

Substance Misuse and the Older Offender



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KEYWORDS

- Elderly • Offender • Incarceration • Prison • Judicial system • Addiction
- Substance use

KEY POINTS

- Alcohol and drug use disorders are highly prevalent among the older justice-involved population.
- Screening for substance use should be part of every comprehensive mental health assessment.
- Incorporating a biopsychosocial approach can assist with identifying risk and protective factors about substance use and determining the overall well-being of older offenders.
- Rates of recidivism may be decreased in older offenders by ensuring continuous access to integrated mental health and substance use services.

INTRODUCTION

Older adults constitute around 1% of offenders in the criminal justice system.¹ However whereas the global incarcerated population has been steadily growing over the past few years,² the subpopulation of older adults has been expanding at the fastest rate. In the United States, the number of state prisoners aged 55 years and older has quadrupled between 1993 and 2013, exceeding the growth rate of the total incarcerated as well as the nonincarcerated older populations.^{3,4} Although aging in prisons parallels the trend in the general population,⁵ the increased number of incarcerated older offenders and those serving long-term sentences in prisons explains the observed phenomena better.⁴

Defining “older offenders” has been a source of controversy. Using the “chronologic age,” that is, a specific cutoff to differentiate younger from older offenders, has been commonly adopted.⁶ However, whereas the age cutoff in geriatric psychiatry was set at 65 years,⁷ no consensus has been reached in geriatric forensic psychiatry to date.⁶

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Clin Geriatr Med 38 (2022) 159–167

<https://doi.org/10.1016/j.cger.2021.07.010>

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A recent systematic review that included 100 studies on the health and well-being of older offenders showed that the cutoff age ranged between 40 and 65 years and that the most selected cutoff was 50 years.⁶ Key empirical evidence supporting this choice is the “accelerated aging” hypothesis that argues that incarcerated individuals’ physical and mental health deteriorates 10 to 15 years earlier than the health of their non-incarcerated counterparts.^{8–10} Additional empirical evidence includes shorter life expectancy, functional limitations leading to an increased reliance on the prison health care system, and earlier cognitive dysfunction.⁶

Medical and mental illnesses and substance use disorders (SUDs) are quite prevalent among older adults involved in the criminal justice system.¹¹ A recent systematic review found that approximately 1 of 3 incarcerated older offenders reported problematic alcohol use and approximately 1 of 4 reported drug misuse.¹² Results from the National Survey on Drug Use and Health (NSDUH) showed that, between 2015 and 2018, noninstitutionalized justice-involved adults aged 50 years or older were 3 and 8 times more likely to have a mental illness and any SUD, respectively, compared with nonjustice involved peers.¹¹ Furthermore, older prisoners were more than twice as likely to have any psychiatric disorder compared with older adults in the community.¹³ Nevertheless, they had lower odds of anxiety disorders and cannabis and cocaine use disorders when compared with younger inmates.¹⁴ Aging was found to have a moderating effect on the association between SUD and chronic conditions. Older inmates with a history of cannabis use disorder were at greater risk of developing psychotic disorders.¹⁴ Similarly, cardiovascular diseases were greatly increased in older inmates with alcohol, cannabis, and injection drug use disorders; hepatitis C infection was significantly associated with cocaine and injection drug use.¹⁴ The extent to which mental illnesses and SUD precede, co-occur with, or develop after incarceration is unclear.¹⁵ Moreover, offending behaviors vary in their association with SUDs. We review the occurrence of different types of offenses and their relationship to drug and alcohol use among older offenders.

SUBGROUPS OF OLDER OFFENDERS

The class of older offenders encompasses 3 groups that are heterogeneous in their criminal behaviors, backgrounds, vulnerabilities, and prognosis.^{16,17}

“First-time offenders” are a minority subclass composed of individuals who commit their first crime at an old age.^{16,18} Compared with the other subclasses, they have a more favorable socioeconomic background and are more likely to suffer from adjustment problems during imprisonment.^{16,17} Also, “first-time offenders” are less likely to have drug dependence and less likely to be convicted of drug-related offenses.¹⁷ The second subclass of “recidivists” includes individuals who get repeatedly incarcerated at different ages due to recurrent crimes or parole violations. Recidivists commonly experience substance abuse and other chronic health problems.^{16,19} Last, individuals incarcerated at a younger age but sentenced for a long period constitute the subclass of “long-term servers.”¹⁶

Crime rates by older adults are often underestimated because crimes by this population go often undetected by the criminal justice system.¹⁸ This fact is shown by the discrepancy between the number of self-reported offenses and the proportion of arrests among offenders.^{20,21} In one study, only 2% of noninstitutionalized adults aged 65 years or older reported getting arrested after breaking the law in the past year.²⁰ Regardless, past-year alcohol and drug use disorders were significantly associated with increased odds of getting arrested as well as breaking the law.²⁰

In the following sections, we refer to 2 main categories of offenses among older adults: “substance-related offenses,” including driving under the influence (DUI) of

Offense	Age (y)		
	50–54	55–59	60–64
Drug abuse violations			
1980	30	22.6	13.1
1990	89.7	44.6	22.8
2000	173	81.9	39.1
2010	266	136	58.7
2014	290	163	72.9
Driving under the influence			
1980	587	427	271
1990	502	349	227
2000	390	266	175
2010	412	265	161
2014	356	246	149
Violent crime index offenses			
1980	74.2	47.2	30.1
1990	93.3	58.6	37.2
2000	87	55.1	35.1
2010	103	57.6	32.9
2014	107.6	62.9	33.5
Property crime index offenses			
1980	197	148	109
1990	233	171	124
2000	165	95.4	58.3
2010	260	142	74
2014	312.8	182.8	91.8

drugs or alcohol, drunkenness, drug sale/trafficking, drug manufacturing, and drug possessions, and “non-substance-related offenses” for all other offenses, including “violence-related offenses.”

SUBSTANCE-RELATED OFFENSES

Data from the Bureau of Justice Statistics shows that between 1980 and 2014, arrest rates for DUI across age groups 50 to 54, 55 to 59, and 60 to 64 years have been consistently decreasing, as seen in [Table 1](#).²² In parallel, arrest rates for drug possession and drug selling/manufacturing have greatly increased.²² However, inmates aged 50 years or older in the Iowa Department of Corrections were found to be less commonly convicted of drug-related offenses compared with their younger counterparts.²³

Among noninstitutionalized older adults surveyed in the NSDUH between 2008 and 2014, DUI of alcohol was by far the most commonly self-reported offense (3.4%), followed by selling illegal drugs (0.7%); DUI of drugs was reported by 0.2% of the population.²⁰

Studies on DUI correlates among noninstitutionalized adults aged 50 years or older invariably report greater involvement of men compared with women and the use of

alcohol and illicit drugs other than marijuana.^{21,24,25} Choi and colleagues²¹ used NSDUH data from 2008 through 2012 to study 2 groups of older adults (aged 50–64 year and ≥ 65 years) with a history of past-year substance use and self-reported DUI. The investigators found that DUI of alcohol was more common than DUI of other drugs in both groups. In addition, common DUI predictors among both groups were elevated income, increased frequency of alcohol use, bingeing on alcohol in the past 30 days, marijuana use, and having a major depressive episode. Being employed, being married, having better health, and using illicit drugs other than cannabis significantly increased the odds of self-reported DUI among individuals aged 50 to 64 years; having a college degree or a lifetime arrest history significantly predicted self-reported DUI among individuals aged 65 years or older.²¹ In another study based on data from NSDUH between 2012 and 2013, the investigators warned of growing safety concerns among older driving adults who use cannabis²⁵; this is particularly true as self-reported DUI among older cannabis users was 7 times higher than nonusers, whereas their risk perception of cannabis was extremely low.²⁵

NON-SUBSTANCE-RELATED OFFENSES

Few studies looked into alcohol and substance misuse in older adults committing non-drug-related offenses. In one retrospective cohort study of 1853 first-time offenders aged 45 years or older in Western Australia, the baseline prevalence of SUDs was 5.9% and 5.5% among violent and nonviolent offenders, respectively.²⁶ The investigators found that violent offenders were equally likely as nonviolent offenders to seek mental health services for SUD during the year before sentencing.²⁶ In a retrospective review of 210 forensic psychiatric evaluations of Swedish offenders aged 60 years or older who committed serious crimes, close to 15% of the principal diagnoses were substance abuse/dependence.²⁷ And in another retrospective review of trial competency or criminal responsibility evaluations of 99 adults aged 60 years or older in South Carolina, alcohol abuse/dependence was the most prevalent diagnosis (67.7%).²⁸ Moreover, close to 30% of these older offenders were using substances at the time of the alleged offense; this factor was not significantly associated with violent crime perpetration.²⁸ The discrepancies in prevalence rates of substance use across studies might be best explained by the heterogeneity of the target populations.

Research in the general population shows that substance use is associated with violent conduct. A study on cannabis use in older offenders suggested that 50- to 64-year-olds who engaged in drug selling were almost 10 times more likely to consume cannabis, whereas those who committed theft or violent attacks only had 2 and 3 times greater odds of use, respectively.²⁹ Alternatively, in a study using NSDUH data spanning from 2002 to 2017 to assess the characteristics of various criminal behaviors among older community-dwelling individuals, those with past-year cannabis use were found to have significantly higher odds of committing violent behaviors. Furthermore, those reporting past-year tobacco and other illicit drug use were found to have significantly higher odds of committing criminal behaviors. However, these results were not stratified by behavior subtype.³⁰

TREATMENT SERVICES FOR ALCOHOL AND SUBSTANCE MISUSE IN THE OLDER OFFENDER

At present, most prison health services do not adequately integrate addiction services. Once individuals with SUDs become involved in the judicial system, they are unlikely to receive evidence-based management.³¹ In addition, they have elevated rates of criminal recidivism.³²

In a content analysis of the literature, it was found that the detection of mental health issues and access to services in older offenders are identified at different stages of the criminal justice pathway.¹⁵ For instance, serious psychiatric disorders such as schizophrenia and neurocognitive impairment are commonly identified in the early stages. However, substance use problems are typically detected later in the criminal justice trajectory, usually during the prison intake process. Furthermore, many older prisoners frequently have difficulty accessing treatment services.¹⁵

Diagnostic delays in prisons are attributed to several factors, including the incomplete transmission of clinical records upon incarceration, highly stressed mental health resources within correction systems, and withholding psychiatric history due to fear of stigma and discrimination. Another hypothesis is that the prison setting itself may be stressful enough to trigger subclinical psychiatric symptoms, particularly in the setting of social isolation, lack of support, and violence.²³ One cross-sectional study found that only 67% of older offenders with an SUD diagnosis received treatment during incarceration. The most frequent treatment service was Narcotics Anonymous. Formal programs, one-on-one counseling, and pharmacologic management were less commonly reported.³³ These results emphasize the importance of timely diagnosis, particularly in special populations such as older offenders, to ensure receipt of adequate services and optimize health care outcomes throughout the imprisonment period. Case in point, one recent systematic review found that prisoners with opioid use disorder who were treated with opioid agonist treatment during their incarceration were more likely to adhere to substance use treatment and were less likely to relapse into illicit opioid use or to be reincarcerated.³⁴

Along the same lines, when looking into older offenders with SUDs and comorbid pain, adequate management can be impeded by physicians' fear of misuse, diversion of medication, or overdosing. As a result, offenders' quality of life can be significantly altered.³⁵ Developing a tailored approach for the assessment and management of pain and other medical conditions in this subgroup is recommended.

More studies looked into the management of substance misuse services in older offenders postincarceration. One cross-sectional study investigated factors associated with illicit substance use after release from incarceration.³³ Variables significantly associated with higher postrelease illicit substance use were male gender, housing with family or friends, a longer period between release and the first medical encounter, and having an SUD diagnosis. Alternatively, a greater period of incarceration and being on parole were associated with lower odds of postrelease illicit substance use.³³

When looking into factors that can help achieve sobriety and prevent relapse, a qualitative study of 15 elderly inmates released from prison noted age as central to the process.³⁶ This observation was closely associated with a growing awareness of their mortality. Prison time also allowed inmates to reflect upon the lives they led before incarceration and to plan for a different path after release, based on newly identified goals and values incompatible with drug use. In addition, the period of forced detoxification after initial incarceration and the prolonged period of sobriety throughout the prison stay acted as a catalyst for this process.³⁶ These results are concordant with clinical data revealing that older age³⁷ and an involuntary period of sobriety^{38,39} may set individuals with SUDs on a new trajectory.

When looking into challenges that can trigger relapse following prison release older offenders pinpoint several themes, including medical issues and social challenges such as discrimination, stigma, limited familial support, and prior associations with

negative peers. Other noted challenges encompass financial difficulties, particularly in getting employed and having housing, and psychological difficulties with older offenders being highly susceptible to triggers.⁴⁰ Along the same lines, Western and colleagues (2015)⁴¹ found that released older prisoners, particularly those with SUDs, were the most socially disconnected and materially disadvantaged (insecurely housed and less likely to be employed).

Despite these challenges, older former prisoners are less likely to recidivate than their younger counterparts and more likely to progress through treatment, complete it, commit to conventional goals, and refrain from relapse.^{42,43} Chamberlain and colleagues (2018)³³ noted that among released older prisoners who had a history of SUD, only one-quarter reported illicit substance use following release.

Overall, data are limited about the types of monitoring practices that are most effective after release. Close supervision is considered best practice.⁴⁴ If participants' parole monitoring included urine drug testing, this may effectively discourage illicit substance use.³³ Also, while it is important to provide material resources for this vulnerable subgroup, it is equally necessary for community organizations to help repair and provide prosocial bonds.

SUMMARY

Alcohol and drug use disorders are highly prevalent among the older justice-involved population. Screening for substance use should be part of every comprehensive mental health assessment. Many studies found that completing such an assessment significantly increases the referral of older offenders to mental health services, whether court-mandated or in the prison setting.¹⁵ Incorporating a biopsychosocial approach can also assist with identifying risk and protective factors about substance use and determining the overall mental and medical well-being of older offenders.¹⁵ Such an approach requires an interprofessional team that includes mental health professionals, medical practitioners, and social services, among others.

Other relevant areas for intervention include postincarceration aftercare for substance use. Rates of recidivism may be decreased in older offenders by ensuring continuous access to integrated mental health and substance use services, not only during incarceration but also after release from custody. A community-wide strategy that takes into consideration the role of social determinants must be adopted when treating SUDs in older offenders. These services should be particularly targeted to those with the greatest risk factors and treatment needs.

CLINICS CARE POINTS

- "Older offenders," primarily defined as individuals aged 50 years and older who are involved in the criminal justice system, have high rates of alcohol and drug misuse as well as other chronic mental and medical conditions.
- Low rates of substance-related offenses have been described in the literature, of which DUI of alcohol and/or drugs has been the most common.
- Preliminary data show that older offenders with violence-related offenses tend to have lower proportions of substance misuse compared with those with substance-related offenses.
- The detection of substance misuse and referral to relevant treatment services typically occur later in the criminal justice pathways for older offenders.

- Older former prisoners are less likely to recidivate and more likely to progress through substance use treatment compared with their younger peers.
- There is a need for timely diagnosis and treatment of substance misuse in older offenders while adopting a biopsychosocial model and ensuring close follow-up in the community after release.

DISCLOSURE

The authors have nothing to disclose.

REFERENCES

1. Zurek O, Stanton L, Kohn R. Sociopathy, antisocial personality, and directed aggression in the geriatric population. In: Holzer JC, Kohn R, Ellison JM, et al, editors. *Geriatric forensic psychiatry: principles and practice*. New York, NY: Oxford University Press; 2018. p. 191–7.
2. Walmsley R. *World prison population list*. 12th edition. London, UK: Institute for Criminal Policy Research; 2018. Available at: https://www.prisonstudies.org/research-publications?shs_term_node_tid_depth=27. Accessed May 23, 2021.
3. Williams BA, Goodwin JS, Baillargeon J, et al. Addressing the aging crisis in U.S. criminal justice health care. *J Am Geriatr Soc* 2012;60(6):1150–6.
4. Carson EA, Sabol WJ. *Aging of the state prison population. May report (NCJ 248766)*. Washington, DC: Bureau of Justice Statistics, US Department of Justice; 2016.
5. United Nations, Department of Economic and Social Affairs, Population Division. *World population ageing 2019 (ST/ESA/SER.A/444)*. 2020. Available at: <https://www.un-ilibrary.org/content/books/9789210045544>. Accessed May 23, 2021.
6. Merkt H, Haesen S, Meyer L, et al. Defining an age cut-off for older offenders: a systematic review of literature. *Int J Prison Health* 2020;16(2):95–116.
7. World Health Organization. Division of mental health and prevention of substance abuse & world psychiatric association. *Psychiatry of the elderly: a consensus statement*. World health organization. 1996. Available at: <https://apps.who.int/iris/handle/10665/63623>. Accessed May 23, 2021.
8. Loeb SJ, Steffensmeier D, Lawrence F. Comparing incarcerated and community-dwelling older men's health. *West J Nurs Res* 2007;30(2):234–49.
9. Fazel S, Hope T, O'Donnell I, et al. Health of elderly male prisoners: worse than the general population, worse than younger prisoners. *Age Ageing* 2001;30(5):403–7.
10. Combalbert N, Pennequin V, Ferrand C, et al. Mental disorders and cognitive impairment in ageing offenders. *J Forensic Psychiatry Psychol* 2016;27(6):853–66.
11. Han BH, Williams BA, Palamar JJ. Medical multimorbidity, mental illness, and substance use disorder among middle-aged and older justice-involved adults in the USA, 2015–2018. *J Gen Intern Med* 2020;36(5):1258–63.
12. Solares C, Dobrosavljevic M, Larsson H, et al. The mental and physical health of older offenders: a systematic review and meta-analysis. *Neurosci Biobehav Rev* 2020;118:440–50.
13. Di Lorito C, Völm B, Dening T. Psychiatric disorders among older prisoners: a systematic review and comparison study against older people in the community. *Aging Ment Health* 2018;22(1):1–10.

14. Gates ML, Staples-Horne M, Walker V, et al. Substance use disorders and related health problems in an aging offender population. *J Health Care Poor Under-served* 2017;28(2s):132–54.
15. Maschi T, Dasarathy D. Aging with mental disorders in the criminal justice system: a content analysis of the empirical literature. *Int J Offender Ther Comp Criminol* 2019;63(12):2103–37.
16. Morton JB. An administrative overview of the older inmate. Washington, DC: US Department of Justice, National Institute of Corrections; 1992.
17. DeLisi M, Tahja KN, Drury AJ, et al. De novo advanced adult-onset offending: new evidence from a population of federal correctional clients. *J Forensic Sci* 2018; 63(1):172–7.
18. Kirk DS. Examining the divergence across self-report and official data sources on inferences about the adolescent life-course of crime. *J Quant Criminol* 2006; 22(2):107–29.
19. Neeley CL, Addison L, Craig-Moreland D. Addressing the needs of elderly offenders. *Correct Today* 1997;59(5):120–3.
20. Ghossoub E, Khoury R. Prevalence and correlates of criminal behavior among the non-institutionalized elderly: results from the national Survey on drug use and health. *J Geriatr Psychiatry Neurol* 2018;31(4):211–22.
21. Choi NG, DiNitto DM, Marti CN. Risk factors for self-reported driving under the influence of alcohol and/or illicit drugs among older adults. *Gerontologist* 2016; 56(2):282–91.
22. Snyder HN, Cooper AD, Mulako-Wangota J. USA Arrest rates by age between 1980 and 2014 for select offenses. Generated using the arrest data analysis tool. 2021. Available at: www.bjs.gov. Accessed on: May 23, 2021.
23. Al-Rousan T, Rubenstein L, Sieleni B, et al. Inside the nation's largest mental health institution: a prevalence study in a state prison system. *BMC Public Health* 2017;17(1):1–9.
24. Malek-Ahmadi M. Age-associated alcohol and driver risk differences in older adult DUI offenders. *J Appl Gerontol* 2017;36(4):499–507.
25. Choi NG, DiNitto DM, Marti CN. Older adults driving under the influence: associations with marijuana use, marijuana use disorder, and risk perceptions. *J Appl Gerontol* 2019;38(12):1687–707.
26. Sodhi-Berry N, Knuiman M, Alan J, et al. Pre- and post-sentence mental health service use by a population cohort of older offenders (≥ 45 years) in Western Australia. *Soc Psychiatry Psychiatr Epidemiol* 2015;50(7):1097–110.
27. Fazel S, Grann M. Older criminals: a descriptive study of psychiatrically examined offenders in Sweden. *Int J Geriatr Psychiatry* 2002;17(10):907–13.
28. Lewis CF, Fields C, Rainey E. A study of geriatric forensic evaluatees: who are the violent elderly? *J Am Acad Psychiatry Law* 2006;34(3):324–32.
29. Salas-Wright CP, Vaughn MG, Cummings-Vaughn LA, et al. Trends and correlates of marijuana use among late middle-aged and older adults in the United States, 2002–2014. *Drug Alcohol Depend* 2017;171:97–106.
30. Holzer KJ, AbiNader MA, Vaughn MG, et al. Crime and violence in older adults: findings from the 2002 to 2017 National Survey on Drug Use and Health. *J Interpers Violence* 2020. 886260520913652.
31. Wakeman SE, Rich JD. Addiction treatment within U.S. Correctional facilities: Bridging the gap between current practice and evidence-based care. *J Addict Dis* 2015;34(2–3):220–5.
32. Håkansson A, Berglund M. Risk factors for criminal recidivism - a prospective follow-up study in prisoners with substance abuse. *BMC Psychiatry* 2012;12:111.

33. Chamberlain A, Nyamu S, Aminawung J, et al. Illicit substance use after release from prison among formerly incarcerated primary care patients: a cross-sectional study. *Addict Sci Clin Pract* 2019;14(1):7.
34. Malta M, Varatharajan T, Russell C, et al. Opioid-related treatment, interventions, and outcomes among incarcerated persons: a systematic review. *PLoS Med* 2019;16(12):e1003002.
35. Haesen S, Merkt H, Imber A, et al. Substance use and other mental health disorders among older prisoners. *Int J Law Psychiatry* 2019;62:20–31.
36. Wyse JJ. Older former prisoners' pathways to sobriety. *Alcohol Treat Q* 2018;36(1):32–53.
37. Best DW, Ghufuran S, Day E, et al. Breaking the habit: a retrospective analysis of desistance factors among formerly problematic heroin users. *Drug Alcohol Rev* 2008;27(6):619–24.
38. Cepeda A, Nowotny KM, Valdez A. Trajectories of aging long-term Mexican American heroin injectors: the “maturing out” paradox. *J Aging Health* 2016;28(1):19–39.
39. Levy JA, Anderson T. The drug career of the older injector. *Addict Res Theor* 2005;13(3):245–58.
40. SACA. Reintegration needs and challenges faced by elderly ex-offenders in Singapore. Singapore: Singapore After-Care Association; 2018.
41. Western B, Braga AA, Davis J, et al. Stress and hardship after prison. *AJS* 2015;120(5):1512–47.
42. Gordon MS, Kinlock TW, Couvillion KA, et al. A Randomized clinical trial of methadone maintenance for prisoners: prediction of treatment entry and completion in prison. *J Offender Rehabil* 2012;51(4):222–38.
43. Zanis DA, Coviello DM, Lloyd JJ, et al. Predictors of drug treatment completion among parole violators. *J Psychoactive Drugs* 2009;41(2):173–80.
44. Marlowe DB. Integrating substance abuse treatment and criminal justice supervision. *Sci Pract Perspect* 2003;2(1):4–14.