

NewsScan

NIDA ADDICTION RESEARCH NEWS

WOMEN & SUBSTANCE ABUSE

Research News

This issue of *NewsScan* focuses on some of the recent scientific investigations supported by the National Institute on Drug Abuse (NIDA) that relate to the subject of substance abuse and women. The last few decades have seen a marked increase in awareness of the importance of gender in medical treatment and research. Scientists have helped us understand that there are multifaceted dimensions to drug abuse and addiction—including gender differences—that can affect the causes, effects, consequences, and treatment of drug abuse.

Researchers and clinicians are developing a comprehensive and detailed picture of gender-related effects that can lead to improvements in treatment and prevention efforts to bring us closer to the goal of individualized interventions that best meet the distinct needs of drug-abusing women.

Scientists Review Data on Substance Abuse in Women

A recent literature review on substance abuse, treatment entry, and outcome in women suggests that women with substance abuse disorders are less likely than men to enter treatment, but once they do, they have outcomes and success rates similar to men.

However, some specific predictors of outcome success do vary by gender, say the scientists who published the review. While treatment retention is important to both men and women, treatment retention and completion may have an even stronger association with outcome in women. Other factors that can adversely affect substance abuse treatment outcomes in women include history of victimization and lower educational attainment. In addition, women have higher rates of certain co-occurring psychiatric disorders, such as depression, that may affect treatment success.

The researchers also found that gender-specific treatment and interventions enhance treatment entry, retention, and outcomes only among certain subgroups of women with substance abuse disorders. For example, women-only settings often are beneficial for pregnant women and provide specialized services such as childcare needs, job training, life-skills training, transportation, and housing assistance.

- **WHAT IT MEANS:** Evidence suggests that women who abuse drugs are less likely than men to seek alcohol and drug treatment. In the past, perceived social stigma and other issues such as childcare and pregnancy may have hindered women's help-seeking patterns into substance abuse treatment and contributed to their under-diagnosis, under-detection, and lower rates of referral to treatment. Research is needed in a variety of areas, such as the interaction between gender and ethnicity in treatment process and clinical outcomes; the cost-effectiveness of gender-specific versus mixed-group treatment; and identifying the characteristics of men and women who would benefit from single-gender treatment.

Dr. Shelly Greenfield, of McLean Hospital and Harvard Medical School, and her colleagues published their findings online in June 2006 on the Web site of *Drug and Alcohol Dependence*.

Study Identifies Factors Associated with a History of Substance Abuse Treatment in Women

New research finds multiple pregnancies, history of physical abuse, and perception of serious legal problems are among common factors associated with women enrolled in substance abuse treatment.

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NEWS UPDATE

Drs. Benita Walton-Moss and Mary E. McCaul analyzed interview data from 153 women enrolled in a prenatal clinic (women with and without a history of drug abuse). Interview data were examined to identify factors associated with prior enrollment in substance abuse treatment among women meeting specific criteria for drug abuse or addiction.

The team of researchers found that pregnant women with at least three pregnancies or physical abuse by a known person were three times more likely to report having been in drug abuse treatment. Moreover, participants who viewed their current legal problems as moderate or very severe were more than five times as likely to have a history of drug abuse treatment. Women who craved drugs or used cocaine at least 15 days in the past month—a measure of drug severity—were also two times more likely to have been enrolled in drug abuse treatment. Contrary to the researchers' expectations, patients with a high alcohol severity score were less likely to have a prior history of drug abuse treatment.

- **WHAT IT MEANS:** Previous research has examined factors related to retention and completion of substance abuse treatment programs; however, little is known about which factors may play a role in a woman's decision to enroll in treatment. These study findings shed new light on common characteristics among women who have enrolled in substance abuse treatment programs. Additional research is needed to identify and evaluate factors related to treatment outcomes in women.

This study, led by Dr. Benita Walton-Moss of The Johns Hopkins University, was published in the February 2006 issue of *Addictive Behaviors*.

Case Management May Help Adolescent Females Stay In Treatment

Results of a recent study suggest that case management improves retention of at-risk adolescent females in substance abuse treatment and that fidelity of case management implementation but not treatment intensity predicts decreased risk of dropping out of treatment. In the model employed by the study, case managers focused on helping the clients to become aware of negative thoughts and their destructive impact; teaching the clients to replace such negative thoughts with positive and constructive ways of thinking about experiences; and teaching skills needed to change how the clients function and interact with others and environmental situations.

The study followed the progress of 90 adolescent females who underwent 16 weeks of substance abuse treatment. It compared the progress of 23 who received case management during treatment with that of 67 who did not receive case management during treatment. All participated in learning sessions that covered adolescent health and development, sexual responsibility, and child development. Participants also received transportation to and from treatment and case management sessions, at least one meal or snack, and \$25. Those with children were reimbursed for childcare expenses. Case management services enhanced primary treatment through face-to-face, one-hour, weekly meetings. Case managers also helped their clients deal with issues that would have inhibited active participation in the treatment program.

Results showed that adolescent females who received case management attended an average of 12 treatment sessions, while those who did not receive case management attended an average of eight treatment sessions. In addition, the ability of the case manager to effectively perform his or her functions by adhering to a predetermined standard of care significantly increased treatment retention.

- **WHAT IT MEANS:** This study shows that faithful implementation of a case management model may have a greater influence on reducing attrition among adolescent female substance abusers in therapy. This is important because people who remain in treatment for substance abuse have better outcomes than those who drop out prematurely, and attrition rates seem to be highest among adolescent populations.

Dr. Pamela Noel of the University of Iowa published her research in the July-September 2006 issue of *The American Journal of Drug & Alcohol Abuse*.

The Nicotine Patch May Increase Short-Term Abstinence Among Postmenopausal Smokers

Researchers at the University of Connecticut School of Medicine confirm the short-term benefit of the nicotine patch among postmenopausal women who smoke. Postmenopausal women represent nearly one-third of the female smoking population; however, limited data are available on their smoking cessation successes.

A research team led by Dr. Cheryl Oncken examined the effects of the nicotine patch on smoking cessation rates in 152 postmenopausal smokers, as well as the impact of hormone replacement therapy on success of treatment. More than one-third of the participants had a lifetime diagnosis of depression; and approximately one-half of the women were taking hormone replacement therapy. Patients were randomized to receive a 21-mg nicotine patch or a placebo patch, in addition to intensive smoking cessation counseling. A total of seven treatment visits were completed during the 12-week treatment period, with a one-year follow-up visit.

High abstinence rates were observed in both groups during the treatment period, with the nicotine replacement group more likely to quit than the placebo group. Typically, 66.7 percent of the nicotine-treated group and 46 percent of the placebo group reported being abstinent during each visit. However, at the one-year follow-up, there was no difference in abstinence rates between the two groups. Additionally, patients with a lifetime diagnosis of depression were less likely to abstain from smoking during the treatment phase of the study, with only 39 percent of depressed women achieving abstinence—compared with 56 percent of nondepressed women. Depressed women also had a relapse rate of 59 percent at the one-year follow-up visit, compared with 30 percent for non-depressed women. Hormone replacement therapy had no effect on smoking cessation outcomes.

- **WHAT IT MEANS:** These study findings extend to postmenopausal women a large body of research suggesting that treatment with the nicotine patch enhances short-term quit rates when compared to placebo. However, since long-term cessation was not typically present at the one-year follow-up, these findings suggest a need for ongoing relapse prevention in postmenopausal smokers, particularly among those with a history of depression.

These research findings were published online in the June 8, 2006 issue of *Addictive Behaviors*.

HIV Prevention Interventions Among Poor Women Need To Address Substance Abuse, Relationship Abuse

A study of low-income women living in shelters or subsidized housing in Los Angeles County emphasizes the need for more comprehensive HIV prevention interventions that address issues of substance abuse and relational victimization.

The study, conducted by scientists with the RAND Corporation, is the first to simultaneously examine the relative importance of different types of substance abuse by each partner (excessive drinking versus drug abuse) as well as different types of relationship abuse (psychological abuse only versus physical or sexual violence) to risky sexual practices that contribute to HIV transmission. The research examined associations of substance abuse, relationship abuse, and HIV self-protective behavior among 133 homeless women in shelters and 157 women in low-income housing. All women in the study had a regular, noncohabitating partner.

The scientists found that women in shelters engaged more in unsafe sexual practices if they were substance abusers, had a partner who was a substance abuser, or experienced recent psychological abuse or physical/sexual violence in their relationship. Among sheltered women, the researchers found that this risky behavior was more frequent among women who abused such drugs as heroin and cocaine, but unrelated to the abuse of such substances as marijuana, painkillers, or sedatives by these women or their partners. Among those with an abusive partner, having a partner who drank to intoxication was the strongest predictor of having unprotected sex.

Among low-income housed women, exposure to recent psychological abuse and physical/sexual violence both were associated with engaging more in risky sexual behavior. However, among this group, neither their own substance abuse nor that of their partners emerged as a significant risk factor for unprotected sex. Although a substantial portion of low-income housed women and their partners had engaged in drug abuse and drinking to intoxication, there was little reported abuse of such drugs as heroin and cocaine by either partner.

- **WHAT IT MEANS:** The study results suggest that impoverished women may be particularly vulnerable to HIV infection due to high rates of drug and alcohol abuse, involvement with substance-abusing partners, and exposure to relationship violence and other forms of victimization. In the past few years, a growing number of studies have implicated substance abuse and interpersonal violence as important risk factors for unprotected sex within heterosexual relationships. It is important to empower women and help them develop the knowledge and skills they need to protect themselves from HIV.

Dr. Joan Tucker and her colleagues published their findings in the September 2006 issue of the *Journal of Health Psychology*.

Pregnant Smokers: Don't Light Up During First Two Weeks of Cessation Program

Previous research has shown that cigarette use during the first two weeks of a smoking cessation program predicts short- and longer-term cigarette use. Now, new NIDA-supported research extends this finding to pregnant women.

Researchers at the University of Vermont evaluated data from 129 pregnant women who had participated in or were participating in two smoking cessation studies at the time of the analysis. Women in each trial were assigned to one of two treatments—they either received vouchers exchangeable for retail items based on breath, saliva, and urine tests that verified smoking abstinence; or received incentives independent of smoking status. Vouchers were available from study entry through four months after giving birth.

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Dr. Stephen Higgins and his colleagues found that among women who received vouchers based on verified abstinence, those who smoked during the first two weeks of a smoking cessation program had a 79-percent chance of smoking at the end of assessment three months later; those who were abstinent during the first two weeks had only an 11-percent chance of being a smoker at the final assessment. Among the participants who received incentives independent of smoking status, those who smoked during the first two weeks had a 92-percent chance of being classified a smoker at the end of the trial, while those who were abstinent had a 50-percent chance of being classified a smoker then.

- **WHAT IT MEANS:** Among pregnant women entering a smoking cessation program, the act of smoking during the first two weeks of the quit attempt can be highly predictive of cigarette use three months later. Clinicians should closely monitor smoking status during the initial weeks of treatment. Clinicians also should continue to facilitate smoking cessation among pregnant women who initially fail in an effort to provide a more beneficial environment to the fetus or child.

The study was available online in *Drug and Alcohol Dependence* as of May 23, 2006.

Toddlers of Mothers Who Smoked During Pregnancy Show Behavior Problems

A NIDA-supported study is the first to show a link between smoking during pregnancy and child behavior problems in the first two years of life.

Researchers followed 93 toddlers between their first and second birthdays. Forty-seven percent were prenatally exposed to cigarettes. The investigators examined whether exposed toddlers' behavior patterns differed over time from nonexposed toddlers. Then they tested if cigarette exposure was associated with specific types of disruptive behavior. The study was designed to delineate between the normal behavior patterns typically seen during the "terrible twos" and more severe behaviors.

They found that toddlers exposed to cigarette smoke in utero exhibited escalating patterns of behavior problems from 12 through 24 months. The scientists also found that exposure to cigarette smoke was associated with social, rather than emotional aspects of early disruptive behavior. For instance, compared with nonexposed toddlers, exposed toddlers were significantly more likely to exhibit aggressive behavior and to refuse to follow directions. Exposed toddlers were also less likely to seek out and participate in playful, social interactions with their mothers.

- **WHAT IT MEANS:** The study highlights the importance of better understanding how prenatal exposure to nicotine affects the development of the fetal brain, and how in turn this may disrupt behavior later on in childhood and adolescence. If scientists can pinpoint which areas of the brain might be most affected by prenatal cigarette smoke exposure, they can better tailor prevention or remedial intervention while children are very young.

The study was conducted by Dr. Lauren Wakschlag, of the University of Illinois at Chicago, and her colleagues at the University of Illinois at Chicago, University of York (England), the University of Massachusetts, and the National Institute of Mental Health. It was published in the July/August 2006 issue of *Child Development*.

For more information about any item in this NewsScan:

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The National Institute on Drug Abuse (NIDA) is a component of the National Institutes of Health, U.S. Department of Health and Human Services. NIDA supports most of the world's research on the health aspects of drug abuse and addiction. The Institute carries out a large variety of programs to ensure the rapid dissemination of research information and its implementation in policy and practice. Fact sheets on the health effects of drugs of abuse and other topics are available in English and Spanish. These fact sheets and further information on NIDA research and other activities can be found on the NIDA home page at www.drugabuse.gov.

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