes the guards would ask the girls to like, do like races or basketball shots and stuff like that. So, they would just ask that I sit out for it, just in case because they didn't want me to get injured or anything happen to the baby. So other than that, no, I still got to do everything that the girls got to do. Just I would sit out for like special little activities that the guards would just throw up [organize] for us." (PI07)*

Other participants also discussed the time they spent in the yard stating, *"[…] every day we got to go outside for 20 minutes and that was the same for everyone." (PI02)* and *"Well you get automatically 15 minutes of yard. Mandatory no matter what." (PI04).*

Although participants valued time spent in the yard, daily access was typically limited to 15 to 20 min. Available activities were generally low in intensity, and due to safety concerns, individuals were actively discouraged from engaging in moderate-intensity exercise. As a result, the physical activity undertaken by incarcerated pregnant individuals remained below the recommended 150 min of moderate-intensity exercise per week [20].

Food fetters

"Food fetters" refers to restrictions on food access, where carceral processes limit individuals' ability to meet their dietary needs. Pregnant participants encountered challenges obtaining adequate nourishment and faced additional challenges if they had specific dietary restrictions. Among the eight participants, one was lactose intolerant, one was vegetarian, and one was vegan.

Participants frequently referenced the "prego bag", a supplement provided at least twice daily to pregnant individuals. Exclusively available to them, the bag contained additional food not offered to other incarcerated individuals. The bag's contents varied but could include milk, cookies, crackers or saltines, cheese, fruit, juice, peanut butter, meat, muffin, sandwiches, and bread. However, participants reported inconsistencies, with some receiving as few as two extra items while others received five or more.

Although participants received a prego bag, six of the eight participants reported unmet nutritional needs. Some stated it did not contain enough food, others had to ration their portions, and those with dietary restrictions found their specific needs were ignored. A vegetarian participant stated: *"I was complaining about the diet 'cause they kept giving me meat and I'm a vegetarian" (PI08).* Her concerns remained unaddressed throughout her incarceration. Similarly, a lactose-intolerant participant described her unmet dietary needs: *"I mean I'm lactose intolerant. I do wish I had had those free [lactose free] stuff [foods] because I couldn't eat the extra milk and extra stuff they were giving me, for me and my baby." (PI01).* A vegan participant recalled requesting oat milk instead of cows' milk but was told the request would likely go unfulfilled:

> *"And I asked for oat milk and instead of regular milk, and they laughed at me and said it wasn't available. They did tell me that I could maybe get almond milk, but they would have to look into it because it's not like a regular item that's available. And they told me that my sentence was so short that it would be hard to get my dietary change." (PI05)*

Food fetters in the carceral setting prevented incarcerated pregnant individuals from meeting their nutritional requirements and dietary needs. These restrictions stemmed from carceral staff disregarding clients' requests and administrative procedures requiring participants to formally declare dietary restrictions before requests could be processed.

Hardly restful sleep

Participants described significant challenges related to sleep, citing overcrowding and the requirement to obtain formal approval to rest during the day as key barriers. According to participants, pregnant individuals were supposed to receive two mattresses and a bed (i.e., not sleep on the floor). However, six of the eight participants stated they were the last person assigned to their cell, and were therefore required to sleep on the floor. Among

them, only one participant received two mattresses, while the other five received just one.

One participant explained, due to overcrowding, three individuals shared a cell with only two beds. As the most recent arrival, she was left to sleep on the floor for at least a week and a half:

> *"We were three to a cell. Uh, like, there's two beds in a cell. So I was on the floor, pregnant on one mattress, and then they [carceral staff] came like two days later and told me that I was not supposed to be on the floor, that I was supposed to be on the bottom bunk with two mattresses, but nothing changed. I still remained on the floor of the [cell]… like I was last one in the cell so…" (PI03)*

Although participants stated pregnant individuals were entitled to a bed, their accounts suggested sleeping on the floor upon arrival was a strategy used to avoid conflicts with cellmates who had been assigned to the cell before them and would otherwise have to give up their bed. One participant said: *"You're not gonna tell somebody, 'You're [I'm] pregnant. Can I have your bed?'" (PI04).* Another participant stated she felt bad taking a bed from someone who was in the cell before her: "*So they switched the girl who's been there for five months down to the floor and then me on the bed. I felt bad, but I was like, I didn't mind being on the floor." (PI01).*

One participant described sleeping conditions she experienced upon admission: *"In the beginning, when you come in [to the carceral facility], if you're in overflow, you sleep on the floor [on a mattress]. If there's no beds, you have no choice but to sleep on the floor." (PI04).* She also described the requirement for approval to nap during the day when tired. To receive permission, individuals had to complete and submit a request form, undergo a physician's assessment, and obtain the physician's approval. She explained:

> *"Like if the doctor doesn't approve it, you cannot have, you cannot be able to take a nap even if you say, 'Listen. I'm tired. I'm pregnant. Can I sleep?' [Correctional officers ask] 'Did the doctor approve you to have a half hour nap every day?' Then they'll open the cell for you to take your half hour nap. Right? Like… um… Yeah. Like, they're very on request forms." (PI04)*

Several participants stated the mattresses were extremely thin or uncomfortable. Although pregnant individuals were not supposed to sleep on the floor, participants' experiences indicated this requirement was not consistently met.

(Un)hygienic practices

Participants described the unsanitary conditions of carceral facilities, and the challenges associated with maintaining personal hygiene while incarcerated. Five out of eight participants spoke in depth about their personal hygiene experiences while incarcerated. They reported limited access to showers, ranging from every other day to an average of one shower every three days. One participant highlighted the unsanitary showers and lack of personal care items. She explained receiving a multi-use soap for both hair and body, and not receiving a washcloth, which made it difficult to engage in a self-care routine: *"I mean, even when I took a shower and stuff like that, the showers are gross and stuff, so it was just weird. And you didn't really have very much stuff to clean yourself with." (PI06).*

Another participant recounted her experience of being left in her cell for four days without any carceral staff monitoring her well-being. When she was nearing discharge, a concerned female guard asked if she had been able to shower during her incarceration. The participant informed the guard, *"I have [had] a shower in my room, but I was never given a toothbrush or soap or toilet paper. Nothing. Nothing was ever brought to me." (PI05).* Shocked by the series of events the participant had endured, the guard then provided them with toiletries, including shampoo, conditioner, soap, a toothbrush, toothpaste, a towel, and clean underwear. The participant viewed this gesture as an act of compassion.

Another participant recounted the difficulties of maintaining hygiene while experiencing withdrawal during pregnancy, with restricted access to showers:

> *"So, there's a bunk [bed] in the cell, and so I was at the top and there was somebody at the bottom. And like they [cellmate] kept complaining to the staff that I stink because I'm withdrawing! I am sweating, like I'm disgusting, and you can't shower at like… you only can shower… not even once a day." (PI02)*

She continued stating: *"I feel like, when you're withdrawing, to sit in like a warm shower would, it just helps. That would have been just so nice to get out and just sit in the shower." (PI02).*

These examples highlight participants' inability to maintain personal care and their feelings of disgust with the unclean carceral facility. These conditions negatively impacted their morale and dignity.

Emotional and mental distress

Participants described feeling anxious about their health, limited support, restricted access to care, and concern for their unborn child's well-being. One participant was placed in segregation after her navel piercing jewelry was

flagged by a full-body X-ray scanner during admission to the facility. Although she removed the jewelry immediately, she was still confined to segregation. She recounted this experience and described its impact on her mental health:

> *"[…] and then the whole thing that was in seg [segregation] that probably didn't help with my mental health, which doesn't help with like your whole body and like I should be moving a bit. I'm not saying like go play basketball in the yard, but I'm saying like, you know, […] the segregation thing was kind of… it was so… it was just so dumb." (PI01)*

Another participant recounted experiencing emotional and mental distress due to limited support and the lack of healthcare during incarceration:

> *"You have no support in there, right? So that's your main, that's the main thing. You have no support. You don't have the healthcare. You don't have your needs [met] either, like you… just feel really down in general. Like… it's a really really dark dark space when you're in there." (PI04)*

Several participants recalled being concerned for their unborn child's health and their preparedness for motherhood. One participant described experiencing withdrawal symptoms following the abrupt discontinuation of methadone, which she had been prescribed in the community prior to incarceration. She recalled fearing she might lose the pregnancy and worrying about her child's health. She also recalled fearing the involvement of child protection services and agonizing over whether she would be able to retain custody of her newborn. She stated:

> *"[…] there could have been a quite a few different outcomes with how he was gonna be when he was born. So, it was terrifying. I just didn't know if I was gonna be able to be a mom. I didn't know if I was gonna be able to, like, keep the baby at the time." (PI06)*

The combined impact of incarceration and pregnancy within the carceral environment contributed to heightened emotional and mental distress among participants.

Participants' experiences of *(im)personal care* during incarceration revealed their inability to meet basic self-care needs, intensifying the challenges of navigating pregnancy in a carceral setting. Feelings of powerlessness to access support essential to a healthy pregnancy impacted their emotional well-being and shaped their experience of pregnancy during incarceration.

Theme 5: parenting from the inside out

The implications of incarceration during pregnancy extend beyond the perinatal period, disrupting relationships between the birthing parent, their newborn, friends, and family. Participants shared experiences of parenting while incarcerated, reflected through two subthemes: *bonding barriers* and *multigenerational mothering*. Four of the eight participants described having children who required care during their incarceration. These children included those from pregnancies while incarcerated and from previous pregnancies. Care was provided by family members or friends while participants remained incarcerated.

Bonding barriers

The circumstances of participants' incarceration were often incongruent with their desire to bond with their newborn. Participants shared how their bonding experiences with their newborns were interrupted by the constraints imposed by the carceral facility. For example, one participant described the physical barriers preventing her from bonding with her baby:

> *"Ah, well I wasn't allowed visits with the baby. They would only let me see like the baby through a glass like a regular visit, even though I had just given birth. Like so, I wasn't allowed visits like I wasn't allowed to hold my baby. I left her at six days old and wasn't allowed to see her. I don't know. It's hard." (PI03)*

The same participant also described the distress she experienced because "*I was trying to breastfeed [express breastmilk to feed newborn] and they wouldn't allow my midwives to pick up my milk. Yeah, that was the most traumatic." (PI03)*

Another participant described being unaware she could request a breast pump to express milk for her newborn, preventing her from feeding him and easing his withdrawal symptoms:

> *"They didn't offer me a pump, and I… if I had known it was possible, I would have pumped [expressed milk] and given the breastmilk to my mom weekly because she was able to come pick it up weekly and so I would have done that. But… and apparently it would have been good for my son too, because I was on methadone, and he was actually withdrawing from drugs too. And it would have actually helped him. But yeah, again I didn't know those things." (PI02)*

These examples highlight how carceral facilities create systemic barriers to bonding, preventing incarcerated

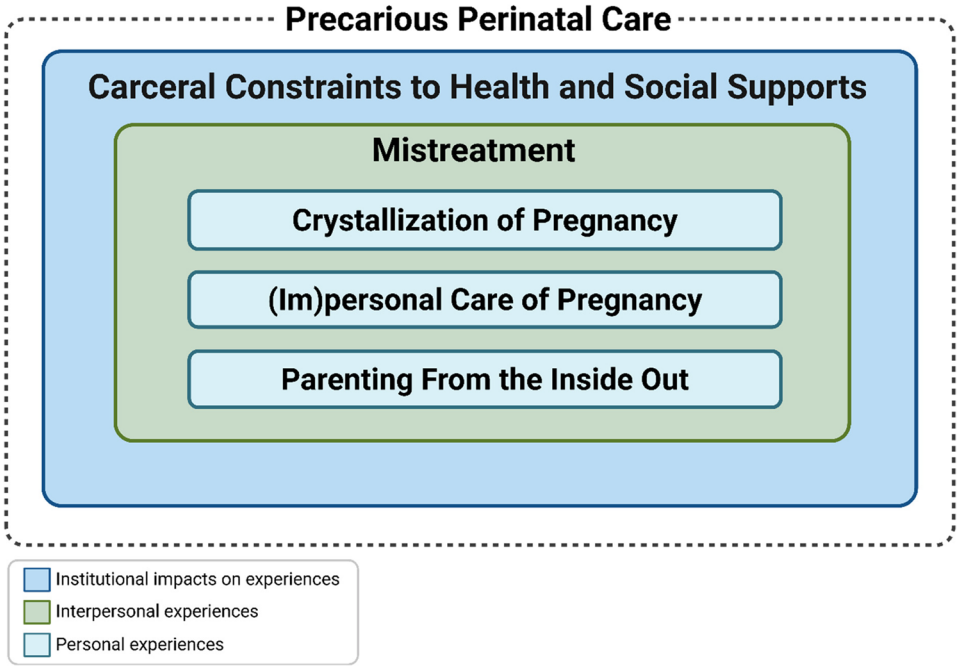

Fig. 1 Precarious perinatal care experiences of formerly incarcerated individuals in Ontario, Canada, as identified through thematic analysis and presented across institutional, interpersonal, and personal levels. (Image created with BioRender.com)

individuals from expressing their breastmilk and hindering the transportation of breastmilk to their newborn. These bonding barriers resulted in emotional and mental distress among participants.

Multigenerational mothering

The birth of participants' children and the resulting separation further impacted their family relationships. Participants described the support they received from their mothers as they navigated incarceration and physical distance from their child.

One participant recounted how her mother, who was caring for her daughter, brought her five-month-old to a court hearing:

> *"So, I was still dealing with duty counsel so they're usually last [cases in court], and so my mom was there for like four to six hours with my baby girl, who on the [date] just turned… five months, actually. Five months old then in the courtroom. You know, like, just waiting. Like she was quiet. She was good." (PI01)*

Another participant described how her mother cared for her son both during her incarceration and after her release. The participant's mother also set clear boundaries based on her daughter's history of substance use:

> *"I'm ready to try and get clean, but I don't know how. I don't have a place to go to when I get out and my family doesn't completely trust me. My mom's already taking care of my son. She didn't want me living in the same house as my son yet. Like so, it's like how, where am I gonna stay? If I'm gonna stay on the street like I'm gonna go back to using. But there's no resources, and that's so difficult." (PI02)*

The *multigenerational mothering* subtheme illustrates how the mothers of incarcerated participants provided critical support by caring for their grandchildren in their daughters' absence. This subtheme highlights the multigenerational dimensions of maternal care — the relationship between the incarcerated individual and her mother, and the grandmother caring for her grandchild to support her daughter. This subtheme also underscores the profound ways in which maternal support can persist, even under difficult and restrictive circumstances.

Relationship between themes

Figure 1 illustrates participants' perinatal experiences during incarceration as represented through five interconnected themes, spanning personal experiences, interpersonal experiences and experiences resulting from institutional practices. While a few participants described moments of support, most characterized their perinatal experiences as predominantly negative. The overarching theme, *Precarious Perinatal Care*, captures the instability, uncertainty, and systemic barriers contributing to shaping these experiences. At the institutional level, *Carceral Constraints to Health and Social Supports*

reflects an environment characterized by administrative delays, chronic understaffing, and inconsistent access to health and social supports — conditions which created barriers to health and well-being throughout participants' pregnancies.

At the interpersonal level, *Mistreatment* described participants' experiences of neglect, dehumanization, and dismissive or uninformed interactions with correctional officers. These interactions were a result of the power imbalance inherent in carceral settings. At the individual level, three themes reflected participants' deeply personal experiences of pregnancy and parenting during incarceration: *Crystallization of Pregnancy* captures internal moments of realization and acceptance of pregnancy. *(Im)personal Care of Pregnancy* describes the disruption of self-care routines, highlighting how incarceration compromised participants' physical comfort, emotional regulation, and sense of dignity. *Parenting from the Inside Out* reflects the emotional toll of separation from children, loss of parental autonomy and altered relationships with family—experiences grounded in participants' personal identities as parents. These themes differ from those situated at the interpersonal or institutional level by centring embodied, reflective, and identity-driven experiences shaped from within.

Discussion

Incarcerated individuals in Ontario experience profound reproductive health inequities, including limited access to prenatal care [4], elevated rates of adverse perinatal outcomes such as preterm birth, low birth weight, and NICU admissions [3], and persistent reproductive health needs [9]. This study examined the perinatal experiences of incarcerated individuals to identify critical gaps in service delivery, guide the development of targeted interventions, and support more equitable and responsive perinatal care delivery—all aimed at improving health outcomes.

We explored the perinatal experiences of eight individuals who were formerly incarcerated during pregnancy. Drawing on participants' narratives, one overarching theme, *Precarious Perinatal Care*, and five interconnected themes were constructed. Together, these themes reflect how participants' experiences unfolded across personal, interpersonal, and institutional domains, illustrating the layered and intersecting challenges of navigating pregnancy within carceral settings (see Fig. 1). Findings indicate incarcerated pregnant individuals face significant obstacles within these environments, encountering challenges accessing perinatal care due to gatekeeping, enduring mistreatment, and struggling to secure support both during incarceration and for post-release reintegration.

The carceral environment

Carceral conditions clearly impacted the health, well-being, and access to perinatal care for participants in this study. They reported concerns for their children, limited exercise, inadequate nutrition, limited access to hygiene products, disrupted sleep and emotional challenges. These findings align with Sufrin et al. [21], who reported similar concerns among incarcerated pregnant and postpartum individuals in the United States (US).

Participants' accounts of sleeping arrangements are indicative of overcrowding, inadequate bedding, and administrative barriers within Ontario provincial carceral facilities. The inability to obtain restful sleep compromised the physical well-being of incarcerated pregnant individuals and contributed to increased discomfort and stress. Poor sleep quality among incarcerated women has been reported in previous studies conducted in the US. Harner and Budescu [22] reported 72% of the incarcerated women in their study met the criteria for poor sleepers. Tussey et al. [23] found 76% of incarcerated women experienced poor sleep quality, and 70% exhibited symptoms falling just below the clinical threshold for an insomnia diagnosis. Participants listed inadequate or uncomfortable bedding and excessive noise as factors contributing to poor sleep [23]. Both studies highlight the multifaceted nature of sleep disturbances among incarcerated women, emphasizing the influence of environmental factors and mental health challenges [22, 23].

Mental health distress is widespread among incarcerated pregnant individuals. Knittel et al. [24] found incarcerated pregnant individuals feared labouring and birthing in carceral settings. Howland et al. [25] reported 34% of pregnant and postpartum individuals incarcerated in Midwestern US state prisons met criteria for moderate to severe depression. Tyler et al. [26] found higher mental health needs among incarcerated women in the United Kingdom (UK) compared to men, and Dolan et al. [27] reported half of pregnant individuals incarcerated in England experienced depression or anxiety.

Participants in this study described how their emotional and mental health needs were frequently neglected. When care was available, it was often delayed, inconsistent, and delivered without informed consent. Emotional and mental health were deprioritised in carceral environments, hindered by fragmented administrative processes and subjective, discretionary decision-making. Contributing factors to poor emotional and mental health included the discontinuation or disruption of substance use treatment, limited access to counselling and other therapeutic supports, the use of segregation and mistreatment.

Gatekeeping as a barrier to perinatal services

Institutional gatekeeping within carceral facilities significantly restricted participants' access to perinatal services. Correctional officers and administrators exercised discretion over care delivery, leaving pregnant individuals reliant on non-medical personnel to make critical health-related decisions. These structural barriers resulted in delays and inconsistent access to essential care.

These findings align with Edge et al. [28], who reported security concerns often outweighing healthcare needs for incarcerated individuals in the UK. In the US, Sufrin et al. [21] and Erikson et al. [29] reported delays in receiving previously prescribed medications and inadequate planning for post-release housing and healthcare. Edge et al. [28] also identified correctional regulations and transport logistics as compounding barriers, reinforcing systemic inequities.

Although request forms are intended to initiate access to care, they often function as ineffective gatekeeping mechanisms. Participants described delays, neglect, and disruption in service delivery, consistent with previous findings in the US and Canada [30–32]. These forms, required for all care types, were frequently linked to bureaucratic inefficiencies and restricted pathways to care. Friedman et al. [30] examined "Medical Care Request" forms in a US women's jail and found submissions commonly included requests related to medications, living conditions, symptoms, service types, and urgency. Our participants described similar requirements across health and social needs, regardless of severity, leading to delayed or denied care. Similar issues were identified in the province of Alberta, Canada, where incarcerated women described the "Health Service Request" process as a significant barrier to care [31]. Participants cited vague staff responses, limited provider engagement, and concerns over confidentiality, especially when forms passed through correctional officers. The involvement of non-clinical staff in medical triage was seen as a violation of privacy, reducing willingness to disclose sensitive concerns.

To address these widespread issues, Scharoun & Miller [33] proposed a redesign of traditional paper-based request systems used in Australia. Their recommendations include a digital format to enhance accessibility, strengthen confidentiality safeguards, and facilitate communication. Such modifications have the potential to significantly improve healthcare access across carceral contexts.

This study expands on existing literature by providing a detailed account of how institutional administrative processes, particularly request forms, impede access to perinatal services in Ontario carceral settings.

Systemic harms during incarceration

Mistreatment in carceral settings impacted participants' perinatal experiences. They described being denied informed consent, subjected to neglect and treated in dehumanizing ways when seeking support. These accounts reflect broader institutional culture of disrespect towards incarcerated pregnant individuals and a systemic disregard for their perinatal needs. Such treatment eroded personal dignity, heightened distress and compounded health risks during pregnancy.

Our findings align with those of studies conducted in the US where mistreatment, neglect, and dehumanization have been documented among incarcerated pregnant individuals [32, 34, 35]. King et al. [34] interviewed jail and prison stakeholders, including sheriffs, clinicians, and legal advocates. Stakeholders described forced postpartum withdrawal from opioid agonist treatment and the presence of correctional officers during childbirth. They also highlighted the use of solitary confinement under the pretext of "safekeeping". Additional concerns included poor access to prenatal and addiction care, disrupted continuity of care, and limited communication during transfers.

Formerly incarcerated individuals in other studies described similar experiences. O'Connor et al. [35] and Wennerstrom et al. [32] documented dismissive provider attitudes, delayed or denied psychiatric and pregnancy-related care, and punitive or verbally abusive treatment by healthcare staff. Participants also recounted coerced or uninformed abortion decisions, harmful facility conditions, and care guided by correctional rather than clinical judgment. Collectively, these studies underscore the structural subordination of pregnant individuals' health, dignity, and autonomy within carceral systems.

The essential role of support

Participants described support as critical in navigating pregnancy and parenting during incarceration. Family, friends, and healthcare and social service providers played key advocacy roles, helping to mitigate some of the adverse effects of incarceration on pregnancy, access to care, and parenting. This aligns with research across Canada, the UK, and the US, which consistently highlights the importance of interpersonal and institutional support systems in meeting the health and psychosocial needs of incarcerated perinatal individuals.

Support from correctional healthcare staff, peers, and family members was particularly important for navigating institutional systems, managing emotional and mental distress, and maintaining maternal identity [31, 36, 37]. Structured programs and group interventions, including peer support and birth companionship, contributed to improved coping, empowerment, and reduced isolation [36, 38]. In both UK and US studies,

women engaged in such programs reported feeling more informed and emotionally supported during pregnancy and loss. These relational supports helped mitigate psychological harms associated with incarceration. Doulas are also a source of support which should be considered for individuals who are incarcerated during pregnancy. Incarcerated women who participated in a prison-based doula program in Minnesota, US, reported a very high level of satisfaction with their doula care experience [39]. Black and Indigenous participants in a peer doula training program in Nova Scotia, Canada, viewed their training as not only a means to support others, but also as a foundation to advocate against racism and mistreatment during perinatal care [40]. These convictions reflect the unique insight Black and Indigenous doulas can offer perinatal care systems when supporting incarcerated individuals.

Collectively, these studies emphasize the important role of interpersonal and institutional support in addressing the complex health and psychosocial needs of incarcerated perinatal individuals. Support during incarceration and during the transitional period post-release is essential for fostering continuity of care, emotional well-being, and successful reintegration. Peer, familial, and professional relationships serve as key facilitators for access to care.

Strengths and limitations

To the best of our knowledge, this is the first study examining perinatal experiences among individuals who were pregnant while incarcerated in Ontario. A key strength lies in the documentation of formerly incarcerated and pregnant individuals' lived experiences, providing valuable insight into pregnancy and care within carceral settings. Participants detailed numerous barriers to timely, appropriate perinatal care, alongside challenges affecting parent-child bonding and post-release reintegration. This study offers an in-depth analysis of factors likely contributing to adverse health outcomes for incarcerated individuals and their newborns, making a meaningful contribution to the field.

Some of the strengths of this study include the researcher's sustained engagement with the data and the methodological accessibility offered to participants. XB conducted all data collection and analysis, facilitating an in-depth engagement with the dataset. Since interviews were held virtually, scheduling was efficient, with minimal logistical barriers. This format also offered participants flexibility to join from familiar and convenient locations. Participants were open and forthcoming in their responses, which enriched the quality of the dialogue and supported the collection of rich data. During analysis, XB and WP met weekly to discuss patterns identified across the dataset. The co-authors involved in data analysis and manuscript preparation were diverse and contributed expertise in perinatal healthcare for marginalized populations, reproductive health, maternal-newborn care, clinical practice, and law.

In terms of limitations, six of the eight participants in this study experienced incarceration in the same facility, albeit over a 12-year period, which may have led to findings disproportionately reflecting this facility's policies and procedures. However, five different provincial facilities were represented, and participants' descriptions did not reflect any notable differences in their experiences across sites. Secondly, although Indigenous women are disproportionately incarcerated in Canada, comprising approximately 50% of federally incarcerated individuals [41], no participant in this study identified as Indigenous. Consequently, their experiences remain underrepresented. Despite these limitations, the experiences described by participants are consistent with findings reported in extant literature.

Nearly all participants described negative incarceration experiences. Those who participated may have been particularly motivated to share their perspectives and raise awareness of rights violations during pregnancy in Ontario's carceral system. Given these factors and the qualitative study design, the findings cannot be generalized to all individuals who experienced perinatal incarceration in Ontario. Additionally, findings cannot be extended to carceral settings beyond Ontario, as variations in legal, healthcare, and social service frameworks influence carceral conditions and perinatal care access.

Future research

While this study centred on the experiences of incarcerated pregnant individuals, it did not include the perspectives of healthcare providers, social service workers, or correctional officers. Future research should examine these perspectives to develop a more holistic understanding of barriers to care and service delivery. Examining how providers and institutional staff navigate tensions between care and custody could help explain systemic dynamics perpetuating inequities.

Perspectives from correctional staff and administrators warrant closer attention. Research could identify institutional conditions contributing to mistreatment and explore how accountability measures might be strengthened. Comparative studies across jurisdictions may offer valuable insight by highlighting policy or operational differences which either reinforce or reduce harm, guiding system-level reform.

Another important area for inquiry involves the experiences of incarcerated individuals' parents, who often take on caregiving responsibilities for their grandchildren. Research should consider how grandparents manage legal and institutional processes, access social support,

and shoulder the emotional, financial, and logistical demands created by parental incarceration.

Finally, systemic policy gaps affecting access to perinatal care in carceral settings remain insufficiently addressed. A focused policy analysis on pregnancy and incarceration could help identify structural shortcomings and support the development of more equitable, responsive models of care.

Conclusion

This study examined the perinatal experiences of formerly incarcerated individuals in Ontario, Canada, with a focus on care access during incarceration. Findings highlight the precarious nature of perinatal care in carceral settings, where the mental, physical, and social needs of pregnant individuals often went unaddressed. Based on participants' experiences, the carceral system consistently prioritizes authority and administrative inefficiency over the health and dignity of pregnant individuals, creating significant barriers to timely, appropriate care. Transitions into and out of custody disrupted continuity of care for pregnancy-related health needs and substance use treatment. Systemic delays in access may increase the risk of miscarriage and contribute to poor maternal and neonatal health outcomes.

These findings offer valuable insights for the Ontario Ombudsman, who holds a critical position, allowing them to address systemic injustices across public services, including correctional oversight [42, 43]. Documenting experiences of mistreatment during incarceration exposes institutional failures and may support the Ombudsman's efforts to investigate complaints or recommend policy changes concerning the treatment of incarcerated pregnant individuals [44].

This study underscores the urgent need for structural reform to address harmful conditions and pervasive gaps in care across the period of incarceration. Mapping care pathways in carceral settings may help identify points of interruption in service delivery. Targeted interventions at these junctures could help mitigate the challenges associated with the complexity of perinatal care provision in carceral settings. Improving access to healthcare, social supports, and consistent care during and after incarceration is essential. In tandem, the development of clear, coordinated policies prioritizing the perinatal health of incarcerated individuals and ensuring accountability across systems is imperative. Such efforts would enhance maternal experiences and improve health outcomes for both mothers and their children.

Abbreviations

CAD	Canadian
CAS	Children's Aid Society
C-section	Caesarean section
NAS	Neonatal abstinence syndrome
NICU	Neonatal intensive care unit
UK	United Kingdom
US	United States

Acknowledgements

We would like to express our sincere gratitude to the individuals who participated in this study. Their willingness to share deeply personal and emotional experiences regarding their incarceration during pregnancy is greatly appreciated. Their trust and openness have been integral to the completion of this research, and we are honoured to have had the opportunity to learn from their stories.

Authors' contributions

XB and WP conceived the study. XB and AM contributed to participant recruitment. XB conducted and transcribed interviews. XB and WP coded and analyzed data. XB and WP interpreted data. XB wrote the first draft of the manuscript. XB, WP, AFP, AM and LM revised the manuscript. All authors have read and approved the content of the manuscript.

Funding

XB declares receipt of the following financial support for conducting research activities:

- Bourse de doctorat de l'Institut du Savoir Montfort (ISM).
- Ontario Graduate Scholarship issued through the University of Ottawa.

Data availability

The datasets generated and/or analyzed during the current study are not publicly available due to the sensitive nature of the data from participants and information about their experience during incarceration while pregnant but are available from the corresponding author on reasonable request.

Declarations

Ethics approval and consent to participate

The study was approved by the University of Ottawa Research Ethics Board (REB) under Ethics File Number: H-01-23-8376. Participants received an electronic copy of the consent form when the interview was scheduled and were asked to review the document in advance. On the day of the interview, each participant was asked whether they had read the consent form and if they had any questions. They were reminded that participation was voluntary, they were under no obligation to answer any question, and they could withdraw from the interview at any time. Participants were also informed they could ask questions at any point during the interview. Oral informed consent was obtained from each participant prior to recording their interview. In alignment with the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS2 2022), which notes that 'where consent is not documented in a signed consent form, researchers may use a range of consent procedures, including oral consent,' the use of oral consent was considered appropriate given the virtual format of the interviews and the robust procedures used to ensure participants' understanding and voluntary participation. This study was conducted in accordance with the ethical principles outlined in the Declaration of Helsinki.

Consent for publication

Not applicable.

Competing interests

The authors declare no competing interests.

Author details

[1]Interdisciplinary School of Health Sciences, University of Ottawa, Ottawa, ON, Canada
[2]Ottawa Hospital Research Institute, Ottawa, ON, Canada
[3]Civil Law Section, Faculty of Law, University of Ottawa, Ottawa, ON, Canada
[4]School of Nursing, University of Ottawa, Ottawa, ON, Canada

Received: 17 April 2025 / Accepted: 25 June 2025
Published online: 12 August 2025

References

1. Miao Q, Guo Y, Erwin E, Sharif F, Berhe M, Wen SW, et al. Racial variations of adverse perinatal outcomes: a population-based retrospective cohort study in Ontario, Canada. PLoS One. 2022;17(6):e0269158-0269158.
2. Bacciaglia M, Neufeld HT, Neiterman E, Krishnan A, Johnston S, Wright K. Indigenous maternal health and health services within Canada: a scoping review. BMC Pregnancy Childbirth. 2023;23(1):327–327.
3. Carter Ramirez A, Liauw J, Costescu D, Holder L, Lu H, Kouyoumdjian FG. Infant and maternal outcomes for women who experience imprisonment in Ontario, Canada: a retrospective cohort study. J Obstet Gynecol Can. 2020;42(4):462–e4722.
4. Carter Ramirez A, Liauw J, Cavanagh A, Costescu D, Holder L, Lu H, et al. Quality of antenatal care for women who experience imprisonment. JAMA Netw Open. 2020;3(8):e2012576–2012576.
5. Testa A, Fahmy C, Jackson DB. Incarceration exposure and prescription opioid use during pregnancy. Drug Alcohol Depend. 2022;235:109434–109434.
6. Corsi DJ, Hsu H, Fell DB, Wen SW, Walker M. Association of maternal opioid use in pregnancy with adverse perinatal outcomes in Ontario, Canada, from 2012 to 2018. JAMA Netw Open. 2020;3(7): e208256.
7. Bell MF, Kelty E, Segal L, Dennison S, Kinner SA, Dawe S, et al. Neonatal abstinence syndrome and other neonatal outcomes for the infants of women experiencing incarceration: a retrospective cohort study. Aust J Soc Issues. 2024;59(2):344–57.
8. Lennox R, Patel T, Marmel A, Shaw E. Prenatal care outcomes in women with substance use disorders: a retrospective cohort study. J Obstet Gynaecol Can. 2021;43(7):850–5.
9. Liauw J, Jurgutis J, Nouvet E, Dineley B, Kearney H, Reaka N, et al. Reproductive healthcare in prison: a qualitative study of women's experiences and perspectives in Ontario, Canada. PLoS One. 2021;16(5): e0251853-0251853.
10. Kirubarajan A, Tsang J, Dong S, Hui J, Sreeram P, Mohmand Z, et al. Pregnancy and childbirth during incarceration: a qualitative systematic review of lived experiences. BJOG. 2022;129(9):1460–72.
11. Reddy J, Black K, Bazemore K, Jordan K, Jackson JB, Knittel AK. Ethical inclusion: risks and benefits of research from the perspective of perinatal people with opioid use disorders who have experienced incarceration. PLoS One. 2023;18(11):e0294604-0294604.
12. National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research. The Belmont report: ethical principles and guidelines for the protection of human subjects of research. 1979.
13. Bradshaw C, Atkinson S, Doody O. Employing a qualitative description approach in health care research. Glob Qual Nurs Res. 2017;4. https://doi.org/10.1177/2333393617742282.
14. Malterud K, Siersma VD, Guassora AD. Sample size in qualitative interview studies: guided by information power. Qual Health Res. 2016;26(13):1753–60.
15. Braun V, Clarke V. Thematic analysis: a practical guide. London: SAGE; 2022.
16. American College of Obstetricians and Gynecologists. ACOG - CLinical. Available from: https://www.acog.org/clinical/clinical-guidance/committee-opinion/articles/2021/07/reproductive-health-care-for-incarcerated-pregnant-postpartum-and-nonpregnant-individuals. [cited 2025 Jan 31].
17. The Collaborating Centre for Prison Health and Education (CCPHE). The College of Family Physicians of Canada. Available from: https://www.cfpc.ca/CFPC/media/Resources/Health-Policy/MCU-Guidelines.pdf. [cited 2025 Jan 31].
18. Quality of Care Network Secretariat. Quality of care network. 2019. Available from: https://www.qualityofcarenetwork.org/sites/default/files/2019-09/2430%20M%26E%20Framework%20290219%20pressready.pdf. [cited 2025 Jan 31].
19. Government of Ontario. Ministry of the solicitor general. 2024. Available from: https://www.ontario.ca/page/inmate-information-guide-adult-correctional-facilities. [cited 2025 March 13].
20. Public Health Agency of Canada. Healthy pregnancy. 2024. Available from: https://www.canada.ca/en/public-health/services/health-promotion/healthy-pregnancy/healthy-pregnancy-guide.html. [cited 2025 Mar 08].
21. Sufrin C, Ziv T, Dayton L, Latkin C, Kramer C. They talked to me like i was dirt under their feet: treatment and withdrawal experiences of incarcerated pregnant people with opioid use disorder in four U.S. states. SSM Qual Res Health. 2024;6: 100453.
22. Harner HM, Budescu M. Sleep quality and risk for sleep apnea in incarcerated women. Nurs Res. 2014;63(3):158–69.
23. Tussey EJ, Perez GR, Lynch SM. Sleepless behind bars: the connection between mental health, environment, and sleep among women in jail. Sleep Adv. 2024;5(1): zpae012–012.
24. Knittel AK, Ferguson EG, Balasubramanian V, Carda-Auten JR, DiRosa EA, Rosen DL. We don't wanna birth it here: a qualitative study of Southern jail personnel approaches to pregnancy. Women Crim Justice. 2023;33(5):349–62.
25. Howland MA, Kotlar B, Davis L, Shlafer RJ. Depressive symptoms among pregnant and postpartum women in prison. J Midwifery Womens Health. 2021;66(4):494–502.
26. Tyler N, Miles HL, Karadag B, Rogers G. An updated picture of the mental health needs of male and female prisoners in the UK: prevalence, comorbidity, and gender differences. Soc Psychiatry Psychiatr Epidemiol. 2019;54(9):1143–52.
27. Dolan R, Hann M, Edge D, Shaw J. Pregnancy in prison, mental health and admission to prison mother and baby units. J Forensic Psychiatry Psychol. 2019;30(3):448–66.
28. Edge C, Stockley MR, Swabey ML, King ME, Decodts MF, Hard DJ, et al. Secondary care clinicians and staff have a key role in delivering equivalence of care for prisoners: a qualitative study of prisoners' experiences. EClinicalMedicine. 2020;24:100416–100416.
29. Erickson M, Deering K, Ranville F, Bingham B, Young P, Korchinski M, et al. They give you a bus ticket and they kick you loose: a qualitative analysis of post-release experiences among recently incarcerated women living with HIV in metro Vancouver, Canada. Violence Against Women. 2024;30(11):2935–58.
30. Friedman E, Burr E, Sufrin C. Seeking recognition through carceral health care bureaucracy: analysis of medical care request forms in a County jail. Soc Sci Med. 2021;291: 114485.
31. Ahmed R, Angel C, Martel R, Pyne D, Keenan L. Access to healthcare services during incarceration among female inmates. Int J Prisoner Health. 2016;12(4):204–15.
32. Wennerstrom A, Sugarman M, Martin D, Lobre CB, Haywood CG, Niyogi A. 'You have to be almost dead before they ever really work on you in prison': A qualitative study of formerly incarcerated women's health care experiences during incarceration in Louisiana, U.S. Health Soc Care Commun. 2022;30(5):1763–74.
33. Scharoun L, Miller E. Agency and access: redesigning the prison health care request process. In: Miller E, Winter A, Chari S, editors. How designers are transforming healthcare. Singapore: Springer; 2024. pp. 137–50.
34. King Z, Lyerly AD, Knittel AK. Safekeeping of pregnant people experiencing incarceration. Women Crim Justice. 2023;33(5):363–77.
35. O'Connor SK, Vanjani R, Cannon R, Dawson MB, Perkins R. General and reproductive healthcare experiences of formerly incarcerated women in the United States: a qualitative study. Int J Prison Health. 2023;19(4):545–64.
36. Koons-Witt B, Crittenden C, Crick S. Coping with incarceration: how women adjust to being separated from their children. Crim Justice Behav. 2024;51(3):353–74.
37. Wilson A, Koons-Witt B, Pasquire N. Mothering experiences in prison: exploring distinctions between maternal and paternal caregiving arrangements. Fam Relat. 2023;72(5):2754–76.
38. Thomson G, Mortimer R, Baybutt M, Whittaker K. Evaluation of birth companions perinatal and peer support provision in two prison settings in England: a mixed-methods study. Int J Prison Health. 2023;19(2):125–42.
39. Shlafer R, Davis L, Hindt L, Pendleton V. The benefits of doula support for women who are pregnant in prison and their newborns. In: Poehlmann-Tynan J, Dallaire D, editors. Children with incarcerated mothers. Switzerland: Springer International Publishing; 2021. pp. 33–48.
40. Paynter M, Matheson L, McVicar L, Jefferies K, Gebre K, Marshall P, et al. Peer doula support training for black and Indigenous groups in Nova Scotia, Canada: a community-based qualitative study. Public Health Nurs. 2022;39(1):135–45.
41. Amato A, Lindsay B. CTV news. 2024. Available from: https://www.ctvnews.ca/edmonton/article/indigenous-population-of-incarcerated-women-still-rising-despite-calls-to-action/. [cited 2025 Mar 22].
42. Ombudsman Ontario. Ombudsman Ontario. 2025. Available from: https://www.ombudsman.on.ca/what-we-do/how-we-work. [cited 2025 Apr 10].
43. Ombudsman Ontario. Ombudsman Ontario. 2025. Available from: https://www.ombudsman.on.ca/have-a-complaint/who-we-oversee. [cited 2025 Apr 10].
44. Ombudsman Ontario. Ombudsman Ontario. 2017. Available from: https://www.ombudsman.on.ca/resources/reports,-cases-and-submissions/reports-on-investigations/2017/out-of-oversight,-out-of-mind. [cited 2025 April 10].

Publisher's Note