

Substance use in pregnancy and nursing approach

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ABSTRACT

Substance abuse, which is increasing rapidly in Türkiye is more common in men than in women. Although it is more common in men, it has more destructive effects on women. Due to biological gender differences, many problems have been encountered during pregnancy and afterwards, which are reflected on the baby. Substance use during pregnancy is the leading cause of poor birth outcomes, maternal complications and related health expenditures. The adverse medical, psychiatric and functional consequences associated with substance use disorders are generally more severe in women. However, men and women differ in terms of substance use disorder treatment. The aim of this review is to highlight the impact of substance use on women's health and how it affects their social lives.

Keywords: Pregnancy, women's health, substance use

INTRODUCTION

Substance abuse has been a worldwide problem at all levels of society since ancient times. In the past few decades, attention has been drawn to legal and illegal substance use by pregnant women (Finnegan,1979). Substance abuse is associated with serious physical and psychological consequences. The risk of developing a substance use disorder increases during the reproductive years and substance use is common during pregnancy (Whiteford et al.,2015). Between 11-15% of pregnant women report using alcohol, tobacco, cannabis and/or illicit substances. The true prevalence may be higher, as stigma and judgment may make some pregnant women hesitant to report substance use (Silang et al., 2021). Almost all drugs are known to cross the placenta and have some effect on the fetus. The effects of prenatal smoking on the human fetus have been identified and studied since the 1960s (Bhenke and Smith, 2013). Women are the most vulnerable group to problematic substance use during the reproductive years. The first 1000 days of life from conception onwards have been identified as a critical window of time for long-term health and development. Substance use during pregnancy is associated with adverse pregnancy and child health outcomes (Louw, 2018).

Substance use among adolescents increases the risk of unplanned pregnancy, which increases the risk of fetal exposure to addictive, teratogenic substances. Specific interventions are needed to target pregnancy planning and contraception among substance users of reproductive age (Connery et al., 2014). Screening for substance use using the CRAFFT is recommended in all health care settings where

adolescent patients are treated. Screening for tobacco and nicotine use is also recommended, as well as the provision of smoking cessation interventions. The use of motivational interviewing styles and strategies to engage adolescents in discussions about substance use reduction, risky sexual behaviors, and the possibility of unplanned pregnancy or late detection of pregnancy is recommended (Connery et al., 2014). Motherhood and pregnancy and the wide range of responsibilities attributed to them profoundly affect women's roles. Rights and responsibilities change according to maternal roles. In the case of substance use disorder women may be presented with different opportunities, obligations and challenges in accessing treatment when they become pregnant or have children. Bearing and raising children can bring increased interest and motivation for substance use disorder treatment, as well as increased social pressure. It also brings significant disadvantages that complicate treatment motivations, such as fear of criminal sanctions, reduced social and economic support, and potential loss of child custody (Choi et al., 2022).

Substance use during pregnancy is the leading preventable cause of poor birth outcomes, maternal complications and associated healthcare costs. Tobacco is the most commonly used substance during pregnancy and is used by approximately 12% of all pregnant women, with significantly higher rates among socioeconomically disadvantaged women, smoking is associated with numerous adverse maternal and fetal/infant health outcomes, including placental separation, placenta previa and preeclampsia, low birth weight, preterm

birth, neonatal death and sudden infant death syndrome (Hand et al., 2017). Approximately 4.7% of pregnant women reported illicit substance use in the previous month, followed by 3.4% who reported using cannabis and 0.8% who reported abusing prescription painkillers. Prescription and non-prescription (i.e. heroin) use accounted for 41% of admissions of pregnant women to substance use disorder treatment programs. Opioid-exposed births increase the risk of infants developing neonatal abstinence syndrome (NAS), a temporary and treatable condition that often requires lengthy and costly hospitalization. Annual health care costs associated with opioid-exposed births exceeded \$1.5 billion (Hand et al., 2017). Risk factors associated with unplanned pregnancy included substance intoxication during sexual activity and lack of contraceptive use (Faherty et al., 2020).

Addiction is a chronic medical condition, but pregnancy is a transitional period in the life course of a woman dealing with a relapsing and recovering addictive disease (Faherty et al., 2020). The results highlight the importance of screening and interventions for all forms of substance use in early pregnancy and suggest that targeting early interventions to pregnant and reproductive-age individuals with polysubstance use should be prioritized (Sujan et al., 2023).

IMPACT OF SUBSTANCE ABUSE ON PREGNANCY

Substance use during pregnancy increases the risks for maternal and infant health and may lead to physical and mental problems. Some of the substances used and their effects in pregnancy are as follows.

Cocaine

The observed effects of cocaine in the pregnant woman and fetus are entirely related to vascular disruptive events, mainly vasoconstriction of arterial beds. These effects are mostly attributed to cocaine's ability to inhibit the norepinephrine reuptake mechanism, allowing localized concentrations of this vasoactive neurotransmitter to accumulate in nerve terminals and diffuse into the vascular spaces and hence circulate to other sites (Mark et al., 1998).

Opiates

It is created from the poppy called *papaver somniferum*, which contains morphine and codeine. Opioids include heroin, meperidine, fentanyl, propoxyphene and methadone etc. Narcotics can be used orally, nasally, intramuscularly and intravenously. Heroin crosses the blood brain barrier more easily than morphine (Lo et al., 2022). Unintended pregnancy rates are higher among women who use substances, especially opioid users. Among pregnant women with opioid use disorders seeking treatment, 86% of pregnancies are reported to be unplanned. Prospective self-report surveys of outpatient women in an opioid treatment program in Australia revealed that almost half (47%) had a pregnancy in adolescence, 84% of which were unplanned; almost a third of the sample had been pregnant in the year prior to entry, and 75% of these pregnancies were unplanned (Faherty et al., 2020).

Amphetamine

Amphetamine was discovered more than 100 years ago. Since then, it has evolved from a drug that was freely available

without a prescription as a panacea for a wide range of disorders to a highly restricted controlled drug with limited therapeutic applications in attention deficit hyperactivity disorder (ADHD) and narcolepsy (Heal et al., 2013). The use of amphetamines and similar drugs during pregnancy can cause heart disease, gastroschisis, biliary tract deficiency, congenital defects, cholestasis, drowsiness, limp babies and tremors; it also increases the risk of low birth weight, premature birth and stillbirth (Cimete, 2002).

POSTPARTUM EFFECTS OF SUBSTANCE USE IN PREGNANT WOMEN

Neonatal Abstinence Syndrome

Neonatal abstinence syndrome (NAS) is a postpartum withdrawal syndrome that occurs shortly after birth in infants born to women who used opioids (including heroin, the use or misuse of prescription painkillers or maternal treatment drugs such as methadone or buprenorphine) during pregnancy (Jansson and Patrick, 2019). Clinical symptoms appear within the first 48-72 hours after birth. The incidence may be delayed in infants who are breastfed after birth. If there was substance abuse during the prenatal day, the likelihood of it being seen in infants increases. Fainting, tremors and hyperactivity are the most common findings. The tremors may be fine and jitteriness or more coarse and fluttering. When the development of the newborn is disrupted, such as substance exposure or inappropriate reactions of the caregiver, impairments in self-regulation and changes in developmental trajectory may occur. An opioid-exposed infant who expends excessive amounts of energy in one subsystem, such as tone in hypertonic infants, may have little energy to expend in other subsystems, such as attention/interaction. This irregular imbalance is the hallmark of infants affected by NAS (Can et al., 2010).

Breastfeeding status of substance-using mothers:

- It is contraindicated for substance-using mothers to breastfeed their babies, especially because these substances are transmitted through milk.
- Nicotine in cigarettes is passed through milk to the baby. The concentration in milk, the amount and depth of smoking affect the amount of nicotine. Smoking not only in the baby's environment but also in other areas of the house is harmful for the baby.
- Substance-using mothers have a high risk of being HIV positive, and HIV transmitted from breast milk to the baby causes permanent damage. (Cimete, 2002).

SUBSTANCE ADDICTION AND NURSING APPROACH

In Türkiye, the duties of alcohol and substance abuse center nurses were defined in the nursing regulation published in the official gazette on March 8, 2010. Nurses, who are part of the health team, are also important in the prevention and treatment of substance abuse. Nurses work in many institutions that provide services such as schools, workplaces, and trsm (Karakas and Ersögütçü, 2016). As nurses, our first role in substance abuse is to prevent substance use, the important thing for us is that the person has never started rather than substance treatment; the second role is to take

an active role in the cessation and treatment of substance use if the person is in substance use; the third role is to create programs to prevent people who cannot get rid of substance addiction from harming themselves and then others (Terakye and Demirkıran, 2003).

Recovery from addiction is a lifelong process. In this process, quitting halfway has been observed most of the time. The follow-up periods of the majority of studies conducted among substance addicts vary between 1 and 24 months (Baysan et al., 2018). The nurse should take a good anamnesis of what type and how often the individual with substance addiction uses substances in which environment, then question whether he/she has ever attempted to quit the substance and evaluate what kind of support he/she has received or what kind of cessation methods can be successful if he/she has never thought about it. Reasons such as family, friends, work, health problems or economic etc. caused by substance abuse should be evaluated (Şimşek, 2010).

Substance addicted patients are not only patients but also individuals who are susceptible to stigmatization. In this case, nurses prepare the patient for social life in community mental health centers on issues such as adaptation to the social environment, accommodation within the family, finding a job, etc. (Ebrahimi et al., 2012). The most important factor in the treatment process of addicted individuals is effective communication between the patient and the nurse. Successful communication facilitates caregiving in the patient's treatment process (Albayrak, 2021). Medication management used in the treatment of addicted patients hospitalized in psychiatric clinics is also among the duties of the nurse. It starts with the hospitalization of the patient and ends with discharge training (Terakye and Demirkıran, 2003).

CONCLUSION

Although women are less likely to use substances than men, they are more affected by the ineffective consequences of substance use disorder. Despite the fact that women are more affected, the treatment outcome does not differ from men. In studies conducted closer to the present day, substance use by pregnant women is on the rise. The first 1000 days of life from conception onwards have been identified as a critical window of time for long-term health and development. Substance use during pregnancy is associated with adverse pregnancy and child health outcomes.

Substance use among adolescents has been shown to be associated with unplanned pregnancies and sexually transmitted diseases. Treatment of adolescent patients is very important because early detection and treatment are beneficial. As a result, efforts should be made to avoid substance use before and during pregnancy. Support should be encouraged for substance-using mothers at the end of childbirth and during motherhood. Nurses should take part in more social projects on this issue.

ETHICAL DECLARATIONS

Referee Evaluation Process

Externally peer-reviewed.

Conflict of Interest Statement

The authors have no conflicts of interest to declare.

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Author Contributions

All of the authors declare that they have all participated in the design, execution, and analysis of the paper, and that they have approved the final version.

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