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A mixed methods study exploring methadone treatment disclosure and perceptions of reproductive health care among women ages 18–44 years old in Los Angeles, CA

Marta Bornstein, MPH^{a,b}, Agatha Berger, MD, MPH^{c,d}, Jessica D. Gipson, PhD, MPH^{a,b}

^aDepartment of Community Health Sciences, Fielding School of Public Health, University of California, Los Angeles, 650 Charles E. Young Dr. South, Los Angeles, CA 90095

^bCalifornia Center for Population Research, University of California Los Angeles, 4284 Public Affairs Bldg, Los Angeles, CA, 90095

^cDepartment of Obstetrics and Gynecology, David Geffen School of Medicine, University of California, Los Angeles, 10833 Le Conte Ave, Los Angeles, CA 90095

^dDepartment of Obstetrics and Gynecology, Christiana Care Health System, 4755 Ogletown-Stanton Road, Newark, DE 19718

Abstract

Introduction: Opioid use disorder (OUD) and methadone treatment are increasing among women ages 18–44 years old, a population with unique healthcare needs. Despite this increase, there is little research on the healthcare experiences of women with OUD, particularly experiences with reproductive healthcare.

Methods: We designed a sequential, mixed-methods study in three Los Angeles methadone clinics. In the first phase, we conducted in-depth interviews with women in methadone treatment (n=22) (September–December 2016). After thematic coding and analysis, we designed and administered a survey to understand patterns in women's experiences and reproductive health knowledge, attitudes, and behavior (n=50) (January–April 2018). We conducted descriptive statistics, then integrated the quantitative and qualitative findings to contextualize and understand women's perceptions and experiences with healthcare providers among women in methadone treatment.

Results: We found that women experienced and anticipated that providers would treat them poorly when they disclosed that they were in methadone treatment for OUD. Women's actual experiences with disclosure, shared in in-depth interviews, varied by whether they had disclosed

Corresponding author: 650 Charles E. Young Dr. South, Los Angeles, CA 90095, mbornstein@ucla.edu, (310) 794-7028.
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Agatha Berger: Conceptualization, methodology, writing – reviewing and editing, supervision, project administration, funding acquisition

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their status intentionally or inadvertently. Approximately one-third (37%) of survey respondents thought a healthcare provider would scold them if they became pregnant; however, all who had been pregnant in the past while on methadone (n=11) reported disclosing methadone treatment during pregnancy to their provider. Under a quarter of all women (22%) said having a healthy pregnancy while on methadone was likely or very likely. These perceptions were reinforced by negative experiences with providers, or, in many cases, women in the survey reported that they had never discussed the recommendations for a healthy pregnancy while on methadone with a healthcare provider.

Discussion: Women experience and anticipate experiencing negative interactions with their healthcare providers if and when they disclose their methadone treatment. These perceptions and experiences impact subsequent treatment seeking and disclosure. The majority of women did not discuss pregnancy with healthcare providers. To improve quality of care, healthcare providers can provide a safe space for women to disclose methadone treatment through nonjudgmental communication that intentionally alleviates stigma. Additionally, healthcare providers should understand medical guidelines and laws/policies around methadone during pregnancy and communicate this understanding to all patients who may wish to become pregnant or who are at risk for unintended pregnancy.

Keywords

Methadone; Opioid use disorder; Pregnancy; Reproductive health; Mixed methods

1. Introduction

1.1 Opioid use disorder

Opioid Use Disorder (OUD) is a growing public health problem in the United States and globally. It is associated with many comorbidities, including depression, anxiety, pain, and other substance use disorders (Amari, Rehm, Goldner, & Fischer, 2011). However, unlike most other substance use disorders, OUD has several, effective Federal Drug Administration (FDA)-approved medication treatments, including methadone, an opioid agonist that helps to reduce symptoms of opioid withdrawal (National Institute on Drug Abuse, 2018). Methadone also helps to prevent OUD relapse, which is common without medication treatments (Alderks, 2013; Fareed et al., 2011).

Although the majority of individuals with OUD are men, women are increasingly at risk. Between 2007 and 2014, the increase in women opioid users began to outpace men (Marsh, Park, Lin, & Bersamira, 2018). However, research around OUD and methadone treatment has largely focused on men and older adults, limiting our understanding of women's experiences, particularly their unique reproductive healthcare needs.

In 2018, the Substance Abuse and Mental Health Services Administration (SAMHSA) provided clinical guidelines for treating women with OUD and their infants. This guidance includes the use of Medication Assisted Treatment (MAT) for OUD during pregnancy (Substance Abuse and Mental Health Services Administration, 2018). However, for healthcare providers to offer and manage MAT during a woman's pregnancy, women must feel comfortable disclosing OUD or current MAT to their pregnancy healthcare providers.

1.2 Patient perceptions of treatment by healthcare providers

Evidence indicates that patients' perceptions of healthcare providers influence their interactions, care-seeking, and health outcomes (Pascoe & Smart Richman, 2009). Studies focusing on individuals with substance use disorders have demonstrated that provider bias and discrimination may impact patients' healthcare experiences and health outcomes (Earnshaw, Smith, & Copenhaver, 2013; Stone, 2015; Woo et al., 2017). A 2013 systematic review found that healthcare professionals were less engaged in the healthcare of patients with substance use disorders and had negative perceptions of them not only as patients, but as people (van Boekel, Brouwers, van Weeghel, & Garretsen, 2013). Additionally, healthcare providers' stigma toward this population can also contribute to lack of healthcare seeking altogether for women with OUD (Olsen & Sharfstein, 2014).

These negative perceptions and stigmatizing beliefs have also emerged in the few studies of women ages 18–44 years old with OUD. While many life transitions occur in this age range, for women, decisions about sexual and reproductive health, including pregnancy, are common during these years. Women in methadone treatment face these same decisions with added layers of complexity, partially stemming from stigma and fears of stigma when they seek healthcare. A 2015 qualitative study with postpartum women with OUD found that the women experienced stigma related to substance use, including methadone treatment. Women perceived that they were treated punitively by their providers and they internalized a sense of shame regarding their ability to be a “good mother” (H. Howard, 2015). Other studies have found similar issues around self-perceptions of pregnancy and parenthood with OUD or while on MAT (Terplan, Kennedy-Hendricks, & Chisolm, 2015). A study of women and men in methadone treatment found that many experienced stigma in their encounters with healthcare providers, which not only made them reluctant to seek healthcare in the future but also made them more likely to put off or discontinue methadone treatment to avoid being stigmatized (Woo et al., 2017). Indeed, women in methadone treatment or with OUD often do not get the healthcare they need or desire, particularly reproductive healthcare (Terplan, Lawental, Connah, & Martin, 2016).

Additionally, although previous studies have found that women in methadone treatment perceive that they receive, and in some cases actually receive, less than optimal care, relatively little research has looked at women in methadone treatment, and how they interact with healthcare providers around their sexual and reproductive health. Only a few studies have examined patterns in how patients with OUD are treated medically while seeking reproductive healthcare or during pregnancy. One study found that, despite clinical guidelines recommending methadone treatment for pregnant women with OUD (American College of Obstetrics and Gynecology, 2017), methadone was provided in less than half of 8,000+ treatment episodes (Angelotta, Weiss, Angelotta, & Friedman, 2016). Critically, there is little research about how women of reproductive age who are not pregnant, but who may be actively navigating sexual and reproductive health decisions, perceive or anticipate how they will be treated by healthcare providers. Such perceptions and anticipated treatment are key determinants of care seeking and are critical to supporting women in achieving their reproductive desires and optimal outcomes, whether that be preventing pregnancy or achieving a healthy pregnancy.

This study aims to advance our understanding of how women in methadone treatment perceive and experience reproductive healthcare, by focusing on factors that influence their decisions to disclose methadone treatment to healthcare providers and their perceptions of the acceptability of pregnancy. Given that sexually active women ages 18–44 may be faced with important sexual and reproductive health decisions, such as preventing or achieving pregnancy, we focus on factors that influence women's decisions to disclose methadone treatment to healthcare providers both broadly, and in the context of pregnancy and childbearing.

2. Material and methods

Given limited research on the healthcare experiences of women ages 18–44 with OUD and on methadone treatment, we used a sequential, exploratory mixed methods study design to first identify key issues affecting this population through in-depth, qualitative interviews (2016); we then used those findings to design and administer a quantitative survey (2018). To develop the qualitative interview guide we conducted a review of existing literature on reproductive health among women with OUD and in MAT broadly. Methadone clinic staff (where data collection took place) then reviewed the interview guides to ensure relevance of the topics. We conducted two pilot interviews to assess participant understanding before finalizing the guides. In-depth interviews focused on women's experiences seeking and receiving reproductive healthcare, as well as women's views and experiences regarding contraception, pregnancy, and fertility within the context of methadone treatment. We developed survey questions based on the major domains raised in in-depth interviews, such as experiences of stigma in healthcare, issues around methadone treatment disclosure and privacy, and views regarding the safety and acceptability of pregnancy while on methadone. The research team and community partners at the three methadone clinics reviewed the survey instrument in multiple rounds. Staff at the clinics provided critical input on both the content and structure of the survey.

In both the qualitative and quantitative portion of the study, we provided participants with written material about the study, and participants gave verbal consent to participate to ensure anonymity. Given the fluidity of methadone clinic patients and the sequential timing of the two data collection stages, we did not design the study to recruit participants into both portions of the study, but given that we did not collect any identifying information, it is possible that some did. The Human Research Protection Program at the University of California, Los Angeles, approved the study protocol for both phases of the study.

2.1 Qualitative

For the initial qualitative phase, we conducted 22 in-depth interviews with women ages 18–44 years old at two Los Angeles, California, methadone clinics in 2016. Interviews focused on women's experiences with reproductive healthcare and pregnancy in the context of OUD and methadone treatment. We purposively recruited women when they came to the clinics for their regular methadone treatment. In most cases, the research assistants scheduled appointments with interested women to be interviewed at a later date. Eligible women were English-speaking; had been sexually active with a male partner; were not pregnant; and had

not received a hysterectomy or any other sterilizing procedure. Women confirmed their eligibility when they were recruited and again at the beginning of the interview. The interviews took approximately 60 minutes. Trained female interviewers conducted, recorded, and transcribed the interviews. We compensated participants with a \$30 gift card for their time.

Once we reached saturation in data collection, researchers used Dedoose version 7.0.23 to code the transcripts. The team used thematic and open coding methods, developing a codebook through consensus. The team also met regularly to reconcile coding inconsistencies and shared preliminary findings through memos (Saldaña, 2016). Two additional researchers reviewed all coded transcripts and identified more granular patterns in the data by creating subcategories within specific codes.

2.2 Quantitative

Following analysis of in-depth interviews, we used common themes to develop a standardized, tablet-based survey focused on women's reproductive health knowledge, attitudes, and behavior, as well as healthcare experiences. The survey went through multiple stages of review, including cognitive interviewing with methadone clinic staff to ensure that the questions were easy to understand and relevant. Participant recruitment and inclusion criteria for the survey were the same as the interviews, except that we administered surveys in three clinics in the Los Angeles area (January–April 2018). In total, research assistants made 150 approaches to women at the three clinics. Because individuals who are enrolled in methadone treatment are frequently required to come to the clinic daily to receive their dose of methadone and the need to protect confidentiality, women who we approached multiple times over the course of the four-month data collection period are recorded as different approaches. This makes it impossible to calculate an accurate participation rate. However, of the 150 approaches, 50 individuals consented and participated in the survey. The majority of women who we approached and who did not participate were over the age of 44 years ($n=39$), pregnant ($n=3$), or did not speak English ($n=3$), and therefore did not meet the eligibility criteria. In just over half ($n=55$) of the unsuccessful approaches, women said that they did not have time or were not interested in taking the survey. We did not screen these women further for eligibility and, therefore, we do not know if they met the criteria of our study population. We concluded data collection after confirming with the clinics that we had surveyed the majority of their clientele who were eligible for the study. Surveys took 20–40 minutes to complete and were either self-administered or a research team member facilitated them, depending on the preference of the participant. We compensated participants with a \$15 gift card for their time.

For survey data, we conducted descriptive analyses and Chi² tests of relationships hypothesized to influence methadone treatment disclosure and perception of pregnancy while on methadone using STATA version 15. To triangulate and integrate the qualitative and quantitative findings, we matched relevant qualitative codes to corresponding survey items. We then examined how information from the two data sources converged and, in some cases, diverged.

3. Results

While the inclusion criteria ensured that participants shared the same general characteristics, there was variation within and between interview and survey participants, as shown in Table 1. Interview participants (n=22) were all 21–39 years old (mean=32), while survey participants (n=50) tended to be older (45% were between the ages of 36 and 44 years). All interview participants were insured by Medicare or Medicaid, as were the majority of survey participants (n=39 (78%)). The majority of both interview (n=12 (55%)) and survey (n=39 (67%)) participants had been pregnant at least once.

Several main themes emerged around women's experiences with healthcare providers: (1) women's experiences with disclosing methadone treatment to healthcare providers, (2) patient-provider communication, and (3) women's views on the acceptability and safety of pregnancy while on methadone.

3.1 Disclosure

Women shared both positive and negative experiences disclosing OUD and/or methadone treatment to healthcare providers outside of the methadone clinic. Women often saw healthcare providers in emergency rooms or drop-in clinics, which meant that they had to choose whether to disclose at each encounter, with little context for how the provider might react. In some cases, women did not make a choice to disclose, but were “outed” as current or previous injection drug users due to physical marks and damage to their veins (we refer to this as inadvertent disclosure).

3.1.1 Intentional disclosure—In interviews, most women discussed being treated differently by their healthcare providers after disclosing (Table 2). Several felt that they were treated the same—equally poorly—whether they were actively using opiates or were in methadone treatment. In other words, healthcare providers considered active OUD (nonmedical opiate or heroin use) and methadone treatment equally unacceptable. A 38-year-old woman shared her disclosure experience while she was pregnant, and her conflicted feelings about disclosing in the future:

[My doctor] said, “There ain’t no doctor in their right mind that would give a [pregnant] person methadone.” She actually argued with me, telling me how I couldn’t be on methadone and [...] there was something wrong with me. Ever since that incident, I just don’t say anything. I know I should because [of medication interactions], but the way [doctors] look at you because they don’t understand, it makes you feel really bad.

(38, 7 children)

Nearly all women who shared negative experiences disclosing to their healthcare provider reported feeling shamed, labeled, and disregarded. A young participant described her feelings when being treated for a possible ectopic pregnancy. In this case, she had someone with her to validate her experience:

I felt really, really degraded. I had to [reflect] and see how much of it was in my head and how much of it was in reality, but I had another person there and they said

they were really treating me ... not as well because of my history with addiction. At that time, it wasn't an active addiction. I constantly deal with that. [Doctors] treat you completely different when you are using or struggling with addiction.

(21, no children)

In some cases, participants shared positive experiences of disclosure. One woman described receiving support from her physician, but also voiced concerns that future providers may be judgmental or lack the knowledge to treat someone who was on methadone. Another participant, who also had had a positive experience with a provider at a family planning clinic after disclosing that she was on methadone, shared that she would return to the provider because she was likely to get the same quality of care. She felt positive about the experience because the provider gave her information about birth control that other providers did not take the time to explain. Other participants were motivated to disclose because they knew it would enhance the quality of care they received. For example, one participant shared her decision to disclose when visiting a women's health clinic: "[Disclosing drug history] was a good thing. [My healthcare] was affected in a good way. I mean, just because they wouldn't have known it would have been ... like a missing hole. You have to be honest with everything." (26, 0 children)

3.1.2 Inadvertent disclosure—However, women whose OUD histories were revealed before they could choose to disclose generally had negative experiences. Table 2 includes additional evidence regarding these experiences.

At least two women in interviews experienced healthcare providers calling Child Protective Services (CPS) when they delivered a baby. This validated their perception that healthcare providers do not support women on methadone who become pregnant and, in fact, consider it potentially criminal. One participant shared how her doctor made a judgement about her character and capability as a mother based on her methadone use during pregnancy:

I've had [doctors] call [CPS] on me, and they are not supposed to. I've had them tell me, when I was in the hospital, that the pain meds won't work because I'm a heroin addict. They are just really rude. They assume that my house is not clean, or my house is not appropriate for children, or my kid is not taken care of.

(26, 2 children)

Another participant talked about how her doctor's misunderstanding of methadone impacted her care:

The doctor came and I was breastfeeding. She was like, "What are you doing, you can't breastfeed if you're taking methadone. I don't know how you would be taking methadone while you're pregnant, there is no doctor [who would give it] - you must be getting it on the street ..." [The doctor] didn't like it and she got really angry and she just walked away. And then I had a visit [from CPS] at my door the next day.

(38, 7 children)

Other women described experiences of medical staff violating confidentiality and/or being denied pain medication when they were on methadone. More than anything else, the vast majority of women discussed feeling shamed and dismissed by healthcare providers when they disclosed that they were on methadone. However, despite the primarily negative experiences that women described in in-depth interviews, in the survey, all women who had ever been pregnant while on methadone (n=11) reported that they disclosed their treatment to their healthcare provider (Table 3).

3.2 Communication with providers

Along with the variation in disclosure experiences, general communication about pregnancy between women and their healthcare providers was limited. In the survey, 40% of women reported receiving reproductive healthcare in the previous year, yet a relatively small proportion of participants said that a healthcare provider outside of the methadone clinic (22%) or inside the methadone clinic (16%) had ever talked to them about the possibility of having a safe or healthy pregnancy while on methadone. Slightly more (30%) said that they had ever talked to a healthcare provider outside of the methadone clinic about preventing pregnancy while on methadone and 26% had talked to someone at the methadone clinic about preventing pregnancy (Table 3).

In general, women anticipated that their healthcare providers would not approve of pregnancy while on methadone, which may have influenced their disclosure. In the survey, 37% of women agreed or strongly agreed that their doctor would scold them or make them feel badly if they became pregnant while on methadone (Table 3). In interviews, women expressed concern about how a healthcare provider would react to them becoming pregnant while on methadone. They used phrases such as, “the relationship [with my doctor] would be tainted,” “trust would be broken,” and “[my doctor’s] eyes would be as huge as the moon.” In the absence of open communication with healthcare providers, some women shared in interviews that they relied on other sources, such as peers, family, and even strangers, for information and advice about pregnancy while on methadone. However, survey findings indicate that just 2% of women talked to their partner and only 12% talked to their family or friends about *having a safe or healthy pregnancy while on methadone*. A larger proportion of women had talked to their partner (18%) or family and friends (20%) about *preventing pregnancy* while on methadone (Table 3).

3.3 Women’s perceptions of pregnancy

3.3.1 Acceptability—In interviews, almost all women expressed some degree of shame and fear about pregnancy and motherhood while on methadone, particularly those without children. One participant speculated what becoming pregnant might mean for her in terms of the cascading decisions she would have to make: “I think it would be a terrible mistake and a terrible loss if I were to get pregnant and something were to go wrong, or I’d have to do something I really didn’t want to, like get an abortion, or not be able to take care of the child.” (30, no children)

In contrast, many women in interviews, particularly those who already had children, expressed some confidence in their role as a parent. The survey results were not as clear

regarding the acceptability of pregnancy and motherhood while on methadone. Almost three quarters (72%) of women disagreed or strongly disagreed with the statement, “I would be a bad mother if I became pregnant while on methadone” (Table 3). This proportion did not vary significantly based on whether a woman had at least one child (not shown).

In interviews, women described how their families have not supported or would not be supportive of them if they became pregnant. This was reflected in survey findings as well, where two-thirds of women (61%) said that their families would not be supportive if they became pregnant on methadone (Table 3). Many women may have already experienced unsupportive family members, as 77% of women in the survey and 10 of 22 interview participants already had at least one pregnancy. When we asked women more explicitly about their experiences with their wider social circles, 54% agreed that people told them it was irresponsible to become pregnant while on methadone (Table 3).

Women’s views about pregnancy being unacceptable while on methadone did not mean that women were resolutely against becoming pregnant or that they were actively preventing it. In the survey, 38% of women used contraception the last time they had sex; however, only 18% of women wanted to have a pregnancy within the next two years (Table 1). Half of the sample did not want to have any (more) children at all. The majority of women (70%) who had been pregnant reported having an unintended pregnancy in the past and 63% reported that they had at least one abortion in their life (Table 1).

3.3.2 Safety and health—All women who discussed their own experiences with pregnancy shared that they had positive health and birth outcomes. One woman shared an interaction she had with her doctor after giving birth that, for her, provided assurance that she and the baby were safe:

I had a baby who was pos tox [born chemically dependent] for both heroin and methadone. And it was a trip because when her pediatrician came in and saw me after I had her, he was like “Studies have shown that babies that are born addicted to methadone are actually smarter” ... Yeah, that’s what he said.

(38, 3 children)

In contrast to women who shared their own experiences with pregnancy, women who talked about other people’s experiences described negative health and social outcomes that came from methadone use. One woman talked about a classmate’s experience, and how it influenced her own feelings about having children:

There was a girl in my class that was pregnant. I think she was on like 70 milligrams of methadone [60mg is considered the minimum effective dose of methadone to prevent relapse (Trafton, Minkel, & Humphreys, 2006)] ... She had her baby and they took it away for a month to try to make sure that they could get [the baby] through the methadone withdrawals. She said the baby constantly cries now. It was really depressing.

Interviewer: How did that influence you about having children?

It made me feel bad. I wouldn't want to put my baby through that. My mom said that one of our old friends growing up, the daughter who is my age started going to a methadone clinic and then she got pregnant. She really believed in God and ... her baby died. Now she blames God, but it is actually probably the methadone or it could have just been a coincidence.

(34, no children)

In the survey, women also reported their beliefs about pregnancy and health while on methadone. In contrast to the positive personal experiences women shared in interviews, under a quarter (22%) of women said that having a *healthy pregnancy* while on methadone was "likely" or "very likely." Even fewer (14%) said it was "likely" or "very likely" that they could have a *healthy baby* if they became pregnant on methadone (Table 3.1). This did not differ between women who did and did not have at least one child (not shown).

4. Discussion

Our findings indicate that women experience and anticipate negative interactions with their healthcare providers when they disclose that they are on methadone. While negative experiences were more common, women who had positive interactions with healthcare providers characterized the provider as nonjudgmental and objective. In our study, women did not differentiate between different kinds of healthcare providers. Instead they made differentiations based on the type of care that they sought (e.g., pregnancy care, substance use treatment) and sometimes the locations of the healthcare visit (e.g., women's health clinic, emergency room).

Our findings around interactions with healthcare providers are similar to those in a 2013 qualitative study that found some women felt that their healthcare providers were supportive of them, despite sometimes being treated poorly (Earnshaw et al., 2013). This coincides with our findings that women felt they were treated poorly after disclosing, but that disclosure was still necessary to receive medically appropriate healthcare. Additionally, even though women in our study reported negative experiences, our survey data indicate that all women who experienced a pregnancy while on methadone disclosed to their provider. This is not necessarily a contradiction, but may indicate that women were willing to endure poor treatment to get the care that they needed to have a healthy pregnancy.

Women who had negative experiences or anticipated that they might in the future were not always hesitant to seek healthcare, but were frequently hesitant to disclose their past OUD or methadone treatment. Many recognized that not disclosing could impact the quality of their care. Indeed, healthcare providers need women to disclose to provide the most appropriate, quality care. Therefore, clinicians should be trained how to both elicit and respond to disclosure, whether intentional or inadvertent.

The majority of survey participants and about half of interview participants had already been pregnant, whether the pregnancy ended in a livebirth, miscarriage, or abortion. Yet in the survey, a small proportion had ever talked with a healthcare provider about having a healthy pregnancy. This finding implies that many women may have become pregnant without any

guidance or pro-active information from a healthcare provider. Given that 40% of survey participants had gone to a healthcare provider for services related to sexual and reproductive health in the past year, not talking with patients about pregnancy may be a significant missed opportunity, signaling an area where further clinical training may be needed.

Nearly half (44%) of women in our survey wanted a(nother) child at some point in their life and another 6% were uncertain. While half did not want a(nother) child, fertility desires are likely to change intermittently in women's reproductive years and pregnancy ambivalence is common (Bornstein, Gipson, Bleck, Sridhar, & Berger, 2019; Cutler et al., 2018; Higgins, Popkin, & Santelli, 2012). Additionally, women with OUD tend to have high rates of unintended pregnancy (Heil et al., 2011). Healthcare providers can support women by sharing accurate information in line with women's current preferences and future desires, whether that is to prevent, delay, or carry a healthy pregnancy. OUD is a chronic condition and methadone treatment may be long term (Hser, Hoffman, Grella, & Anglin, 2001); therefore, these women are likely to continue contending with the idea of pregnancy while on methadone.

Our findings also show that only a small proportion of women surveyed believed that it was "likely" or "very likely" to have a healthy pregnancy or baby while on methadone. These beliefs, expressed in in-depth interviews as well, contradict existing evidence and medical guidelines, which recommend use of methadone or other MAT during pregnancy (American College of Obstetrics and Gynecology, 2017). Based on our findings, it appears that some healthcare providers may not be aware of the clinical guidelines for methadone and pregnancy. Providers also may have personal biases that could affect the quality of care they provide to women on methadone treatment or with a history of OUD (van Boekel et al., 2013). This is not surprising, given the general societal view of OUD as a moral-deficit rather than a legitimate medical condition (Angelotta et al., 2016).

Other studies have found that women with substance use disorders, including OUD, face stigma around parenthood that narratives about "unfit mothers" perpetuate (Terplan et al., 2015). These narratives, as Terplan (2015) relays, are not based in science. Healthcare providers' and systems' intentional or unintentional perpetuation of these narratives can further exacerbate stigmatization of this population and hinder healthcare seeking (Stone, 2015). In our study, the majority of participants felt that a safe and healthy pregnancy and baby while on methadone were not likely, yet 71% disagreed that they would be a bad mother if they became pregnant while on methadone. This may indicate a level of resilience among women and their perceived ability to persevere as a parent through less than ideal circumstances, even without the support of their family or healthcare providers.

Several women experienced healthcare providers notifying CPS during their pregnancy or after giving birth. Unfortunately, the laws around OUD and methadone treatment during pregnancy are complex. A recent study that examined these laws found that, as of 2017, providers were mandated to report perinatal substance use in 20 states. Of those, seven did not differentiate between substance use and substance use treatments like methadone (Jarlenski et al., 2017). In 27 states, there were no laws regarding OUD during pregnancy (Jarlenski et al., 2017), placing the burden on the healthcare provider to judge the safety for

women and their babies. Without legal guidance, healthcare providers may involve CPS unnecessarily, which can have serious consequences on both maternal and child health by interfering with a critical bonding period between mother and child (K. Howard, Martin, Berlin, & Brooks-Gunn, 2011). There are also significant racial disparities in CPS involvement, which has a disproportionately negative impact on Black, indigenous, and other people of color who are on methadone treatment during pregnancy (Roberts & Nuru-Jeter, 2011).

Our survey sample was selected through convenience sampling and is relatively small, primarily because women ages 18–44 years were not well-represented in our data collection sites, and, indeed, make up a smaller proportion of people in methadone treatment compared to men (Cicero, Ellis, Surratt, & Kurtz, 2019). As a result, we were limited in our ability to detect significant subgroup differences in our data. While we examined differences by subgroups (e.g., by parity, recency of drug use, communication with providers), differences were marginal and not statistically significant.

However, given the dearth of literature about women's reproductive health in methadone clinics, even descriptive statistics provide much-needed information. Our sample may also be biased toward women who had time to participate in the survey. Sixty percent of our survey participants were unemployed or on disability (not shown). Although our findings are potentially transferrable to other settings, they are not generalizable to the entire population of women ages 18–44 with OUD or on methadone. Despite these limitations, this study advances our understanding of how women and healthcare providers interact at a critical timepoint in women's lives, which is essential to ensuring that patients, providers, and policy-makers work together in support of the best possible health and social outcomes for women and their children

5. Conclusion

Women with OUD or on methadone face immense stigma from the world around them, particularly when it comes to reproductive health, pregnancy, and parenting. Healthcare providers have the opportunity to combat this stigma in how they care for patients with a history of OUD and who are in methadone treatment. Unfortunately, our findings show that this may not currently be the case. Future studies should not only focus on increasing provider knowledge, but also on integrating strategies to identify and reduce potential biases that may influence provision of care.

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Highlights:

- Most women 18–44 years on methadone have never talked to a provider about pregnancy
- Women on methadone need unbiased reproductive healthcare to make decisions
- Provider biases may influence how women on methadone perceive and receive healthcare

Table 1.Demographic characteristic of survey (n=50) and interview (n=22) participants.^a

	Survey; n (%)	Interviews; n (%)
Age group (survey n=38)^b		
18–25	5 (13%)	Mean age=32 Range:21–39
26–35	16 (42%)	
36–44	17 (45%)	
Race		
Black/African American	7 (14%)	1 (4.5%)
White	28 (56%)	9 (41%)
Another race or multi-racial	15 (30%)	3 (14%)
Hispanic ethnicity	17 (34%)	8 (36%)
Education		
Less than high school degree	8 (16%)	4 (18%)
High school or equivalent	15 (30%)	2 (9%)
Some College	21 (42%)	9 (41%)
Associates degree	3 (6%)	--
Bachelor's degree or higher	3 (6%)	3 (14%)
Not reported	--	4 (18%)
Relationship status (n=49)		
Married or living with a partner	26 (53%)	Partnered: 17 (77%)
Not (currently) married or living with partner	23 (47%)	Not partnered: 5 (23%)
Nulliparous (n=48)	11 (23%)	12 (55%)
Ever had an abortion (n=38)^c	24 (63%)	--
Ever had a miscarriage (n=37)^c	17 (46%)	--
Ever had an unintended pregnancy (n=37)^c	26 (70%)	--
Used contraception at last sex (n=47)	18 (38%)	--
Desire for (additional) children		--
Yes, within 2 years	9 (18%)	
Yes, after 2 years	9 (18%)	
No	25 (50%)	
Not sure	3 (6%)	
Self-rated health		
Excellent	3 (6%)	
Very good	7 (14%)	
Good	21 (42%)	
Fair	12 (24%)	
Poor	7 (14%)	

	Survey; n (%)	Interviews; n (%)
Receives any public assistance	46 (92%)	--
Insured by Medicaid or Medicare	39 (78%)	22 (100%)
Previous drug treatment (at least once)	37 (66%)	--
Recency of sexual/reproductive healthcare (n=47)		--
Within the last year	19 (40%)	
Within the last 1–3 years	15 (32%)	
More than 3 years ago	13 (28%)	
Recency of illegal substance use (n=45)		
In the last week	18 (40%)	
1–4 weeks	11 (24%)	
1–3 months	3 (7%)	
More than 6 months	9 (20%)	
Never	4 (9%)	

^aWhen survey N deviates from 50, the sample size is noted.

^bAll survey participants were between ages 18 and 44, per their eligibility statement. In the survey, age was collected categorically.

^cAbortion, miscarriage, and unintended pregnancy are only among women who reported ever being pregnant.

Table 2.

Women's experiences disclosing to healthcare providers.

	Intentional disclosure	Inadvertent disclosure
Negative experiences	<p>"Another time I was in a car accident and I was at the ER. Again, on opiates and [there was] just a complete transformation of the interaction that we were having after that information was let known." ... "It felt like I was sort of not a high priority after that point. Sort of like a waste ... I wasn't taken very seriously ... and again, not every time, and not with every [provider]." (30, 0 children)</p> <p>"[Doctors] look at you different if you tell them you have a history of drugs ... I went to the emergency room one time and I told them I have so many years clean, but I used to use drugs. Their whole attitude changes ... and then if you tell them you're on methadone they're like 'why are you on that?' It's been really bad ... I usually don't say [anything]. Even though I should, I don't just because I don't feel comfortable. I feel that they're going to look at me a certain way so I just don't say anything." (38, 7 children)</p>	<p>"[The nurses] were having a hard time getting blood [from my veins]. Then the doctor walked in and had a fit. He talked shit to [the nurse]... 'when you get a person like that, you get rid of them and you send them to the emergency room.' Then she was very rude to me too. I just told her to give me the referral to the emergency room and I would take it from there. Ever since that experience... I just come into the room expecting it. I'm surprised when they're nice to me." (38,1 child)</p> <p>"I had a general doctor that I was going to, like a family doctor. And then when I started using drugs, he told my family. So that broke the [trust]... I never went back there. I told him that, you know, I trusted him. When he took my blood, I guess he saw drugs in there and instead of... telling me about the issue, first thing he did [was] call my mom and dad and told them." (35,0 children)</p>
Positive experiences	<p>"They were nice [at the clinic]. The doctor was amazing. She came, she gave me everything, every information; she did not leave until she gave me all the details. That surprised me." (32, 0 children)</p> <p>"She was amazing. She was really awesome. Really cool about everything I ever needed. Even things that she didn't agree with, she was like 'if it helps you that's fine.' She was just really cool." (26, 2 children) ever needed. Even things that she didn't agree with, she was like 'if it helps you that's fine.' She was just really cool." (26, 2 children)</p>	<p>"At the end I had to tell because I had marks. She knew me, we were very close ... She actually tried to help me." (39, 0 children)</p>

Table 3.Provider communication and perceived stigma of pregnancy while on methadone.^a

	Yes	No
1) Has anyone ever talked to you about having a safe or healthy pregnancy while on methadone? (N=49)	39%	61%
1.1) Who has talked to you about having a safe or healthy pregnancy while on methadone? (N=49) ^b		
A healthcare provider	22%	78%
Someone at the methadone clinic (e.g., a nurse or counselor)	16%	84%
A partner	2%	98%
A friend or family member	12%	88%
Someone else	6%	94%
2) Has anyone ever talked to you about preventing pregnancy while on methadone? (N=50)	42%	58%
2.1) Who has talked to you about preventing pregnancy while on methadone? (N=50) ^b		
A healthcare provider	30%	70%
Someone at the methadone clinic (e.g., a nurse or counselor)	26%	74%
A partner	18%	82%
A friend or family member	20%	80%
Someone else	4%	96%
4) <i>Among those who were ever pregnant while on methadone</i> (N=11)... Did you tell your pregnancy healthcare provider about your methadone treatment?	100%	0%
	Strongly agree/ Agree	Strongly disagree/ Disagree
5) People have told me it is irresponsible to become pregnant on methadone (N=48)	54%	46%
6) I would be a bad mother if I became pregnant while on methadone (N=49)	29%	71%
7) A doctor would scold me or make me feel badly if I became pregnant while on methadone (N=49)	37%	63%
8) My family would not be supportive if I became pregnant while on methadone (N=49) ^c	61%	39%

Table 3.1.Likelihood of health pregnancy and baby while on methadone.^a

	Very likely/Likely	Equal chances	Very unlikely/Unlikely
9) Likelihood of having a healthy pregnancy while on methadone (N=50)	22%	34%	44%
10) Likelihood of having a healthy baby while on methadone (N=49)	14%	35%	51%

^aItems 1–4 had two response options: yes/no and was coded as binary in analysis. Items 5–8 were asked on a 4-point Likert scale: strongly agree, agree, disagree, strongly disagree. In analysis, the response options were recoded as binary: strongly agree/agree and strongly disagree/disagree based on the observed distribution. Items 9–10 had six response options: very likely, likely, equal chances, unlikely, very unlikely. In analysis, response options were recoded: very likely/likely, equal chances, and very unlikely/unlikely.

^bPercentages do not add to 100 because the questions allowed respondents to check all that apply.

^cThis item was reverse coded. It was included in the survey as, “My family would be supportive if I became pregnant while on methadone.”