



A Phenomenological Inquiry into the Psychological Experiences of Incarcerated Pregnant Women

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Abstract

Objective With the increasing number of incarcerated women worldwide, the rate of women who experience pregnancy in prison, has also increased in this population. Exploring the unique experience of pregnant prisoners can contribute to understanding the complex world of this vulnerable population and, as a result, tailoring programs to promote their health status. The objective of this study was to understand the psychological experience of pregnancy in prison based on the lived experiences of incarcerated women.

Methods This was a qualitative inquiry using van Manen’s approach to phenomenology. Seven pregnant and four early postpartum women, with experience of pregnancy during incarceration, were selected purposefully in a prison in Iran from 2019 to 2020. In-depth semi-structured interviews were used to collect data. To analyze data, six-step van Manen’s descriptive-interpretive phenomenological approach was adopted using MAXQDA10 software.

Results The main theme of “white torture”, a term used to describe the psychological and emotional distress experienced by incarcerated pregnant women, emerged from the data analysis. This theme echoes the pressure and torment of pregnancy on incarcerated women and consists of two subthemes: “captive to bitter and harsh emotions” and “suffering from psychosomatic pain and injuries.”

Conclusion for Practice As an emotional trauma, pregnancy puts incarcerated women under psychological torture. Policies should be developed towards the acknowledgment and meeting of the unique psychological needs of pregnant women in prison. It is also crucial for healthcare providers to provide women in prison with training on coping strategies to address the psychological and emotional challenges of pregnancy.

Significance

The women who get pregnant while incarcerated face many of emotions ranging from isolation and grief to anger and hostility. Incarcerated pregnant women are constantly tormented; a torment that may have no physical evidence but for pregnant prisoners, their bulging abdomen, leaves deep and long-term psychological impacts that seems like constant torture. This shows that the psychological needs of these women should be identified, and comprehensive executive-guaranteed mental health programs must be developed to promote their psychological and emotional health.

Keywords Pregnant women · Prison · Psychological

Introduction

The global number of incarcerated population is estimated to be approximately 11 million worldwide, with 6.9% being women and girls. In the United States, the rate of incarcerated women is the highest at 665 per 100,000 individuals, while San Marino has the lowest rate at 3 per 100,000 individuals (Wansley, 2021). Each year, an estimated 58,000 pregnant women enter prisons globally, facing pregnancy-related challenges during incarceration (Wang, 2021).

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In Iran, the incarcerated female population is on the rise, currently reaching 6,880 out of the overall prison population (Ghazinezhad & Abasian, 2011). These women are primarily aged 30 and older, with most arrests occurring in the 25–34 age group, followed by the age group of 18–24 (Rimaz et al., 2016). About half of them are married and have an average of 1.3 children (Ghazinezhad & Abasian, 2011). Common offenses among them include drug-related crimes and acts against chastity (Rashidi & Barati, 2017). Their average prison sentence is approximately 19.98 months (Aborisade & Fayemi, 2016). These women typically come from disadvantaged socioeconomic backgrounds (Ataei et al., 2011). 66% of them have a history of drug use, with about 5% being addicted to injection drugs (Rashidi & Barati, 2017).

Pregnancy is an important period in woman's life (Abbott L, 2020) and accompanied by various psychological issues (Shah et al., 2011). Various circumstances and policies of prison can negatively impact the experience of pregnancy (Fochi et al., 2014). Physical and environmental constraints in prison can lead to limited access to proper healthcare and medical services (van den Bergh et al., 2011). Lack of direct communication with family, along with restrictions on visits, can intensify feelings of isolation and loneliness (Sapkota et al., 2022). Furthermore, policies such as no maternity leave or limitations on maternal rights can contribute to increased anxiety among imprisoned pregnant women (Friedman et al., 2020). These constraints and limitations can result in heightened concerns, and increased psychological hardships (Mukherjee et al., 2014).

Pregnant inmates face exceptional challenges, as they juggle their roles as prisoners and expectant mothers, potentially reshaping their views on motherhood (Wismont, 2000). Tailored support is crucial for this population (Fochi et al., 2014). Initial health assessments, especially mental well-being, upon entry are vital (Bard E, 2016), yet many prisons lack the resources to address serious mental health issues (Mignon, 2016), leaving pregnant inmates susceptible to various problems, including mental health disorders, substance abuse, recidivism, domestic violence, physical health issues, and parenting difficulties due to limited family support and social isolation (DeHart, 2018). In some instances, involvement with the criminal justice system can exacerbate trauma and psychological challenges rather than providing healing. Overall, pregnancy in prison poses complex challenges and risks to incarcerated pregnant women's psychological and physical well-being (Kennedy et al., 2016).

Pregnant incarcerated women worldwide experience varied childbirth arrangements – some give birth in prison, while others go to external hospitals. Newborns usually stay in prison or external facilities. Access to medical care and nutrition is challenging, affecting both mother and child (Alirezai & Latifnejad Roudsari, 2020). In Iran, pregnant

inmates may give birth in prison or be sent to external hospitals. Babies temporarily stay in prison or go to charities with judicial approval (Watch, 2021), impacting maternal mental health (Alirezai & Latifnejad Roudsari, 2022a, b).

Limited research suggests that addressing food security, substance abuse, and violence in prisons could improve perinatal outcomes. However, maternal mental health in prison lacks conclusive research, emphasizing the need for robust studies and appropriate mental health programs (Baker, 2019). Despite established standards by organizations like the American Correctional Association and the National Commission on Correctional Health Care, prisons often fall short in meeting pregnancy-related mental health guidelines (Bronson & Sufrin, 2019), leaving pregnant inmates with psychological challenges and emotional vulnerability (Hayes et al., 2020). Although the psychological experiences of pregnancy in prison have been studied worldwide (Abbott et al., 2020; Fochi et al., 2014; Wismont, 2000), but the picture presented by previous literature on the psychological aspect of pregnancy in prison has hitherto been vague and confusing (Goffman, 1968). Prior research on the psychological aspects of pregnancy in prison has been hindered by cultural sensitivities, limited access to the prisoners, and funding constraints (Goffman, 1968; Canada et al., 2022).

Understanding the psychological experiences of incarcerated pregnant women is vital for developing policies, intervention programs, and tailored support services (Alirezai & Latifnejad Roudsari, 2022a, b). Through a deep understanding of imprisoned women's psychological experiences of pregnancy, prison employees and health caregivers could enhance their understanding of the psychological aspect of pregnancy in prison and therefore provide more psychological support, ultimately promoting the well-being of this vulnerable population. This study therefore, aimed to gain insight into the psychological experiences of pregnancy in prison based on the lived experiences of incarcerated pregnant women.

Methods

Study Design

This study adopted van Manen's descriptive-interpretive approach to phenomenology, known for its use in qualitative research to deeply understand individual experiences and meanings (Neubauer et al., 2019; Van Manen, 2016). This method prioritizes detailed description through in-depth interviews, allowing incarcerated pregnant women to freely express their experiences, emotions, and mental states (Speziale et al., 2011; Alirezai & Latifnejad Roudsari, 2020).

Max van Manen's descriptive-interpretive phenomenology (Van Manen, 2016) involves six steps including (1) Turning to the nature of the lived experience in which researchers focus on the phenomenon's nature to grasp its essence. (2) Exploring real experience through which researchers examine the actual experiences, not their conceptualization, from various perspectives. (3) Reflecting on essential themes, which involves contemplating essential themes that characterize the phenomenon. (4) Describing the phenomenon through the art of writing and rewriting in which the researchers create a vivid narrative to immerse readers in the phenomenon, using evocative language. (5) Maintaining a strong and oriented relation with the phenomenon which entails staying engaged with the phenomenon, revisiting the data, and seeking diverse viewpoints. (6) Balancing research context which allows: researchers to consider both parts and the whole, ensuring a holistic analysis of the research context (Fig. 1).

Setting

The study was conducted in one of the prisons in Iran with the largest and most significant correctional facilities, where around 700 female inmates were housed, including approximately 40 to 50 pregnant women. The prison had 12 resident buildings, each categorized by security level, ranging from low to high, based on inmates' security needs and risk levels.

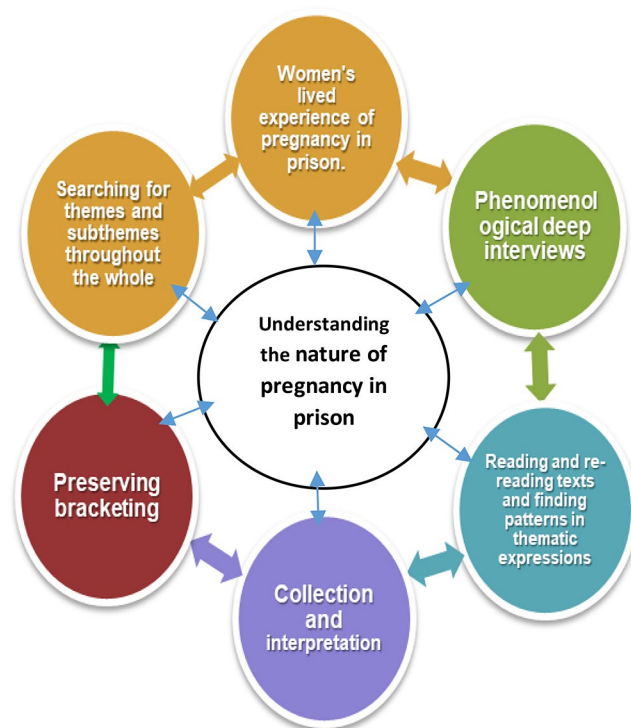


Fig. 1 The six practical steps of Van Manen's methodology

Participants

The study included incarcerated pregnant women who experienced pregnancy while in prison. These women could have been pregnant prior to their arrest or become pregnant during incarceration due to having family visits with their spouses while imprisoned. Also, they should either spent at least one month of their pregnancy in prison or gave birth while incarcerated or completed the postpartum period in prison. Participants were fluent in Persian and gave their consent to take part in the study. Priority was given to pregnant women with longer potential incarceration periods, providing more extended experience of pregnancy in prison.

Sampling

Participants were selected using purposeful sampling to ensure maximum variation in characteristics such as age, education, number of pregnancies, pregnancy stage, duration of incarceration, and circumstances of pregnancy. The female ward supervisor also played a role in participant selection based on her discretion to achieve maximum variation. The study involved seven women experiencing pregnancy and four in the early postpartum period, with no dropouts or refusals to participate. The data collection period extended from August 2019 to May 2020.

Data Collection

The interviews were conducted within the prison in a dedicated room to ensure safety and privacy. Confidentiality and anonymity were strictly maintained. Participants were briefed on the purpose of the study, and due to prison regulations, interviews were conducted using note-taking. The interviews were semi-structured, focusing on topics such as prisoners' feelings about discovering their pregnancy in prison and comparing it to previous experiences. They were asked open-ended questions like "How did you feel when you discovered that you are pregnant in prison?" or "What was it like when you faced with pregnancy in jail?" or "What did it mean to you" or "Can you please describe as detailed as possible when you ended up in prison while being pregnant?". Detailed notes were taken during interviews, and a feedback mechanism was established for participants to provide additional input regarding any points they felt were misrepresented or not fully captured in the initial note-taking process. The researchers paid particular attention to the non-verbal communication cues and used narrative anecdotes to provide reflections on the data collection throughout the interview. A follow-up interview was conducted with one participant who gave birth in prison. Interviews lasted 30 to 50 min, with a total of 11 participants. Saturation was

achieved after nine interviews, but two more were conducted for completeness. Transcripts were validated by participants before the data analysis.

Analysis

The data analysis employed Max van Manen's approach, emphasizing thematic analysis with holistic, selective, and detailed approaches. The holistic approach involved multiple reviews of transcripts to capture their essence. A concise summary was generated using a phenomenological lens. The progressive approach began with holistic understanding and crafted descriptive texts, followed by selective and detailed analysis to identify thematic phrases and subthemes. Commonalities led to main themes. Distinguishing incidental from essential themes focused on the core meanings.

Participant checking ensured validity, and MAXQDI0 software managed data. Qualitative rigor involved orientation, strength, richness, and depth, following van Manen's guidelines. Trust was established, latent meanings uncovered, and Lincoln and Guba's framework strengthened credibility, dependability, confirmability, and transferability (Van Manen, 2016; Speziale et al., 2011).

Ethical Consideration

The study received ethical approval Local Research Ethics Committee (code IR.x.1398.099) and obtained permissions from the General Directorate of Prisons Organization to access the women's ward in the prison. Participants provided written informed consent and were assured of their freedom to choose whether to accept or refuse to participate in the study as well as their right to withdraw without consequences. Confidentiality and anonymity were maintained. The study adhered to COREQ criteria in reporting qualitative research.

Results

In total, out of 11 total participants, seven participants were less than or equal to 35 years old and four participants were greater than or equal to 36 years old. Four participant's completed a diploma. Of the seven pregnant participants, four were at 23 weeks gestation or less. Four participants were in their post-partum period. Six participants were incarcerated for less than or equal to one year, and five were incarcerated more than one year. Four participants were incarcerated beforehand.

The main theme, "white torture," encompasses the psychological torment experienced by incarcerated pregnant women. This distressing ordeal is intensified by the harsh

prison environment, inadequate medical care, separation from family, and uncertainty about their children's future. This theme includes subthemes: "captive to bitter and harsh emotions" and "suffering from psychosomatic pain and injuries."

Captive to Bitter and Harsh Emotions

This theme describes the emotions and indications of the response of incarcerated women to pregnancy in prison. Their psychological and emotional reactions are similar to being imprisoned in the darkest depths of the mind. It is like experiencing the darkest and most bitter moments of their lives. For many of these women, the realization that they are pregnant while in prison can be overwhelming. They may feel a range of emotions, including sorrow, anxiety, and fear, as they struggle to come to terms with the fact that they will be giving birth while incarcerated. This theme was emerged from subthemes of "sorrow from being pregnant in prison", "the agonizing feeling of pregnancy in captivity", "being ashamed from being pregnant in prison", "fear of pregnancy in a dungeon", and "hating being pregnant in prison".

Sorrow from Being Pregnant in Prison

Pregnancy in prison is a sorrowful experience for many women. The shadow of pregnancy adds to their already harsh life behind bars, and it shatters their not-so-pleasant world like a wrecking ball. It intensifies their pain and suffering, leading them to the edge of depression. The prison itself is an environment that makes pregnancy bitter and difficult for them. A participant who was incarcerated for less than five years conveys her sadness as:

"I don't have a good feeling towards pregnancy whatsoever, and I'm very sad about being pregnant here. I would definitely be happy if I was out, but now I'm not. When I think about my pregnancy, my heart aches and it saddens me. I have depression and I'm not happy at all" (Participant 5,30s).

The participants acknowledge that before their own personal experience, they did not have a complete understanding of the difficult circumstances faced by incarcerated pregnant women. They expressed that only after personal experience people would be able to comprehend the difficult circumstances of pregnancy in prison and understand its sorrows and hardships:

"You won't understand how it feels until you are in this position. I didn't know what pregnancy could be

like in these conditions, what grief it carries, until I was incarcerated” (Participant 7, 20s, over 5 years in).

The Agonizing Feeling of Pregnancy in Captivity

Being pregnant while incarcerated is accompanied by physical and emotional pain. Participants described that pregnancy in prison is extremely difficult and feels like a crisis. They believed that their bodies and their souls are in agony. One participant who experienced six pregnancies emphasized on the additional difficulties that pregnant incarcerated persons face, including the ambiguous status and physical issues. Her quote sheds light on the institutional ignominy and the pains of imprisonment that pregnant incarcerated women experience:

“You know, life in prison is difficult and it is even harder when someone is pregnant. The most painful thing is to become pregnant in such conditions. Being pregnant and also being incarcerated is extremely bothering. It’s like you’re in a crisis. Your body is in agony and your soul is in agony” (Participant 8, 40s, under 5 years in).

For women who had previously experienced imprisonment, the portrayal of this experience was more specific and distressing. Pregnancy significantly intensified the emotional and physical burden of this experience. These women believed that imprisonment naturally entails harsh conditions and severe limitations and pregnancy can exacerbate feelings of injustice, discomfort, and anxiety in this tough circumstances. They emphasized that with the addition of pregnancy, new constraints are added to the experience of incarceration and these limitations can lead to increased stress, deprivation, and profound impacts on their physical and emotional needs:

“I’ve been in prison before but this time, it’s very different. This time is much worse because I have become pregnant and it’s much harder for me.” (Participant 6, 30s, under 5 years in).

Being Ashamed from Getting Pregnant in Prison

Women who were incarcerated and become pregnant experienced complex emotions. They felt embarrassed when they imagined what others think about their pregnancy in this setting. These women believed that motherhood requires deservingness, but they did not feel that they are worthy of it. They perceived themselves as criminals who lack the

qualifications for being a mother in the eyes of everyone else. In fact, these women were preoccupied with others’ perspectives on pregnancy in prison and were concerned about negative judgments and critiques. A participant in her thirties, experiencing her pregnancy in prison, points out the role of the prison environment in creating the feeling of self-contempt:

“You know, this is not a place where a person would want to be pregnant. Others say to themselves that she would be ashamed of getting pregnant here. Well, I feel ashamed when others see that a person in such a situation became pregnant. I believe that motherhood requires competence and I feel that I’m not worthy of it because, after all, I am a criminal, and that’s why now I feel very ashamed.” (Under 5 years in).

Fear of Pregnancy in a Dungeon

Fear of Pregnancy in a bleak confinement was the interpretation of some women, who found themselves imprisoned while were pregnant, and initially experienced an overwhelming sense of fear. The dungeon-like prison environment for them served as a potent trigger, prompting a multitude of questions about navigating pregnancy within its confines and making crucial decisions about the uncertain future. These contemplations further escalated their trepidation and unease. Overall, both the prison setting and pregnancy itself were intricate matters that gave rise to emotional states like fear and anxiety. Women encountered conflicting dilemmas, and their quest for solutions only amplified the sharpness of their fear:

“At first, when I was incarcerated while pregnant, I was very scared. Prison seemed like a dungeon and I was truly horrified. I asked myself what I’m going to do in prison with a bulging belly.” (Participant 1, 20s, 1, under 5 years in).

In some women, pregnancy established a connection with their previous experiences. They emotionally recalled their past experiences and underwent similar emotions and concerns. In fact, pregnancy in prison was an amplified experience for these individuals. Their feelings of stress and fear showed that the profound effects of their past events still persist. Pregnancy created a state of returning to a previous time and place for these individuals, bringing them back to their bitter previous sensations:

“When I think about my pregnancy, I feel like I’ve gone back to the day of my incarceration, and the

same level of stress and horror that I felt three years ago comes back to me.” (Participant 5, 30s, over 5 years in).

It can be said that the participant’s experience of anxiety and concern regarding their child during pregnancy in prison was significant. This experience demonstrated a deep mother-child bond and showed that the participant is anxious about losing this bond in case of not being released. According to the participants, this experience reflected a sense of restlessness and worry that was associated with physical limitations and potential future access barriers to their child:

“I have a lot of anxiety... I can’t sleep at night. I’m always thinking about my child, how long they will stay with me, and what will happen to them if I don’t get released.” (Participant 5, 30s, over 5 years in).

Repulsive Pregnancy in Captivity

In some women, pregnancy was an unwanted situation. Some pregnant prisoners felt that an unwelcome guest has entered to their lives, and they have a strong dislike for this situation. However, due to commitment and duty, they felt obligated to confront and accept it. Participants believed that pregnancy accompanied by feelings of disgust and aversion indicates a complete understanding of the internal stress and conflict. These women said that they clearly did not wish to experience pregnancy, but due to reasons such as responsibility or lack of access to other options, they were compelled to deal with it:

“I feel like I have an uninvited guest that has intruded on my life. A guest that I hate it but also feel obligated to entertain. But there’s nothing I can do, even though I don’t want it, but what choice do I have except to keep it. I have to do so.” (Participant 10, 30s, over 5 years in).

Deserving Contempt for Being Pregnant in Prison

Incarcerated pregnant women commented that the feeling of powerlessness and lack of control over the private matters of their pregnancy and delivery makes them deserving contempt for being pregnant. These women were not aware of what will happen to them after delivery. They said that following the rules of prison causes them to deserve contempt and because of that to lose their independence and the ability to make decisions when necessary:

“In this place, you don’t have access to anything. If something happens to you or you are faced with a problem, you can’t do anything about it. At the beginning of pregnancy when I started bleeding, they said that they can’t do anything about it and that either I will have a miscarriage or I won’t.” (Participant 5, 30s, over 5 years in).

Some pregnant women who were in prison experienced feelings of hopelessness and uncertainty. Participants indicated that within prisons they were under immense pressure during pregnancy. Their concerns reflected uncertainty and anxiety about the future and the occurrence of unfavorable events. They felt overwhelmed by the challenges and pains of childbirth and experienced a sense of loneliness, seeking help and rescue. Participants coped with their feelings of helplessness and incapacity with stress and distress. They were concerned about negative consequences and outcomes associated with childbirth that manifested in their minds and consciousness.

“I feel miserable; I don’t know what to do or what will happen to me. I’m constantly afraid of going into labor in the middle of the night or something happening to me, while I’m not capable of doing anything and nobody comes to my rescue. After all, pregnancy and labor come with a lot of problems and pain.” (Participant 3, 20s, under 5 years in).

One of the participants said that a pregnant woman in prison is robbed of all the customary hopes and dreams, and even the last maternal liberties, i.e. the liberty to deal with the events of pregnancy, are taken away from her. After years of infertility, a participant, who had served less than five years in prison, became pregnant with profound astonishment and hopes that she thought would be unattainable. She expressed:

“I had been infertile for years and truly believed that I wouldn’t get pregnant here. I don’t mean to be ungrateful but I didn’t want it to happen here, because my husband and I had a lot of plans for it. I wanted to be able to visit good doctors, eat good foods, and take care of my infant and myself. However, here, I cannot do any of these things in the way I want to. All my wishes have been ruined.” (Participant 11, 30s).

Suffering from Psychosomatic Pain and Injuries

This theme describes that pregnant women in prison face severe psychological and physical stressors, involving

various factors. Pregnant women in prison described that they are under psychological pressure, which can manifest as mental and physical pain. They felt that pregnancy has added an extra burden to their shoulders through feelings of weakness and helplessness. This sense could lead to the emergence of psychological and physical pains and intensified their negative emotions. Additionally, in the experience of pregnancy in prison, women encountered multiple physical and psychological issues, which can result from inadequate conditions and reduced access to medical care. This theme emerged from subthemes of “an afflicted and wearied body”, and “a wretched and depressed soul”.

An Afflicted and Wearied Body

The prison conditions had a negative impact on all dimensions of the participants' lives and reflected the experience of discomfort and anxiety among pregnant women in the prison environment. Descriptions of these conditions from the participants' perspective indicate that these women were constantly subjected to humiliation and surveillance, and they felt that their privacy is violated. The prison conditions negatively affected their sleep and rest, causing fatigue and inadequate energy. The disregard for basic needs such as hygiene, rest, and nutrition caused them to have an afflicted and wearied body experiencing suffering and discomfort:

“I’m always being treated like dirt in this prison. It’s like they’re digging into my personal space, and I feel my privacy is totally invaded. This situation keeps me on edge, with constant unease and anxiety. It’s freaking me out, and I can’t even find a tiny bit of peace. Constant light. Lights stay on, even at night. Sleep’s impossible. Waking us all in the morning, feels like I never slept, still tired. Hard, uncomfortable bed, scarce pillows, facilities lacking. Sitting, getting up, sleeping, and eating – all tough. I’m in great discomfort. Basic needs like hygiene, rest, and food were ignored, causing us pain and distress.” (Participant 5, 30s, over 5 years in).

The prison environment and factors related to the access to drugs such as methadone had a considerable impact on the physical condition and pain level of participants with addiction history. The lack of necessary substances or delays in obtaining them result in significant pain and discomfort for their bodies. In prison, these individuals were deprived of control and responsibility over taking their required medications, which leads to feelings of powerlessness and injustice:

“Whenever there’s a delay in getting my syrup or its dosage is insufficient, I feel like both mentally and

physically in pain. It’s as if every part of my body is being torn apart, while at the same time, I’m filled with various kinds of pains from within. But during my previous pregnancies when I was outside of prison and had control over my medications, it was entirely different - I wouldn’t experience any pain at all. I even went through childbirth as if nothing had happened. (Participant 10, 30s, over 5 years in)

A Wretched and Depressed Soul

Pregnancy created some changes in the circumstances and experiences of some participants. Women indicated that pregnancy intensifies feelings of weakness and concern for them. They believed that, given their current situation, they cannot fully defend their rights, which leads to a sense of powerlessness and insecurity:

“I wouldn’t be so frightened if I wasn’t pregnant, but now I am, I can’t fully defend my rights. My situation is different now, now I feel weak, and I don’t have a good feeling.” (Participant 7, 20s, under 5 years in).

The stressful environment and the fights and arguments arising from it might be a normal experience for all incarcerated persons, but for pregnant women, it was accompanied with double pain and agony. Fights and violence in prisons evoked feelings of fear and horror in pregnant women. Participants emphasized that confronting scenes of violence and witnessing the violent behavior of others is frightening for them:

“When a fight breaks out, I get very scared and terrified. One time, an incarcerated persons broke a window and the others climbed the bars to watch the fight. It was completely normal for them but I was very scared. I was on the verge of crying.” (Participant 1, 20s, under 5 years in).

Participants believed that the difficulty of enduring labor and delivery pains is obvious to everyone, but when the individual is forced to tolerate handcuffs and leg cuffs in addition to labor, this multiplies their experience of pain. Participants expressed concerns about the impact of wristbands and ankle cuffs during childbirth. They believed that these items could make the childbirth process more difficult and painful for them. They expressed that their own pain and suffering should be enough, and they should not be subjected to additional distress and pain:

“When I think about handcuffs and leg cuffs, I imagine the difficulty of being tied to the bed and giving birth. Oh God, my own pain and my own agony seems enough; why this misery has been added to it” (Participant 8, 40s, under 5 years in).

Discussion

The study aimed to explore the psychological experiences of pregnant incarcerated women in Iran. The main theme, “white torture,” emerged from two sub-themes of “captive to bitter and harsh emotions” and “suffering from psychosomatic pain and injuries.”

The term “white torture” aptly describes the conditions faced by incarcerated pregnant women, who endure psychological and emotional distress similar to those subjected to white torture in prisons. They experience isolation, continuous surveillance, physical and psychological reactions, heightened stress, feelings of helplessness, and a lack of control over their situations, mirroring the experiences of individuals enduring white torture. Additionally, both groups grapple with insecurity and fear of the future. While those undergoing white torture fear the unpredictability of prison conditions, incarcerated pregnant women also share this fear due to uncertainty about their pregnancy status in the prison environment.

One of the emerged theme titled “captive to bitter and harsh emotions” highlights the issue that incarcerated pregnant women experience a profound impact on their mental well-being, similar to the findings of study by (Abbott et al., 2020). Despite outward similarities to pregnant women in the community, these women grapple internally with persistent negative emotions and anxiety, intensifying as their pregnancies progress (Sapkota et al., 2022). This emotional distress further complicates their lives within the prison environment, leading to significant psychological and physical hardships. Pregnant women in prison experience distressing emotions such as sorrow, anger, animosity, and hostility, aligning with the theme of “captive to bitter and harsh emotions” (Gillette, 2011). Research by Abbott et al., 2020 highlights the unique challenges of pregnancy in prison, resulting in both physical and mental distress, akin to an existential crisis. Incarcerated women’s perceptions of pregnancy significantly differ from those of women in the community. They carry a sense of shame, anticipating societal judgment and condemnation associated with their pregnancies within the prison environment (Sykes, 2007).

Pregnant women in prison experience heightened emotional challenges, especially upon realizing their pregnancies while incarcerated or entering prison while already

pregnant. These emotions are characterized by negativity and fear, and they intensify as the pregnancy progresses. The emotional responses include feelings of aversion and fear, making the pregnancy experience particularly distressing for these women. Research by Abbott et al. underscores the additional mental anguish and sense of unsafety that pregnancy induces in incarcerated women (Albertson et al., 2014). Pregnancy adds stress and emotional trauma to their already difficult situation in prison, where they often feel powerless and lacking of control over their pregnancies (Fritz & Whiteacre, 2016).

The theme of “suffering from psychosomatic pain and injuries,” emerged in this study describes that pregnant women in prison are under psychological pressure, which can manifest as mental and physical pain. This is congruent with the findings of study by Mukherjee et al., who reported that the psychological distress experienced by incarcerated pregnant women in prison exacerbates their existing challenges and contributes to significant mental and physical health risks (Mukherjee et al., 2014). Goffman (1968) describes the suffering that incarcerated individuals go through in prison as the “Pains of Prison,” and pregnancy in prison is seen as evidence of the trauma and suffering inflicted on incarcerated individuals (Goffman, 1968). The psychological pressure placed on pregnant women in prison puts them at a high-risk for adverse outcomes for both themselves and their unborn children. These women often struggle to achieve physical and mental readiness for motherhood (Abbott et al., 2020). Studies, such as one by Crew et al., highlight the painful and agonizing nature of pregnancy in prison (Crew et al., 2017). It seems that both the body and soul of pregnant women are confined within the prison, intensifying their physical and spiritual suffering (Leder, 2016). In another study (Gillette, 2011), it was reported that pregnancy was associated with mental and physical distress, leading to psychosomatic disorders. Similarly, the women in this study endured significant mental and physical pressure and stress due to their pregnancies, as their bodies and souls were struggling against the confines of prison to cope with the challenges of pregnancy.

The strength of this study included illuminating the experiences of incarcerated pregnant women and giving them a voice, who are a forgotten population and hidden from the society; but it faced limitations due to prison regulations restricting the access of researcher to the participants. The self-reporting nature of data raised concerns about honesty due to potential legal consequences, although trust and confidentiality were emphasized. The COVID-19 pandemic caused a two-month sampling delay, mitigated by additional visits and adherence to health protocols.

The findings of this study can influence public perception of incarcerated pregnant women’s experiences. Future

research should delve into psychological challenges, prison mental health policies, the role of prison staff, and midwives' support for incarcerated pregnant women and pregnant prisoners' maternal and neonatal outcomes. Recommendations include implementing mental health and counseling programs by The Ministry of Health to support this vulnerable group.

Conclusion

The emerged overarching theme of this study, i.e. “white torture” and its subthemes of “captive to bitter and harsh emotions” and “suffering from psychosomatic pain and injuries” illuminate the immense psychological pressure and suffering experienced by incarcerated pregnant women in prison. This research, alongside the existing literature, highlights the profound impact of pregnancy in prison on women worldwide. These women endure a relentless ordeal, with psychological consequences that may be invisible but leave lasting scars. The study emphasizes the urgent need to recognize the psychological needs of incarcerated pregnant women and implementing comprehensive mental health programs to enhance their well-being.

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Declarations

Ethical Approval This study was approved by the Local Research Ethics Committee of Mashhad University of Medical Sciences under code of IR. MUMS.1398.099. Moreover, the required permission of entrance to the women's section of Mashhad Central Prison was obtained via the Directorate-General of Prisons.

Conflict of Interest The authors declare that they have no conflict of interest. This research is part of a PhD thesis in Reproductive Health of the first author (SA), which was financially supported by Mashhad University of Medical Sciences, Mashhad, Iran (Grant number: 980109).

References

- Abbott, L., & Thomas, S. P. (2020). H. *Breaking down global barriers: physical and emotional health of pregnant prisoners: Findings of an Ethnographic Study of Perinatal Women in English Prisons*. Paper presented at the Paper presented at 5th Commonwealth Nurses and Midwives Conference, London, United Kingdom.
- Abbott, L., Scott, T., Thomas, H., & Weston, K. (2020). Pregnancy and childbirth in English prisons: Institutional ignominy and the pains of imprisonment. *Sociology of Health & Illness*, *42*(3), 660–675.
- Aborisade, R. A., & Fayemi, J. A. (2016). A qualitative exploration of the coping strategies of female offenders in Nigerian prisons.

- International Journal of Criminology and Sociological Theory*, *9*(1).
- Albertson, K., O'Keeffe, C., Burke, C., Lessing-Turner, G., & Renfrew, M. (2014). Addressing health inequalities for mothers and babies in prison. *Health and Inequality: Applying Public Health Research to Policy and Practice*, 39.
- Alirezaei, S., & Latifnejad Roudsari, R. (2020). Promoting health care for pregnant women in prison: A review of international guidelines. *Iranian Journal of Nursing and Midwifery Research*, *25*(2), 91.
- Alirezaei, S., & Latifnejad Roudsari, R. (2022a). Imprisoned pregnant women's lived experience of prenatal care: A phenomenological Inquiry. *Journal of Midwifery and Reproductive Health*, *10*(2), 3258–3267.
- Alirezaei, S., & Latifnejad Roudsari, R. (2022b). The needs of incarcerated pregnant women: A systematic review of literature. *International Journal of Community Based Nursing and Midwifery*, *10*(1), 2–17. <https://doi.org/10.30476/IJCBNM.2021.89508.1613>
- Ataai, B., Khorvash, F., Azadeh, S., Nokhodian, Z., Kassaian, N., & Babak, A. (2011). The prevalence of high risk behaviors among women prisoners in isfahan, iran. *Journal of Isfahan Medical School*, *29*(150).
- Baker, B. (2019). Perinatal outcomes of incarcerated pregnant women: An integrative review. *Journal of Correctional Health Care: The Official Journal of the National Commission on Correctional Health Care*, *25*(2), 92–104. <https://doi.org/10.1177/1078345819832366>.
- Bard, E., & Plugge, K. M. E. (2016). Perinatal health care services for imprisoned pregnant women and associated outcomes: A systematic review. *Bmc Pregnancy and Childbirth*, *16*(1), 1–9.
- Bronson, J., & Sufrin, C. (2019). Pregnant women in prison and Jail don't count: Data gaps on maternal health and incarceration. *Public Health Reports*, *134*(1_suppl), 57s–62s. <https://doi.org/10.1177/0033354918812088>.
- Canada, K., Barrenger, S., Bohrman, C., Banks, A., & Peketi, P. (2022). Multi-level barriers to Prison Mental Health and Physical Health Care for individuals with Mental illnesses. *Frontiers in Psychiatry*, *13*, 777124. <https://doi.org/10.3389/fpsy.2022.777124>.
- Crewe, B., Hulley, S., & Wright, S. (2017). The gendered pains of life imprisonment. *British Journal of Criminology*, *57*(6), 1359–1378.
- DeHart, D. D. (2018). Women's pathways to crime: A heuristic typology of offenders. *Criminal Justice and Behavior*, *45*(10), 1461–1482.
- Fochi, M. C. S., da Silva, A. R. C., & de Moraes Lopes, M. H. B. (2014). Prenatal care in a primary healthcare center for imprisoned pregnant women. *Northeast Network Nursing Journal*, *15*(2).
- Friedman, S. H., Kaempf, A., & Kauffman, S. (2020). The realities of pregnancy and Mothering while incarcerated. *Journal of the American Academy of Psychiatry and the Law Online JAAPL 003924–003920*. <https://doi.org/10.29158/jaapl.003924-20>.
- Fritz, S., & Whiteacre, K. (2016). Prison nurseries: Experiences of incarcerated women during pregnancy. *Journal of Offender Rehabilitation*, *55*(1), 1–20.
- Ghazinezhad, M., & Abasian, M. (2011). Qualitative Study of Social Factors of Spousal Homicide.
- Gillette, K. E. (2011). The psychological and emotional experiences of pregnant and postpartum incarcerated women.
- Goffman, E. (1968). *Asylums: Essays on the social situation of mental patients and other inmates*. AldineTransaction.
- Hayes, C. M., Sufrin, C., & Perritt, J. B. (2020). Reproductive Justice disrupted: Mass Incarceration as a driver of Reproductive Oppression. *American Journal of Public Health*, *110*(S1), S21–s24. <https://doi.org/10.2105/ajph.2019.305407>.

- Kennedy, A., Marshall, D., Parkinson, D., Delap, N., & Abbott, L. (2016). *Birth Charter for women in prisons in England and Wales*. Birth Companions.
- Leder, D. (2016). *The distressed body: Rethinking illness, imprisonment, and healing*. University of Chicago Press.
- Mignon, S. (2016). Health issues of incarcerated women in the United States. *Ciencia & Saude Coletiva*, 21, 2051–2060.
- Mukherjee, S., Pierre-Victor, D., Bahelah, R., & Madhivanan, P. (2014). Mental health issues among pregnant women in correctional facilities: A systematic review. *Women and Health*, 54(8), 816–842. <https://doi.org/10.1080/03630242.2014.932894>.
- Neubauer, B. E., Witkop, C. T., & Varpio, L. (2019). How phenomenology can help us learn from the experiences of others. *Perspect Med Educ*, 8(2), 90–97. <https://doi.org/10.1007/s40037-019-0509-2>.
- Rashidi, A., & Barati, M. (2017). Studying the conditions of women prisoners and their Rehabilitation methods: A Case Study of Arak prisoners, 1394. *Women Studies*, 7(17), 67–93.
- Rimaz, S., Ebrahimi-Kalan, M., Gharibzadeh, S., Vasali, S., Zandian, E., Dastoorpoor, M., & Rajabi, A. (2016). The mental health and its related factors in women prisoners. *Rahavard Salamat Journal*, 1(2), 1–15.
- Sapkota, D., Dennison, S., Allen, J., Gamble, J., Williams, C., Malope-Rwodzi, N., & Renae McGee, T. (2022). Navigating pregnancy and early motherhood in prison: A thematic analysis of mothers' experiences. *Health & Justice*, 10(1), 32.
- Shah, S., Plugge, E., & Douglas, N. (2011). Ethnic differences in the health of women prisoners. *Public Health*, 125(6), 349–356.
- Speziale, H. S., Streubert, H. J., & Carpenter, D. R. (2011). *Qualitative research in nursing: Advancing the humanistic imperative*. Lippincott Williams & Wilkins.
- Sykes, G. M. (2007). *The society of captives: A study of a maximum security prison*. Princeton University Press.
- van den Bergh, B. J., Gatherer, A., Fraser, A., & Moller, L. (2011). Imprisonment and women's health: Concerns about gender sensitivity, human rights and public health. *Bulletin of the World Health Organization*, 89(9), 689–694. <https://doi.org/10.2471/blt.10.082842>.
- Van Manen, M. (2016). *Researching lived experience: Human science for an action sensitive pedagogy*. Routledge.
- Wang, L. (2021). *Unsupportive environments and limited policies: Pregnancy, postpartum, and birth during incarceration*. Prison Policy Initiative.
- Wansley, R. (2021). International Centre for Prison Studies. World Prison Population List. Internet]. World Prison Brief. Available from Institute for Crime & Justice Policy Research <https://www.prisonstudies.org/country/iran>.
- Watch, H. R. (2021). *Iran: Prisoners' Rights at Risk Amid COVID-19*. Retrieved from <https://www.hrw.org/news/2021/04/19/iran-prisoners-rights-risk-amid-covid-19>.
- Wismont, J. (2000). *The lived pregnancy experience of women in prison* (Vol. 45).

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