

## **Difference Between Men and Women in Drug Use Disorders**

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### **Abstract**

For a long time, drug-abuse disorders were related to men. Women were less involved in drug abuse. They were even not allowed to speak about it openly. Nonetheless, in the last ten years, there has been great transformation resulting in increased drug use among women. However, despite the changes, contemporary clinical practice is greatly dominated by male studies irrespective of the succinct differences in drug use disorders between the men and the women. Therefore, the main objective of the research is to bridge the gap by discussing the differences between men and women in drug use disorders. Using eight novel studies, the research examines the variances pointing out clear differences between the men and women. The study discovered that gender differences are similar for all drug use disorders. The reviews revealed that women are more likely to get addicted compared to men. Additionally, their escalation is much quicker than that of men. Women stabilize at higher doses while men stabilize at minimal doses. Moreover, the side-effects of drugs are higher in women than men. Also, women are more susceptible to relapse than men.

**Keywords:** Sex/gender difference; Drug use disorder; Drug abuse; Women; Addiction

### **1. Introduction**

There is no doubt that drug-use disorders are detrimental both for men and women. Nonetheless, nationwide researches have indicated that the use of different drugs is dependent on gender [1]. Recent researches have shown that gender impacts the manner in which an individual responds to drugs [2]. Therefore, in researching about drug abuse in relation to gender, one will be examining a critical concept that can be used to studying drug-use disorders.

## 2. Method

The research paper evaluates novel studies on the gender differences in drug use disorders. Seven studies all within the last five years are reviewed and a pattern established. They are obtained from the US National Library of Medicine. Some of the keywords used are sex/gender difference, drug use disorder, drug abuse, women, and addiction.

## 3. Results

The contemporary studies discovered many gender differences in drug abuse disorders. The Center for Behavioral Health Statistics and Quality [3] survey noted that men, unlike women, are more likely to utilize varied illegal drugs leading to more cases of emergency department visits as a result of overdosing. Moreover, men are more likely to misuse prescription drugs compared to women. Nevertheless, women are predisposed to developing substance use disorders just like men. They are more vulnerable to craving and relapse than men. They use drugs, respond to them, and have specific obstacles that affect their treatment and quick recovery. On the contrary, fewer women are likely to use addictive drugs such as marijuana. For them that use marijuana, their impact might be different from that of men. The survey further showed that marijuana greatly impairs women spatial memory.

So, the difference in marijuana use disorder between the two genders is that men tend to develop other substance abuse disorders. Additionally, they develop an antisocial personality disorder. Women, on the other hand, develop pain attacks, anxiety disorders, and the disorder develops more rapidly (Center for Behavioral Health Statistics and Quality) [3]. The research concludes that both genders are likely to develop an additional mental health condition such as depression when they use marijuana. Like many other researchers, Becker et al. also did research elucidating sex differences in addiction. The review examined drug addiction in relation to a sociocultural and biological phenomenon.

	Acquisition	Escalation	Maintenance	Withdrawal	Relapse
<b>Women</b>	Initial exposure to drug, food or activity. May experience more pleasurable response to drugs than men (cocaine, amphetamine). More likely to self-medicate than men.	Increase in amount and frequency of drug taking. For those at risk for addiction, escalation is more rapid than for men (gambling, alcohol, drugs).	The addictive behavior is established and stabilizes. Females stabilize at higher dose of drug than do males. Side effects of drug use are greater for women.	Female smokers report increased negative affect during withdrawal and experience a greater stress response than men do.	Women are more likely to relapse than men and do so more sporadically.
<b>Men</b>	Initial exposure to drug, food or	Slower escalation than for women	Tha addictive behavior is	Men exhibit greater symptoms	Men have longer periods

	activity. Take drugs and engage in risky behaviors to to be part of the group more than women do.	(gambling, alcohol, drugs)	established and stabilizes. Males stabilize at lower dose of drug than do females.	of withdrawal from alcohol than women.	of abstinence than women.
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Source: Becker et al. (2017)

**Table 1:** Sex Variances in Varied Stages of Addiction.

In the first stage which is an acquisition, women tend to experience a more satisfying response to substances compared to males. Additionally, women are more susceptible to self-medication. Men, on the other hand, take the drugs prompting them to engage in risky behaviors. Becker et al. further mention that at the escalation stage, women increase the amount of drugs they use increasing the risk of addiction compared to men. Males, on the other hand, have a slower escalation, to alcohol or drug addiction. On the third phase, maintenance, Becker et al. further provides a number of variances. Women tend to stabilize at huge doses of drugs than males. Moreover, the side-effects are far greater in women. Men, on the other hand, tend to stabilize slowly. Nevertheless, they show greater signs of withdrawal than females. Becker et al. go further to give the difference between men and women at the relapse stage. The study argues that women are highly susceptible to relapse compared to men. They do so sporadically. On the contrary, males have longer intermittent periods of abstinence.

Other than the dissimilarities in the various stages of drug addiction, the novel reviews further showed the difference in tobacco use disorder. In a study that involved a survey by the National Epidemiological Survey on Alcohol, Weinberger et al. [4] noted that gender differences are evident in withdrawal signs and quitting smoking. The research revealed that women were more likely to recommend any withdrawal signs. 69.4% of women compared to 61.6% of men endorsed more than one withdrawal sign. Females had much higher average signs compared to men [4]. Daily smoking women were likely to recommend seven of the eight withdrawal signs. The only sign they did not mention was the slowed heartbeat.

Table two clearly illustrates the argument. The study provided evidence showing that men underreport withdrawal signs of smoking. The withdrawal signs may affect the quitting behavior. The study suggested that withdrawal symptoms, distress, and discomfort are all linked to the lowered likelihood of reducing and quitting smoking in both genders. Both males and females showed similarities in the relation between withdrawal and smoking abstinence. On the contrary, there were areas where men and women differed. The variances are the reporting of many withdrawal symptoms in women and the relation between withdrawal signs number and a smoking decline in men [4]. While it is imperative to mention the withdrawal signs in males and females who want to leave smoking, it is of great importance to understand the aspects of withdrawal and strategies that might be used.

	Total		Men (N=3,391)		Women (N=3,520)		P-value
	N <sup>a</sup>	(%) <sup>b</sup>	N <sup>a</sup>	(%) <sup>b</sup>	N <sup>a</sup>	(%) <sup>b</sup>	
<b>Past-Year Withdrawal Symptoms<sup>c</sup></b>							
Any withdrawal symptoms	4415	(65.1)	2024	(61.6)	2391	(69.4)	<0.0001
Depression	1303	(19.2)	512	(15.4)	791	(23.9)	<0.0001
Trouble Sleeping	1084	(16.6)	463	(14.6)	621	(19.0)	<0.0001
Difficulty Concentrating	1321	(20.1)	583	(17.9)	738	(22.7)	<0.0001
Weight Gain	2889	(41.8)	1224	(36.9)	1665	(47.8)	<0.0001
Irritable	3201	(48.4)	1394	(43.9)	1807	(53.9)	<0.0001
Anxious	2836	(42.2)	1235	(38.1)	1601	(47.2)	<0.0001
Heart beat slower	366	(5.3)	167	(5.1)	199	(5.6)	0.216
Restless	2119	(33.0)	971	(29.7)	1220	(37.0)	<0.0001
<b>Past-Year Withdrawal-Related Experiences</b>							
Withdrawal-related discomfort	686	(10.6)	265	(8.6)	421	(13.0)	0.0001
Withdrawal-related relapse	1048	(15.3)	408	(12.6)	640	(18.7)	<0.0001

<sup>a</sup>Unweighted N; <sup>b</sup>Weighted%; <sup>c</sup>Past-year refers to the 12 months directly preceding the Wave 1 interview.

Self-reported withdrawal symptoms and withdrawal-related experiences for the full sample of Wave 1 current daily smoking adults (n=6,911) and by gender. Source: Weinberger et al. (2016) [4].

**Table 2:** Self-reported withdrawal signs between males and females.

Lal et al. [5] also noted some differences in substance abuse disorders in men and women. Lal et al. first pointed out that until recently, it was known that drug abuse and related disorders were a men affair. The study revealed that men were 2.2 times more likely to use drugs than women. They are also 1.9 times more probable to develop substance abuse dependence. Information from the National Household Survey on Drug Abuse revealed 5% and 7.7% of women and men respectively, presently use illegal drugs [5]. Moreover, among boys and girls between the ages of 12-17 years, the rate of drug use was almost similar. Nevertheless, tobacco utilization was higher in girls compared to boys.

Koons et al. [6] while researching on Opioid use disorder, noted that a large number of American women had been diagnosed with prescription opioid overdoses. National data in the United States revealed that women are susceptible to opioid abuse compared to men. In 2013, women reported a rise in opioid abuse. The research also reveals that the utilization of sedative-hypnotic drugs is more in females than males. Koons et al. [6] explained that the abuse of opioid is high among women because of a large percentage visit healthcare centers more than men. Additionally, a large number of pharmaceutical marketing targets them. Moreover, female's patients get opioids prescription compared to men. They end up misusing the drugs leading to the disorder. Secondly, women are mostly victims of sexual violence, abuse, and psychological effects like anxiety. These afflictions are mostly treated with opioids increasing the susceptibility of women to the disorder.

The study further points out that sex risk factors play a vital role in opioid use disorder. The risk factors of opioid utilization disorder in females encompass the history of the issue, inhalant use, and medication overdose. Risk factors of men, on the other hand, range from age, hallucinogen utilization, and recent depression [6]. Similar findings were reported by Campbell et al. [2]. The study discovered that women that misused opioid had a higher risk of psychiatric comorbidity compared to men.

Lastly, it is evident that the treatment of substance use disorders varies. Smith et al. [7] noted some difference in treatment response that may be important to matching interventions on the basis of sex. Studies on smoking cessation discovered that females respond better to varenicline. Men, on the other hand, respond effectively to nicotine treatment [7, 8]. Furthermore, the new treatment of drug-use disorders is based on gender-responsive interventions. The treatments may employ approaches such as women group therapy or an approach specific to women.

#### 4. Conclusion

There is a great difference between men and women in drug use disorders. Some of the differences are vividly seen in the drug addiction cycle. In the acquisition stage, men use drugs and engage in behaviors. Women, on the other hand, might experience more enjoyable responses to drugs. Additionally, they are at a greater risk of addiction compared to males. Their side-effects are far much greater. Furthermore, women are highly susceptible to relapse and at a quick pace compared to men. When trying to quit smoking, the women show more unpleasant symptoms compared to men. They have greater effects on mood and anxiety. On marijuana use disorder, men may exhibit more than one substance use disorder, for example, anxiety, depression, and mental health condition. Moreover, they have high rates of antisocial personality disorder compared to women. The severity of marijuana use disorder is high in men. However, its onset in women is much faster. Therefore, contemporary researches show that there is a great gender difference in drug use disorders.

#### References

1. Teixidó-Compañó E, Espelt A, Sordo L, et al. Differences between men and women in substance use: the role of educational level and employment status. *Gaceta Sanitaria* 32 (2018): 41-47.
2. Campbell ANC, et al. Gender differences in demographic and clinical characteristics of patients with opioid use disorder entering a comparative effectiveness medication trial. *The American Journal on Addiction* 27 (2018): 465-470.
3. Center for Behavioral Health Statistics and Quality. Results from the 2016 National Survey on Drug Use and Health: Detailed Tables. Rockville, MD: Substance Abuse and Mental Health Services Administration. (2017).
4. Weinberger AH, Platt JM, Shuter J, et al. Gender differences in self-reported withdrawal symptoms and reducing or quitting smoking three years later: A prospective, longitudinal examination of US adults. *Drug and Alcohol Dependence* 165 (2016): 253-259.

5. Lal R, Deb KS, Kedia S. Substance use in women: Current status and future directions. *Indian Journal of Psychiatry* 57 (2015): S275.
6. Koons AL, Greenberg MR, Cannon RD, et al. Women and the experience of pain and opioid use disorder: a literature-based commentary. *Clinical Therapeutics* 40 (2018): 190-196.
7. Smith PH, Weinberger AH, Zhang J, et al. Sex Differences in Smoking Cessation Pharmacotherapy Comparative Efficacy: A Network Meta-analysis. *Nicotine & Tobacco Research* 19 (2017): 273-281.
8. Gjersing L, Bretteville-Jensen AL. Gender differences in mortality and risk factors in a 13-year cohort study of street-recruited injecting drug users. *BMC Public Health* 14 (2014): 440.

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