



UNDERSTANDING GENDER-DIFFERENCES IN SUBSTANCE USE TO DEVELOP APPROPRIATE PREVENTION INTERVENTIONS

ABSTRACT

An elaboration on the gender-differences within substance use, showcasing the urgent need for further research in and development of gender-sensitive prevention programmes. The document aims to create an understanding of the different needs for, incentives by, and effects on girls and women who use substances. It highlights that prevention is an essential part of the continuum of care framework while promoting health and wellbeing.

Introduction

This document showcases the need for evidence-based gender-sensitive substance use prevention programmes. Gender-sensitive research on treatment has started to develop, yet prevention seems to lack gender- and regionally-specific research and evaluation. It has historically been assumed that universal prevention programmes work similarly for all genders and regions. Little research evaluates gender-disaggregated prevention data, yet it is showcased that girls do not benefit from universal prevention programmes similarly compared to boys.

To be able to develop gender and regional specific prevention intervention, it is a necessity to understand the different needs, triggers, and incentives experienced by women to initiate substance use. Therefore, this document is divided into two parts. First, a brief overview of gender-sensitive research in substance use and the different effects of substances on gender is provided. This background is essential to not only provide suitable treatment and care but should also be considered in prevention. Secondly, the document will elaborate on the various forms of prevention and the different risk factors and their impact concerning substance use. The document finally summarises positive outcomes of prevention and aims to advocate for future prevention programmes that are inclusive, culturally and gender-sensitive, and evidence-based to ensure a safe and healthy lifestyle for all generations.

Limitations

This document is intended to showcase the global perspectives on the need for gender-specific drug prevention. Overall, it highlights the necessity to include gender-sensitive programmes in prevention and treatment while also showcasing the different impacts of substance use. This is a necessity that accounts globally. All countries should take relevant steps and continue their efforts in creating gender-sensitive programmes and encourage regional research, monitoring and evaluation. Unfortunately, current research is mainly conducted in and focuses on, the western states, such as Northern America and the European Region. Little research and evaluation have been conducted in further cultural contexts. This document is using these 'western-focused' evidence-based publications to showcase the impacts of substances on the genders and the importance and need for gender-sensitive prevention intervention while highlighting regional and gender-specific gaps in the existing evidence. It should be stressed that there is an immense need for research, monitoring and evaluation representing other regions in the world to enable the development of gender- and culturally sensitive prevention and treatment programmes. Simultaneously, further research and evaluation should focus on prevention strategies targeting specific groups, such as the LGBTQIA+ community, the elder population, minorities, and other groups, to ensure that prevention programmes become fully inclusive.

Table of Contents:

INTRODUCTION2

LIMITATIONS3

EFFECTS OF SUBSTANCES BASED ON GENDER

1. THE BACKGROUND OF GENDER-SENSITIVE
RESEARCH IN SUBSTANCE USE9

2. DIFFERENT EFFECTS OF SUBSTANCES
ON MEN & WOMEN8

3. SUBSTANCE USE DURING PREGNANCY13

GENDER-SENSITIVE PREVENTION INTERVENTIONS

4. BACKGROUND OF GENDER-SENSITIVE
PREVENTION PROGRAMMES17

5. VARIETIES OF PREVENTION18

6. INCENTIVES FOR SUBSTANCE USE
AMONG GIRLS & WOMEN19

7. GENDER-BASED VIOLENCE
& SUBSTANCE USE PREVENTION22

8. THE NECESSITY OF
GENDER-SENSITIVE PREVENTION23

REFERENCES25

1.

THE BACKGROUND OF GENDER-SENSITIVE RESEARCH IN SUBSTANCE USE

Until recently, gender differences in substance use have not been widely recognised. Historically, substance use was mainly considered a “male issue” and research focused solely on men (Tuchman 2010). Then, it was assumed that evidence-based programmes worked equally well for women and men alike. In 1974, the National Institute on Drug Abuse (NIDA) was established in the United States as one of the first organisations to commit their research to substance abuse among women. The early focus of their research varied with time (Figure 1). Only in the early 1980s, the realisation of the

underrepresentation of women in treatment compared to the percentage of women in need of treatment pushed research and programmes to include gender-sensitivity (Kumpfer, Smith, and Summerhays 2008). By including specific subgroups, a larger portion of the public can receive appropriate help.

The National Institute of Drug Abuse became a component of the National Institute of Health (NIH) in 1992. Both institutes remain substantial in the field of substance abuse research funding. Following the shift towards gender-sensitive substance abuse research,



Figure 1

the National Institutes of Health (NIH) integrated women and minorities in research and clinical trials prominently in their 1994 guidelines (National Institute of Health 2017). These guidelines determine requirements that need to be included in the funded research.

The integration of women and other subgroups remain extremely relevant as the use of substances continues to grow. In 2016, the Substance Abuse and Mental Health Services Administration Center for Behavioral Health Statistics and Quality (SAMHSA) researched that at least 19.5 million females over the age of 18 in the United States had used an illicit drug in that year (SAMHSA 2017). However, in 2020, this number increased exponentially to 26.3 million female users in that year. This

implies that 20.3% of females in the United States have tried an illicit drug at least once or used prescribed drugs improperly for recreational purposes in 2020 (SAMHSA 2021).

Interestingly, whereas gender-sensitive treatment research has seen an increase over the last decades, evidence-based research on prevention approaches for women and girls appears to be scanty. Most studies continued to eschew the importance of prevention towards curtailing substance disorders among women. It has invariably undermined activities that needed evidence to influence the attitude of women towards substance use. Hence, the importance to breach the gap and establish evidence-based activities while promoting the prevention of drug abuse among women.

2.

DIFFERENT EFFECTS OF SUBSTANCES ON MEN & WOMEN

Gender-sensitive prevention programmes are essential to decrease the initiation of substances of girls and boys. Especially since substances affect women and men tremendous differences while showing only some similarities. Women also often face unique obstacles to effective treatment. Obstacles can include the inability to find childcare or being prescribed a treatment that has not been adequately tested on women. Learn more about these issues in the

Position Paper on Gender-Specific Treatment and Recovery.

Below, different substances are listed to showcase [long-term] similarities and differences among men and women (National Institute on Drug Abuse 2020). These similarities and differences need to be considered when offering treatment and prevention and education programmes.

MARIJUANA

MEN

WOMEN

SIMILARITIES

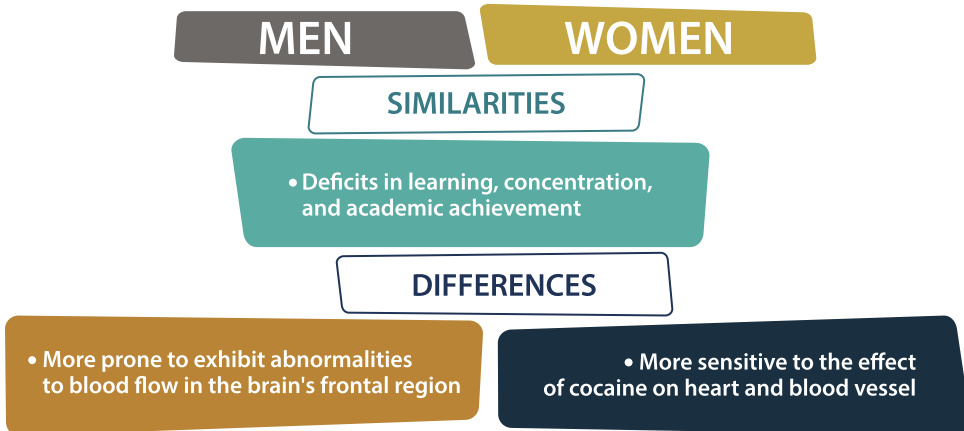
- At least one other mental health disorder
- Low rate of seeking treatment

DIFFERENCES

- Other substance use disorders
- Antisocial personality disorder
- Severity of the disorder

- Panic attacks
- Anxiety disorders
- Disorder develops more quickly

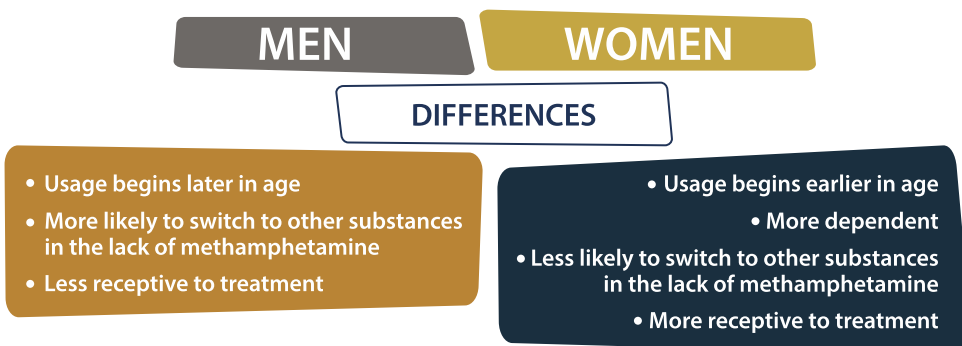
COCAINE



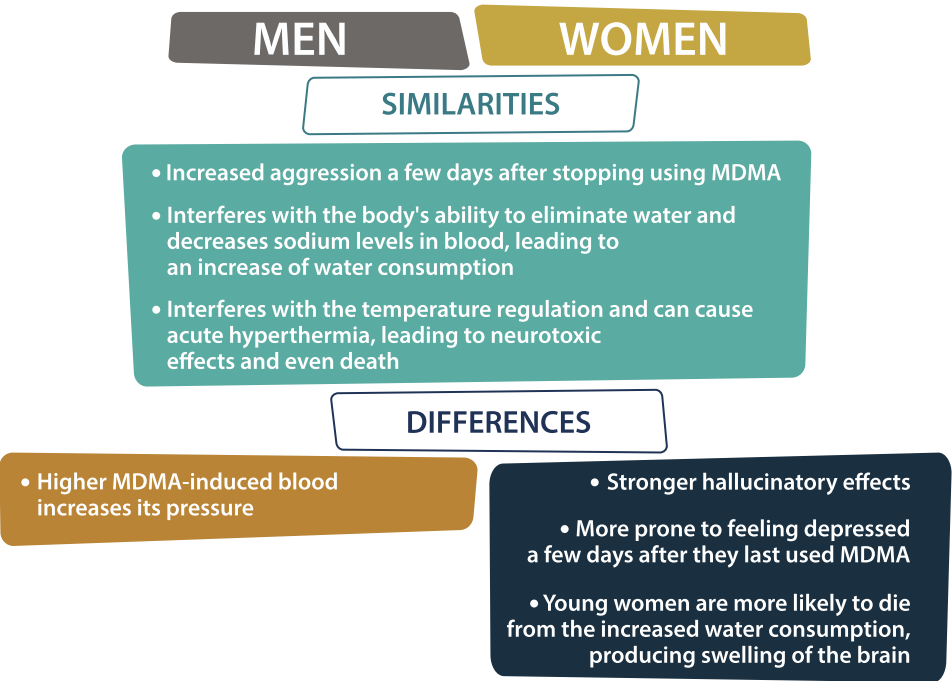
METHAMPHETAMINE

Men and women experience different incentive factors to use methamphetamine. Women often use the drug to experience an increase of energy and decrease the exhaustion related to work, child and home care, and other family responsibilities. Another moti-

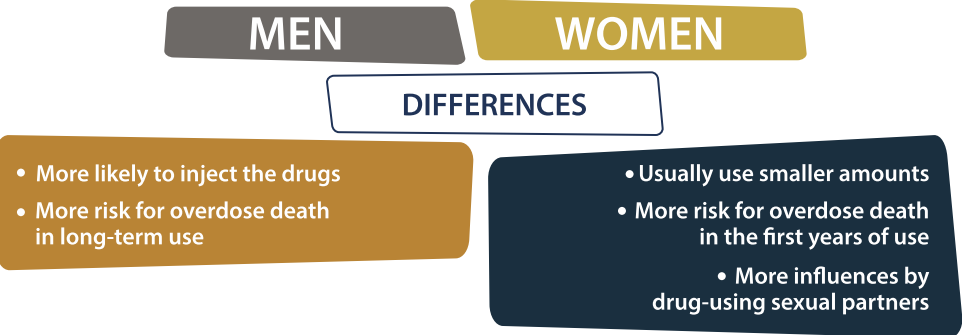
vator could be weight loss. Research shows that women using methamphetamine also have a high rate of co-occurring depression. The differences in the effects on men and women are listed below:



MDMM (ECSTASY, MDMA)



HEROINE



PRESCRIPTION OPIOID

MEN

WOMEN

DIFFERENCES

- More men die of opioid overdose
[However, the gender gap is narrowing]

- More likely to use prescription opioids without prescription
- More likely to misuse prescription opioids to self-treat other problems

ALCOHOL

MEN

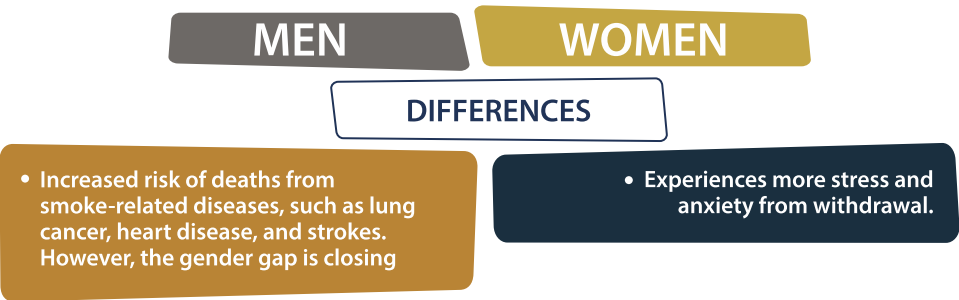
WOMEN

DIFFERENCES

- High rate of alcohol use, including binge drinking
- Less likely to damage health with time
- Lesser percentage of death rate in men
- Less exposed to unique health risks
- Less chance of intoxication
- Lower blood ethanol concentrations

- Higher rate of alcohol use of young girls between the age of 12 to 20
- More likely to damage health with time
 - Higher death rates among women (50 to 100 percent higher than men), including deaths from suicide, alcohol-related accidents, heart disease, etc.)
- More exposed to unique health risks like unprotected sex, diseases, sexual assault and violence, HIV/AIDS, and breast cancer (for postmenopausal women and those with a family history of breast cancer)
- High chance of intoxication
- After drinking comparable amounts, women have higher blood ethanol concentrations

NICOTINE (TOBACCO)



Even though men are still more likely to use substances and are more often resulting in emergency visits or overdose, the gender gap is narrowing, especially within younger age groups. Currently, in most age groups, men have higher rates of use. Nevertheless, women are just as likely to develop a substance use disorder and are more prone to craving and relapse. Generally, from the var-

ious tables, it can be concluded that women face different negative and life-threatening long-term consequences of substance use (ibid). As the gender gap is closing, the health risks for women are increasing since they often experience more negative health risks than men. Therefore, it is urgent for prevention mechanisms to adopt these differences.

3.

SUBSTANCE USE DURING PREGNANCY

Women are at a higher risk to develop a substance use disorder during their reproductive years, particularly between the ages of 18 and 29. As Forray (2016) states, “this means that women who are pregnant or soon to be pregnant are at an increased risk for substance abuse (2)”. The most used substance during pregnancy is nicotine, followed by alcohol and marijuana. Worldwide, amphetamine-type stimulants are being used and a growing number is using opioids during pregnancy. Substance use during pregnancy can have negative consequences for the mother and for the foetus. Different substances can lead to various negative outcomes. Before elaborating on various substances separately, it is important to note that the negative consequences are also influenced by co-exist-

ing substance use and mental illnesses. Women using substances during pregnancy often experience “inadequate prenatal care, poor nutrition, chronic medical problems, poverty, and domestic violence (Ibid, 3)” and might have experienced an unhealthy relationship with their own parents. Not only the negative consequences to the [unborn] child should be considered in prevention and treatment strategies, the background of the mother also needs to be included.

Alcohol

There are many negative birth outcomes associated with alcohol use during pregnancy. These outcomes include “increased risk of miscarriage, stillbirth and infant mortality, con-

MENTAL DISORDER

- Poor coordination
- Poor memory
- Hyperactivity
- Difficulty with attention
- Difficulty in school
- Learning disabilities
- Speech and language delays
- Intellectual disability
- Poor reasoning and judgement skills

PHYSICAL DISORDER

- Abnormal facial features
 - Small head size
- Vision or hearing problem
- Problem with the heart, kidneys, and bones

Figure 2

genital anomalies, low birth weight, reduced gestational age, preterm delivery, and small-for-gestational-age (Forray 2016, 2)". Over the years, several studies have shown that alcohol use during pregnancy can lead to Foetal Alcohol Syndrome or Foetal Alcohol Spectrum Disorder (FASD). The syndrome includes a variety of conditions (Figure 2) that differ in severity. The amount of exposure to alcohol does not influence the risk of the development of the syndrome (PAHO n.d.). Globally, the WHO European Region¹ had the highest prevalence of FASD, 19.8 per 1000 population. The lowest prevalence of FASD is the WHO Eastern Mediterranean Region, which is 0.1 per 1000 population. South Africa seems to have the highest prevalence of FASD as a country, which is 111.1 per 1000 population (Lange, et. al 2017).

Statistics on alcohol use during pregnancy is quite limited to certain regions of the world. Overall, the WHO Region of Americas has the highest percentage globally of women consuming alcohol (41.9%), closely followed by the Western Pacific Region (40.7%) (WHO 2018). A study by England et. al (2020) evaluated the consumption of alcohol during pregnancy in the United States between 2015 and 2018. Here, they concluded that 9 per cent of the women did drink during their pregnancy and of those almost 50 per cent also used at least one other substance, most commonly tobacco, marijuana, and opioids. The most recent multinational European study by Mårdby et al. (2017) reported that an average of 15.8% of women consume alcohol during pregnancy in Europe. The United Kingdom, followed by Russia and Switzerland, had the highest prevalence of alcohol consumption during pregnancy. The lowest prevalence was reported in Norway, followed by Sweden and Poland. Women with higher education and a history of smoking seem to consume more alcohol during pregnancy. The importance of

not only prevention tools but also a united strategy is emphasised by Mårdby et al. (2017). They express the necessity to develop a European strategy to prevent women from consuming alcohol during pregnancy while focusing on the countries with a higher prevalence.

Nicotine

Smoking during pregnancy has direct adverse effects on birth outcomes, such as "damage to the umbilical cord structure, miscarriage, increased risk for ectopic pregnancy, low birth weight, placental abruption, preterm birth, and increased mortality (Forray 2016, 2)". Another consequence of smoking for the new-born child is second-hand smoking. This can lead to "higher rates of respiratory and ear infections, sudden infant death syndrome, behavioural dysfunction, and cognitive impairment (Ibid, 2)". Recently, e-cigarettes have become more popular. Nevertheless, also these products are harmful to the [unborn] baby. It can, for example, damage the child's brain and lungs (CDC 2020).

Marijuana

Even though marijuana is often considered harmless during pregnancy, the substance does have negative birth outcomes and adverse health effects on the foetus. The negative health effects for the foetus are most apparent under heavy users and the use of several substances at the same time. Negative birth outcomes include "preterm labour, low birth weight, small-for-gestational-age, and admission to the neonatal intensive care unit (Forray 2016, 2)". The unborn child can experience "adverse consequences for the growth of foetal and adolescent brains, reduced attention and executive functioning skills, poorer academic achievement and more behavioural problem (Ibid, 2)".

¹ Find the various WHO regions, and the belonging countries, [here](#)

Cocaine and Methamphetamine

Even though the negative health outcomes for the child as a consequence of the use of cocaine during pregnancy has been overestimated, there are risks for the child. Direct effects can include “premature rupture of membranes, placental abruption, preterm birth, low birth weight, and small for gestational age infant (Ibid, 2)”. Research and conclusions on the long-term effects of cocaine use during pregnancy vary. This inconsistency is probably related to the general environment for the child after birth, which can be an unstable home environment, dysfunctional parenting, and continued heavy use. However, some of the long-term effects can affect motor, language, and cognitive development.

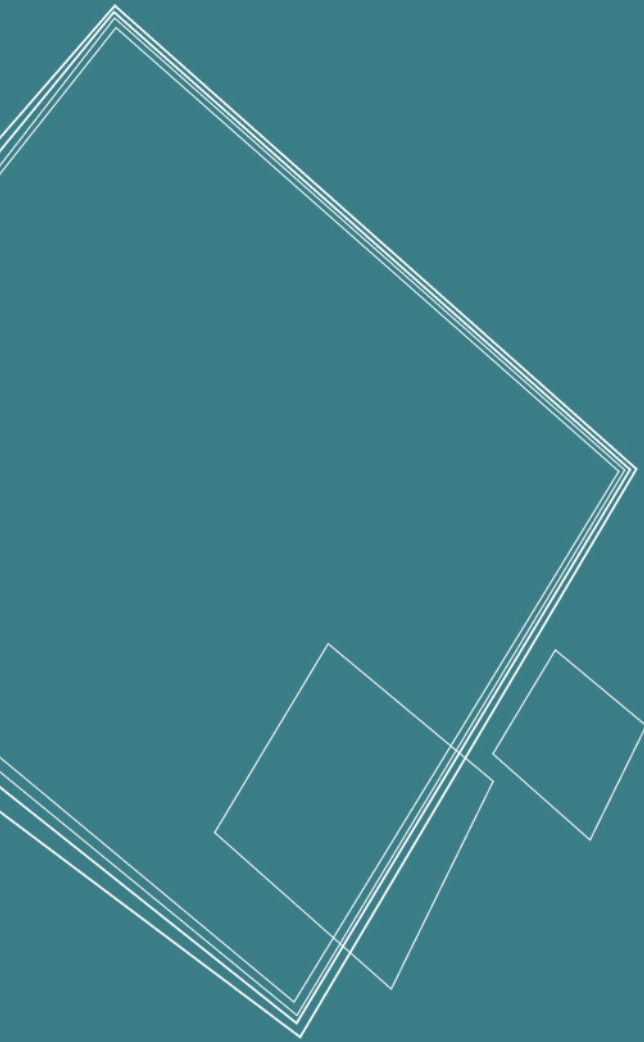
Methamphetamine use during pregnancy shows similar effects on birth outcomes. The

effects linked to methamphetamine use are “shorter gestational ages, lower birth weight, foetal loss, developmental and behavioural defects, preeclampsia, gestational hypertension, and intrauterine foetal death (Ibid, 3)”.

Opioid

Opioid use during pregnancy is increasing. For example, in the United States, the number of pregnant women with opioid disorders quadrupled from 1999 to 2014 (CDC 2020). Opioid use during pregnancy is linked to a “greater risk of low birth weight, respiratory problems, the third trimester bleeding, toxemia, mortality, postnatal growth deficiency, microcephaly, neurobehavioral problems, and sudden infant death syndrome (Forray 2016, 3)”. It also can lead to neonatal abstinence syndrome (CDC 2020).

Gender-Sensitive Prevention Interventions



4.

BACKGROUND OF GENDER-SENSITIVE PREVENTION PROGRAMMES

Compared to gender-sensitive research in substance abuse treatment, prevention programmes including gender sensitivity were established later. Treatment received earlier attention since there was a visible underrepresentation of women in treatment compared to those in need of said treatment. It proved more complicated to recognise differences in prevention programmes since both genders received “universal” prevention education in, for example, schools. Only when more girls started to initiate the use of substances, narrowing the gender gap, did developmental psychologists start to analyse both genders separately. Hence, more gender-disaggregated data was published after 1991 (Kumpfer, Smith, and Summerhays 2008).

Current research showcases that generic prevention tools and mechanisms lead to different outcomes based on gender and ethnicity. Yet, additional research is needed to develop appropriate gender-sensitive prevention approaches. Simultaneously, monitoring and evaluation in existing prevention interventions are necessary to lay ground for best practices and evidence. The research would also require the inclusion of subgroup analyses to determine its effectiveness not only on gender but also on other subgroups, offering an intersectionality approach. Already in 2008, Kumpfer, Smith, and Summerhays highlighted that the prevention field should “place more emphasis on testing gender-based etiological models and programmes and disseminating effective prevention efforts for girls (979)” as the initiation of drugs among girls is increasing.

5.

TYPES OF PREVENTION

Generally, prevention aims “to ensure the healthy and safe development of children and youth so that they can realise their talents and potential and become contributing members of their community and society” (UNODC and WHO 2018). By understanding the individual and environmental factors making a person more vulnerable towards the initiation and use of substances through science, the progression of the substance is also understood better. It is important to note that substance use is often beyond the control of the individual and substance prevention is simultaneously preventing other risky behaviours. Overall, as stressed in the International Standards on Drug Use Prevention, “marginalised youth in poor communities with little or no family support and limited access to education in school are especially at risk. So are children, individuals and communities suffering the effects of war or a natural disaster” (Ibid, 2). Generally, prevention should be inclusive and target everyone but should include a specific focus on marginalised youth.

There are three forms of prevention methods, universal, selective, and indicated. Universal prevention does not differentiate between subgroups, gender, different risk levels, etc. Currently, universal prevention methods,

such as generic prevention curriculums in schools or mass media campaigns, are the mainstream. Selective prevention is more targeted and would be directed towards those who have a potential for developing substance use. Indicated prevention is further targeted to those that already show [fore] signs of substance use development (Begun 2019). In substance use prevention, there is also primary, secondary, and tertiary prevention. Primary prevention targets those at risk and educates them about the risks of substance use and understand the problem. Here, the target group is mainly [school] children. Secondary prevention primary focuses on detecting early stages of substance abuse disorder and preventing a continuation of [irregular] use. Tertiary prevention targets individuals to avoid the retaking of substances after abstinence or relapse (NIDA n.d; van Heeringen 1995).

Overall, it is important to note that effective prevention interventions, policies, or systems cannot be done in isolation. To be effective, “local and national prevention systems should be embedded and integrated into a larger health-centred and balanced system responding to drugs” (UNODC and WHO 2018, 3). Treatment and rehabilitation services for drug use are part of the health-centred system.

6.

INCENTIVES FOR SUBSTANCE USE AMONG GIRLS & WOMEN

To develop appropriate and effective prevention tools, it is necessary to understand the different incentives and triggers of substance use for the genders. The earlier mentioned increase of substance use is linked in research to, for example, [thin] body ideals among girls, depression, anxiety, and early onset of puberty. The latter can lead to girls entering relationships with older boys, which can create earlier exposure to substances (Ibid). Overall, the development of substance use [disorders] is determined by different pathways and is strongly dependent on experiences [see figure 3] (UNODC 2018).

Substance use initiation is strongly connected to protective and risk factors. Whereas protective factors can lead to a strengthening of self-regulation, impulse control, and executive

decision-making, risk factors, including negative experiences, can lead to the opposite. Risk factors are divided into three groups (see figure 4) that lead to the primary outcome of substance use and its related problems:

- Macro-level influences – including income and resources, social environment, and physical environment.
- Micro-level influences – including family influence, school influence, and peer influence.
- Personal characteristics – including genetic susceptibilities, mental health and personality traits, neurological development, and stress reactivity.

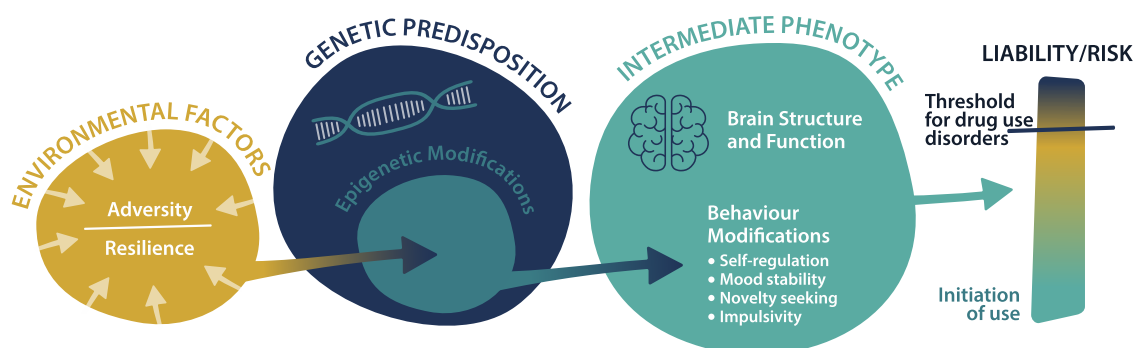


Figure 3

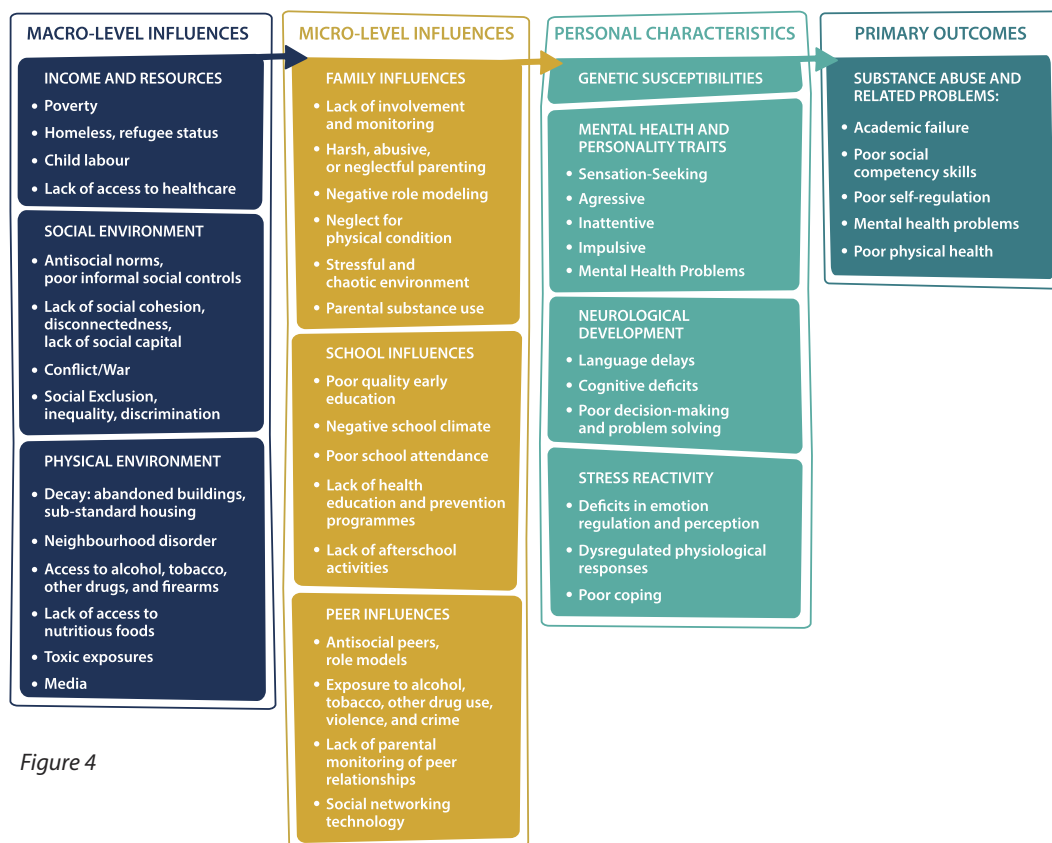


Figure 4

These three groups overlap and interact, which is important to consider when identifying relevant targets for programmes and policies.

A substantial risk factor is early life (or childhood) adversity, which can be a mixture of macro-and micro-level influences. Early life adversity consists of experiences that can lead to toxic stress and include child abuse, neglect, exposure to violence, and family economic hardship (Office of Early Childhood Development 2020). Childhood adversity is associated with “an increased risk of substance use, harmful use, and dependence [since the] drug may occur as a maladaptive response to stressful experiences” (UNODC 2018, 28).

Within life adversity, differences exist between genders. Compared to boys, girls report a higher number of negative life experiences during adolescence and are also more “likely to experience interpersonal stressors and be adversely affected by them” (Ibid, 4).

Similarly, other micro-level influences also showcase different outcomes in abstention or initiation of drugs among the genders. For example, peer pressure influences both genders similarly. However, boys are more influenced by their school and community environment (Kumpfer, Smith, and Summerhays 2008). Overall, the home and family environment influence the child’s development. A “chaotic home environment, ineffective parenting, and

lack of mutual attachment” (Ibid 30) particularly lead to a negative impact on the child. Nevertheless, these factors affect girls more than boys since they tend to be more sensitive to family-centred and relational problems. The connected stress and mental health issues can lead to the early onset of substance use (UNODC 2018).

These aforementioned factors are necessary to consider when designing appropriate gender-sensitive prevention interventions. Currently, there are a few international guidelines and standards that are useful to use as tools in gender-sensitive prevention interventions and build upon locally/regionally. For example, the International Standards on Drug Use Prevention (UNODC and WHO 2018) and the International Guidelines on Human Rights and Drug Policy (International Centre on Human Rights and Drug Policy, et al. 2019). Both documents highlight the necessity to integrate gender-sensitive [early] childhood prevention. The former provides tools and evidence to address and develop prevention programmes for various target groups, such as parents, schools, community, etc. to strengthen prevention interventions.

Incentives for Women

On top of potential adverse experiences faced during childhood, women can be triggered by a variety of factors to initiate substance use. Factors such as fatigue, stress, loneliness, low self-esteem, body image issues, etc., to adopt certain behavioural changes possibly leading to substance dependency. The substance is often used to take over certain control of

something of dislike and is used as part of a coping mechanism. It is important to note that while women typically begin using substances later than men, women tend to accelerate their consumption rate more rapidly upon initiation, which is also known as telescoping (Greenfield, et al. 2010). Common reasons for women to use substances are also connected to chronic pain, mental illness, and/or trauma. Women, more often than men, suffer from chronic pain, especially in later years. Often opioids are given to treat chronic pain. This substance is, however, quite addictive. Since women are more prone to develop an addiction faster, they risk developing an addiction with the prescribed opioids and continue their intake without prescription while also starting to use other substances, such as heroin. Furthermore, studies in the United States show that there is a sufficient number of women suffering from mental illnesses. When suffering from a mental illness, substances can be seen and used as an escape from emotional pain. However, the drug makes it more complicated to treat the underlying issues. Mental health issues that are common among women are, for example, suicidal tendencies, eating disorders, post-traumatic stress disorder (PTSD), depression, and anxiety. Additionally, traumas can lead to substance misuse and addiction. Trauma includes “physical, sexual or psychological abuse, accidents, natural disasters, domestic violence, and any other incident that is destructive in nature (Clancy, n.d.)”. Several physical and emotional symptoms can be developed caused by the trauma. As a result, a substance can be used to mask emotional pain and physical symptoms.

7.

GENDER-BASED VIOLENCE & SUBSTANCE USE PREVENTION

Gender-based violence and substance use are strongly correlated which need to be understood to be able to prevent. Gender-based violence (GBV) is an act done to someone against their will based on gender norms and unequal power relationships and often involves crimes of power intending to degrade, humiliate, and/or subjugate victims. There are different forms of GBV, including physical, sexual, psychological, material, digital and socio-economic violence. Gender-based violence is not only between partners but can also be between family members or happens in the community and has no age limit (European Commission n.d.). Globally, an average of “1 in 3 women aged 15 or older have been subjected to physical or sexual violence by an intimate partner, non-partner, or both at least once in their lifetime (WHO 2021)”. These numbers have only increased during the COVID-19 pandemic (UNFPA). These forms of violence can lead to depression, post-traumatic stress and other anxiety disorders, sleep difficulties, eating disorders, and suicide attempts. All of which can become triggers for women to start using substances to cope with the trauma and its effects. Hence, the importance to not only focus on gender-based violence traumas during treatment but also develop gender-based violence prevention programmes itself to avoid GBV as well as substance use.

However, prevention programmes should also focus on the fact that substance use can be a trigger for gender-based violence. Substance use can be used as an excuse for violent and controlling behaviour by the abuser or lead to more aggression in general. Both substance use and GBV can be rooted in the need to achieve personal power by the perpetrator. In a situational relationship, where GBV and substances are involved, the abused woman may use substances with her abuser attempting to manage his violence and increase her own safety or she may be forced to use substances with her abuser. Additionally, women using substances are more likely than non-substance users to live with men who are substance abusers, leading to a higher risk to face physical violence. Finally, women who use drugs may be less likely to have the social and financial means to escape from their abuser. They might not report the violent attack due to the fear that their partner will physically, emotionally, or financial retaliate. At the same time, stigma in the communities also stops women from speaking up and reporting the violent case. Not only will the women remain subject to violence and possibly use substances, but the pattern can also become generational for the violence as well as the substance abuse (Bennett 1998).

8.

THE NECESSITY OF GENDER-SENSITIVE PREVENTION

Generally, substance use and disorders have always been an issue for all genders, yet research and evidence-based prevention programmes are lacking a gender focus. As the gender gap in substance use is narrowing, the importance to continue to close the gender gap in research and programmes increases. Prevention tools should include selective and indicative prevention methods that specifically target women and girls. As elaborated earlier, each gender has its unique triggers and motivations to initiate the use of substances. Yet, the genders face sep-

arate negative health effects and the development towards substance use disorder is different. Additionally, substance use during pregnancy is not only harmful to the mother but also for the new-born child. Therefore, the integration of gender differences in more selective and indicative prevention tools should lead to an increase of gender-sensitive evidence-based prevention programmes to help women to refrain from substance use. At the same time, gender-sensitive evidence-based treatment should be offered to those women that are willing to embark on the journey of recovery.

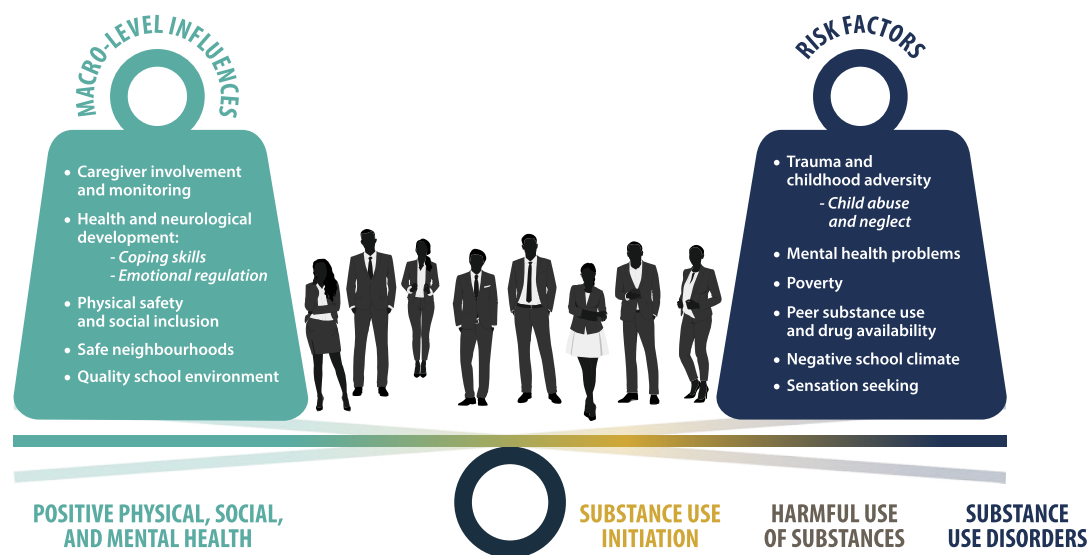


Figure 5

Prevention is an essential part of the continuum of care framework while promoting health and wellbeing. It works through focusing on strengthening protective factors while reducing risk factors (figure 5) (UNODC 2018). Through education, developing knowledge, skills, and attitudes, women can be empowered to refrain from substance use and prevent developing substance use disorders. There are several other positive outcomes of prevention, which are listed below:

- Prevention is less costly than treatment
Every dollar spent on prevention can save up to ten dollars. Prevention saves high costs of treatment, health care, and crime-related costs while it can also avoid violence, unhealthy lifestyles, and traumas (Kofler n.d.).
- Prevention is a continuum of behavioural health-promoting a healthy living
It is important to recognise prevention being part of the continuum of behavioural health. Behavioural health “is a state of mental/emotional being and/or choices and actions that affect wellness (SAMHSA 2019)”. By considering the linkages connected to behavioural health, rather than only focusing on one, such as substance use disorder, the overall health can be improved. Prevention is important to reduce the risks of behavioural health issues and promotes positive behaviours.
- Prevention and treatment provide opportunities for self-actualisation in women
By preventing the initiation or offering substance use disorders treatment, women can embark on the road of self-actualisation, which provides them the opportunity to reach their full potential. Self-actualisation is the highest step on the pyramid of the hierarchy of needs. By covering and properly supporting the physiological needs, often associated with substance use, safety, belonging, and esteem needs can lead to self-actualisation (Best, et. al 2008).
- Prevention improves the societal value of the person
By overcoming substance use disorder and starting the road of recovery or by abstaining from substances, the social value will improve. Societal values include, but are not limited to, accountability, collective responsibility, dignity, education, individual rights, humanity, justice, etc. (NICE 2014)
- Prevention encourages a boost in socio-economic activities
Through the prevention of substance use disorders, citizens can fully participate in the family, community, society and, therefore, boost socio-economic activities.
- Reduce and limit Adverse Childhood Experiences (ACEs)
Adverse Childhood Experiences are “potentially traumatic events that occur before a child reaches the age of 18 (NCSL 2021)” which can negatively influence a person’s health, opportunities, and stability throughout its lifetime. Growing up in a household with substance use disorder can lead to such traumatic events through neglect, violence, mental illness, etc. ACEs can be generational. Therefore, prevention programmes should focus on breaking the generational negative cycle and create a safe environment for the child to become healthy adults.

REFERENCES

- Begun, Audrey. 2019. *Theories and Biological Basis of Substance Misuse, Part 1*. The Ohio State University.
- Bennett, Larry W. 1998. "Substance Abuse and Woman Abuse by Male Partners." [Http://www.vawnet.org](http://www.vawnet.org). https://vawnet.org/sites/default/files/materials/files/2016-09/AR_Substance.pdf: VAWnet.
- Best, D., E. Day, T. McCarthy, I. Darlington, and K. Pinchbeck. 2008. "The Hierarchy of Needs and Care Planning in Addiction Services: What Maslow Can Tell Us about Addressing Competing Priorities?" *Addiction Research & Theory* 16 (4): 305–7.
- Centers for Disease Control and Prevention (CDC). 2020. "The Number of Women with Opioid Use Disorder at Labor and Delivery Quadrupled from 1999-2014." 2019. <https://www.cdc.gov/media/releases/2018/p0809-women-opioid-use.html>.
- Clancy, Chris. n.d. "Substance Abuse among Women: Why Women Use Drugs." JourneyPure at the River. <https://journeypureriver.com/substance-abuse-among-women/>.
- England, Lucinda J., Carolyne Bennett, Clark H. Denny, Margaret H. Honein, Suzanne M. Gilboa, Shin Y. Kim, Gery P. Guy jr., et al. 2020. "Alcohol Use and Co-Use of Other Substances among Pregnant Females Aged 12–44 Years — United States, 2015–2018." *MMWR. Morbidity and Mortality Weekly Report* 69.
- European Commission. n.d. "What Is Gender-Based Violence?" European Commission - European Commission. https://ec.europa.eu/info/policies/justice-and-fundamental-rights/gender-equality/gender-based-violence/what-gender-based-violence_en.
- Forray, Ariadna. 2016. "Substance Use during Pregnancy." *F1000Research* 5 (May): 887.
- Greenfield, Shelly F., Sudie E. Back, Katie Lawson, and Kathleen T. Brady. "Substance Abuse in Women." *The Psychiatric Clinics of North America* 33, no. 2 (June 1, 2010): 339–55. <https://doi.org/10.1016/j.psc.2010.01.004>.

-
- Kofler, Romana. n.d. "INCB: Every Dollar Spent on Prevention Can Save up to Ten Dollars." *Www.unodc.org*. Accessed December 30, 2021. https://www.unodc.org/islamicropublicofiran/en/incb_-every-dollar-spent-on-prevention-can-save-up-to-ten-dollars.html.
- Kumpfer, Karol L., Paula Smith, and Julia Franklin Summerhays. 2008. "A Wakeup Call to the Prevention Field: Are Prevention Programs for Substance Use Effective for Girls?" *Substance Use & Misuse* 43 (8-9): 978–1001.
- Lange, Shannon, Charlotte Probst, Gerrit Gmel, Jürgen Rehm, Larry Burd, and Svetlana Popova. 2017. "Global Prevalence of Fetal Alcohol Spectrum Disorder among Children and Youth." *JAMA Pediatrics* 171 (10): 948.
- Mårdby, Ann-Charlotte, Angela Lupattelli, Gunnel Hensing, and Hedvig Nordeng. 2017. "Consumption of Alcohol during Pregnancy—a Multinational European Study." *Women and Birth* 30 (4): e207–13.
- National Institute on Drug Abuse. 2020. "Sex and Gender Differences in Substance Use." *Drugabuse.gov*. 2020. <https://www.drugabuse.gov/publications/research-reports/substance-use-in-women/sex-gender-differences-in-substance-use>.
- . n.d. "Prevention." *Drugabuse.gov*. <https://archives.drugabuse.gov/publications/diagnosis-treatment-drug-abuse-in-family-practice-american-family-physician-monograph/prevention>.
- National Institute of Health. 2017. "NIH Policy and Guidelines on the Inclusion of Women and Minorities as Subjects in Clinical Research | Grants.nih.gov." *Nih.gov*. 2017. <https://grants.nih.gov/policy/inclusion/women-and-minorities/guidelines.htm>.
- NCSL. 2021. "Adverse Childhood Experiences." *Www.ncsl.org*. February 2, 2021. <https://www.ncsl.org/research/health/adverse-childhood-experiences-aces.aspx>.
- NICE Citizens Council. 2014. "What Are the Societal Values That Need to Be Considered When Making Decisions about Trade-Offs between Equity and Efficiency."
- Office of Early Childhood Development. 2020. "Early Childhood Adversity." *Early Childhood Development | ACF*. <https://www.acf.hhs.gov/ecd/child-health-development/early-adversity>.
- Pan American Health Organization (PAHO). n.d. "Health Impacts of Women's Alcohol Consumption." https://www3.paho.org/hq/index.php?option=com_docman&view=download&category_slug=infographics-7772&alias=35125-health-impacts-%20women-s-alcohol-consumption-125&Itemid=270&lang=en.
- Substance Abuse and Mental Health Services Administration (SAMHSA). 2017. "Results from the 2016 National Survey on Drug Use and Health: Detailed Tables."

-
- . 2019. "Center for the Application of Prevention Technologies Fact Sheet." <https://www.mass.gov/doc/samhsa-behavioral-health-continuum-of-care-overview-9232019/download>.
- . 2021. "Results from the 2020 National Survey on Drug Use and Health: Detailed Tables."
- Tuchman, Ellen. 2010. "Women and Addiction: The Importance of Gender Issues in Substance Abuse Research." *Journal of Addictive Diseases* 29 (2): 127–38.
- UNFPA. 2020. "Impact of the COVID-19 Pandemic on Family Planning and Ending Gender-Based Violence, Female Genital Mutilation and Child Marriage."
- UNODC. "World Drug Report 2018: Booklet 4 - Drugs and Age: Drugs and Associated Issues among Young People and Older People." https://www.unodc.org/Wdr2018/Prelaunch/WDR18_Booklet_4_YOUTH.pdf, 2018.
- UNODC, and WHO. 2018. "International Standards on Drug Use Prevention." https://www.unodc.org/Documents/Prevention/UNODC-WHO_2018_prevention_standards_E.pdf.
- Van Heeringen, Kees C. "The Prevention of Drug Abuse – State of the Art and Directions for Future Actions." *Journal of Toxicology: Clinical Toxicology* 33, no. 6 (January 1995): 575–79.
- World Health Organization (WHO). 2018. "Global Status Report on Alcohol and Health 2018." <https://apps.who.int/iris/rest/bitstreams/1151838/retrieve>.
- . 2021. "Violence against Women Prevalence Estimates, 2018."

