Sex and Gender Differences in Substance Use Disorders

Leena Mittal, MD



Substance Use Disorders are more common in men than women





Substance Use Disorders in women have distinct features and natural history

Telescoping – accelerated progression from initiation of use to onset of diagnosis of dependence/SUD and initiation of treatment – seen with alcohol, opioids, cannabis

Interpersonal factors modulate progression more for women than men (partners and children)



Biological differences between males and females contribute sex difference in Substance Use Disorder presentation and course

Menstrual cycle, pregnancy, aging and menopause

Ovarian sex steroids impact effects of cocaine, amphetamines, cannabis

Sex-based ETOH thresholds



Pregnancy is a window of opportunity for the treatment of Substance Use Disorder in women





Drug use in the past month, females 15-44

Sex and gender differences in psychiatric comorbidity can impact Substance Use Disorders in women

Comorbid psychiatric conditions are more prevalent in women:

Mood disorders Eating Disorders PTSD



Women can benefit from gender specific treatment

- Childcare, prenatal care, integrated HIV care in mixed gender treatment vs women only
- Women only treatment associated with lower rates of relapse and improved outcomes in some studies
- A minority of programs offer women-targeted treatment



Greenfield Psychiatr Clin North Am. 2010 June ; 33(2): 339-355

Treatment setting	Services	Limitations for women
Outpatient Counseling	Individual and group counseling/Medication management.	Heterogeneous regarding pt population, trauma informed, child-care, womens health
Outpatient MAT only	Through PCP/OB-Gyn or Psychiatric/SUD care provider	Risk for limited knowledge regarding pregnancy, IPV, Trauma informed
Intensive Outpatient/Partial Hospital Program	Day programs including meds and counseling	Rare single sex programs; may have women-focused groups
Medically supervised withdrawal ("detox")	Medication assisted withdrawal.	Especially difficult to access in pregnancy
Dual diagnosis	Inpatient psychiatry with concurrent SUD care	Especially difficult to access in pregnancy
Intermediate level inpatient ("rehab", holding programs)	After detox, before residential	Difficult to access, long waits, separation from family
Involuntary commitment	Court ordered	Often takes place in correctional settings, little to no access during pregnancy
Residential	Months long	Few allow children, even fewer allow partners and children together

References

- Center for Behavioral Health Statistics and Quality. (2017). 2016 National Survey on Drug Use and Health: Detailed Tables. Substance Abuse and Mental Health Services Administration, Rockville, MD
- Hernandez-Avila CA, Rounsaville BJ, Kranzler HR. Opioid-, cannabis-and alcohol-dependent women show more rapid progression to substance abuse treatment. Drug and alcohol dependence. 2004 Jun 11;74(3):265-72.
- Grella CE, Scott CK, Foss MA, Joshi V, Hser YI. Gender differences in drug treatment outcomes among participants in the Chicago Target Cities Study. Evaluation and Program Planning. 2003 Aug 1;26(3):297-310.
- Greenfield SF, Back SE, Lawson K, Brady KT. Substance abuse in women. Psychiatric Clinics. 2010 Jun 1;33(2):339-55
- Substance Abuse and Mental Health Services Administration. Substance Abuse Treatment: Addressing the Specific Needs of Women. Treatment Improvement Protocol (TIP) Series, No. 51. HHS Publication No. (SMA) 13-4426. Rockville, MD: Substance Abuse and Mental Health Services Administration, 2009.
- Lindblad R, Hu L, Oden N, Wakim P, Rosa C, VanVeldhuisen P. Mortality rates among substance use disorder participants in clinical trials: pooled analysis of twenty-two clinical trials within the National Drug Abuse Treatment Clinical Trials Network. Journal of substance abuse treatment. 2016 Nov 1;70:73-80.v
- Sofuoglu M, Dudish-Poulsen S, Nelson D, Pentel PR, Hatsukami DK. Sex and menstrual cycle differences in the subjective effects from smoked cocaine in humans. Experimental and clinical psychopharmacology. 1999 Aug;7(3):274.
- McCabe JE, Arndt S. Demographic and substance abuse trends among pregnant and non-pregnant women: eleven years of treatment admission data. Maternal and child health journal. 2012 Nov 1;16(8):1696-702.

References (continued)

- National Institute on Alcohol Abuse and Alcoholism. Helping Patients Who Drink Too Much: A Clinician's Guide. 2005. NIH publication: 07-3769
- Havens, J. R., Simmons, L. A., Shannon, L. M., & Hansen, W. F. (2009). Factors associated with substance use during pregnancy: results from a national sample. *Drug and alcohol dependence*, 99(1-3), 89-95.
- Harrison, P. A., & Sidebottom, A. C. (2009). Alcohol and drug use before and during pregnancy: an examination of use patterns and predictors of cessation. *Maternal and child health journal*, 13(3), 386.
- Garcia-Guix A, Mestre-Pinto JI, Tirado-Muñoz J, Domingo-Salvany A, Torrens M. Psychiatric comorbidity among women with substance use disorders. Advances in Dual Diagnosis. 2018 Feb 19;11(1):1-3.
- Frem Y, Torrens M, Domingo-Salvany A, Gilchrist G. Gender differences in lifetime psychiatric and substance use disorders among people who use substances in Barcelona, Spain. Advances in Dual Diagnosis. 2017 May 15;10(2):45-56.
- Krawczyk N, Feder KA, Saloner B, Crum RM, Kealhofer M, Mojtabai R. The association of psychiatric comorbidity with treatment completion among clients admitted to substance use treatment programs in a US national sample. Drug and alcohol dependence. 2017 Jun 1;175:157-63.
- Eggleston AM, Calhoun PS, Svikis DS, Tuten M, Chisolm MS, Jones HE. Suicidality, aggression, and other treatment considerations among pregnant, substance-dependent women with posttraumatic stress disorder. Comprehensive psychiatry. 2009 Sep 1;50(5):415-23.