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Journal of Addiction Medicine and Therapy

Mini Review

# Women with opioid use disorders in the criminal justice system: A brief report

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**Submitted:** 20 October 2014

**Accepted:** 27 October 2014

**Published:** 30 October 2014

**ISSN:** 2333-665X



**Keywords**

- Women
- Gender
- Opioid
- Opiate
- Criminal justice
- Offender
- Incarcerated

**Abstract**

The number of women in the criminal justice system is growing. Women represent a significant number of these opioid-abusing and dependent incarcerated individuals. Substance-abusing men and women in the criminal justice system differ in terms of their patterns of drug use, criminal history, co morbidities and psychosocial stressors. These differences may have important treatment implications. Both men and women with opioid use disorders (OUDs) in the criminal justice system (CJS) are undertreated. However, gender differences have rarely been examined in treatment outcome studies, with a paucity of treatment studies looking specifically at women with opioid use disorders. Future studies should include more women, assess for gender differences and gender-specific needs, and ultimately treatment interventions addressing their unique clinical issues should be developed and tested.

## INTRODUCTION

The number of women in the criminal justice system (CJS) is growing. In the United States prison system, the number of women incarcerated increased by 646% between 1980 and 2010 [1,2]. Rates of incarcerated women are growing faster than those for men [1,2]. Incarcerated individuals have disproportionally higher rates of heroin addiction than the general population [3-5]. Women represent a significant number of these opioid-abusing and dependent incarcerated individuals. Despite this large and growing number of opioid-dependent women in the CJS, gender differences have rarely been examined in treatment outcome studies [6-8]. Women in the CJS have specific needs that may not be targeted by substance abuse treatment programs, both in prison and once transitioned back to the community. Thus, the applicability of research done largely with men is not clear [9-10].

The purpose of this brief report, therefore, is to review the existing literature on women with OUDs in the CJS. We will review the scope of this problem, what is known about gender differences in this population, and review the treatment literature specific to women with OUDs in the criminal justice system.

## METHODS

We conducted a comprehensive search on Pub Med and Medline, as well as criminal justice-specific sites and databases including the Bureau of Justice Statistics, the National Institute of Justice, the Criminal Justice Drug Abuse Treatment Studies and the International Centre for Prison Studies. We used the search terms "opioid," "opiate," "heroin," "addiction," "substance abuse," "women," "female," "gender," "incarcerated," "jail," "prison," "criminal justice," "offender," "treatment," "buprenorphine," "methadone," and "naltrexone" in various combinations, to identify articles of women with OUDs in the CJS.

## SCOPE

Opioid abuse and dependence among the criminal justice population represents a significant problem both in the United States and internationally [11]. Female prisoners may be more likely to be daily opioid users and meet criteria for opioid dependence than their male counterparts [12,13]. In the United States in 2003 (the last time large-scale epidemiologic data for female arrestees were collected by the National Institute of Justice), up to 23% of female arrestees tested positive for opioids at the time of booking, and up to 23% reported past-month heroin use [14]. In the United Kingdom, data from the New English and Welsh Arrestee Drug Abuse Monitoring (NEW-ADAM) program found that women arrestees were significantly more likely to test positive for opioids than men (46% vs. 30%), they were 1.4 times more likely to have used heroin in the past 12 months, and among those arrestees reporting drug dependence in the past 12 months, women were significantly more likely to be dependent upon heroin (81% vs. 67%) [15]. Similar data were found by Australia's Drug Use Monitoring in Australia (DUMA) program: women arrestees were significantly more likely to use opioids than men, with 23% of women, compared to 14% of men, testing positive for heroin at the time of arrest [13,16]. Taken together, these data reveal that women represent a greater portion of those abusing and dependent upon opioids in the CJS.

## GENDER DIFFERENCES

Data suggest that incarcerated women may be more likely to inject opioids [6,7,13], are more likely to be addicted to multiple substances than incarcerated men [6], and may be at an increased risk of post-release overdose and opioid-related death [17]. Incarcerated women also have higher rates of psychiatric co morbidities compared to incarcerated men and non-incarcerated women [6,16,18,19] and are more likely than men to have chronic and/or communicable diseases (including HIV and Hepatitis C) [6, 20]. Women offenders have high rates of trauma, including histories of child abuse, physical and sexual abuse, intimate partner violence, and they are more likely than men to be victims of staff sexual misconduct while incarcerated [16,21,22]. Nearly two thirds of women in prison are mothers; women offenders are also more likely to have dependent children at home, be unemployed, be living below the poverty line, and be living in public housing as compared to men [2,6,13,23]. They also may have different patterns of offending; men are more likely to commit violent crimes but women are more likely to have been convicted of a drug-related offense [1,15,24,25]. Finally, data from 2009 suggest that women under correctional supervision were more likely than men to be supervised in the community on parole or probation (85% vs. 66%) [26]. Thus, substance-abusing men and women in the criminal justice system differ in terms of their pathway of entry into the criminal justice system, patterns of substance use, medical and psychiatric co morbidities, and psychosocial stressors. These differences may have important clinical, treatment and research implications. Treatment needs, such as psychiatric and medical co morbidities, as well as addressing trauma, childcare, and housing should be considered.

## TREATMENT

Pharmacotherapy for OUDs has been shown to reduce HIV risk and incidence [27, 28], reduce opioid and other drug use, and improve physical, mental health and social outcomes [29-30]. It has also been shown to reduce in-prison drug injection [31], reduce mortality risk, which is particularly high for opioid-dependent individuals in the first days and weeks post-release, and to reduce in-prison deaths among opioid-dependent prisoners [32-34]. However, incarcerated individuals with OUDs of both genders are undertreated for their substance use disorder [35, 36] with estimates that less than a quarter of offenders in prisons and jails, and less than 10% of those in community correctional agencies, have access to substance abuse services [35]. In a national survey of 500 jails, only 12% offered continuation of pre-incarceration methadone for opioid-dependent incarcerated inmates [37]. In another survey, approximately 45% of facilities provided some community linkage to methadone treatment post-release and just 29% offered referrals to buprenorphine providers upon release [38]. While a clear need for increased treatment access exists for all individuals with opioid use disorders in the criminal justice system, women are marginalized within a system largely designed for men [10].

Treatment and research within the CJS can generally be divided into: community supervision, jail/prison-based treatment, treatment just prior to release, and post-release. However, the majority of studies looking at medication-assisted treatment (e.g. methadone, buprenorphine, naltrexone) within the CJS are comprised largely, and in many cases entirely, of men [39-46]. Even in those studies that include women, the studies generally do not comment on gender differences [48-52], a fact that may be due to the small sample sizes. There is not, to date, a large enough literature base of treatment of women with OUDs to divide the studies in the aforementioned manner.

To the authors' knowledge, Cropsey et al. (2011) performed the only medication-assisted randomized clinical trial for opioid-dependent women in the CJS [53]. The study was a 12-week double-blind, randomized, placebo-controlled pilot study of buprenorphine for opioid-dependent adult women who were on parole or probation prior to treatment (i.e. 'community supervision') in which, following an enrollment of 9 women in open-label buprenorphine, 27 were then randomized to buprenorphine (n=15) or placebo (n=12) [53]. Cropsey et al. found that those on active medication were significantly more likely to complete treatment, and at the1-month follow up, significantly less likely to test positive for opioids via urine drug screen (this difference did not hold up at the 3-month follow-up when the women were off active medication) [53]. This study finds that buprenorphine is feasible to implement in women in this setting and is consistent with an (open-label) pilot study of buprenorphine/naloxone prior to release from incarceration and continuing into the community, which included (16%) women [54]. These findings are also comparable to a more recent randomized controlled trial of prison-initiated buprenorphine with a sample that included 30% women (N=63) [5]. This trial, which was a 2 (in-prison treatment condition: buprenorphine treatment vs. counseling only) x 2 (post-release service setting: opioid agonist maintenance treatment program vs. community health center) x 2 (gender) factorial design, found that those individuals in the buprenorphine in-prison treatment condition were significantly more likely than those in the counseling-only condition to enter treatment, and that those in the in-prison buprenorphine group were more likely to enter treatment post-release [5]. Finally, the authors found that irrespective of treatment arm, women were significantly more likely to complete prison treatment than men [5]. The findings of the above studies, of decreased opioid use and improved adherence, are consistent with prior literature of both buprenorphine and methadone performed in largely male criminal justice samples [5,11,42,45].

While there is a paucity of treatment trials that include and focus on treatment outcomes for women with OUDs in the CJS, the availability of specialized treatment programs for substance-abusing women in the CJS is increasing [55]. Interventions typically attempt to target specific needs of women and include: gender-responsive treatment programs and cognitive behavioral treatments, such as Seeking Safety, which address trauma and co morbid post traumatic stress disorder, probation case management tailored to the needs of drug-involved female offenders, collaborative behavioral management which integrates the parole officer and treatment services, and therapeutic communities with programs specifically adapted for women offenders [56-60]. While the outcomes literature is limited supporting gender-specific treatments in the criminal justice system, a recent review of randomized controlled trials found that interventions designed for female offenders appear to reduce drug use and may reduce arrest and re-incarceration [56].

Many of these trials did not specify the substance(s) of abuse. Thus, while it is unclear if these results would apply to women with OUDs, the findings seem to suggest a benefit for gender-specific interventions for incarcerated individuals with OUDs.

## CONCLUSIONS

Women represent a significant and likely growing portion of the opioid-dependent population in the CJS, yet they are profoundly under-represented in treatment trials. Women with OUDs have different needs and potential barriers to treatment that likely impact treatment outcome. One should not assume that treatments effective for men with OUDs in the CJS, or even gender-specific treatments found effective for non-offending women, will be effective; opioid-dependent women in the CJS represent a unique population that warrants specific treatment and research.

Available data suggest a profile of the opioid-dependent woman in the CJS: she is more likely to inject opioids, more likely to have HIV/Hepatitis C, and more likely to overdose post-release than her male counterpart. Thus, interventions such as agonist therapy while incarcerated/pre-release, referral to medication-assisted treatment post-release, as well as harm-reduction interventions (naloxone kit, clean needle exchange) may be particularly important for women in the CJS. Methadone clinics require (initially) attendance for 6 days per week. Women in the CJS with substance use disorders are more likely to be the primary care givers to dependent children, be unemployed and be living below the poverty line. Do these factors present barriers to engagement and treatment in methadone maintenance programs? Are there services (e.g. childcare, transportation) that might improve retention, or might these women be better served by buprenorphine or naltrexone? These are important questions for future research. Finally, the woman with OUD in the CJS is more likely to have psychiatric and medical co morbidities and trauma, all of which likely impact, not only her substance use, but also her ability to engage in treatment. More trials of specialized treatment programs for women are needed, and it may be beneficial to look at impact by substance of abuse. In summary, future studies should include more women and assess for gender differences and gender-specific needs of those with OUDs. Ultimately, treatment interventions addressing the unique clinical issues confronting this population should be developed and tested.

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**Cite this article**

*Evans EA, Sullivan MA (2015) Women with opioid use disorders in the criminal justice system: A brief report. J Addict Med Ther 3(1): 1011.*