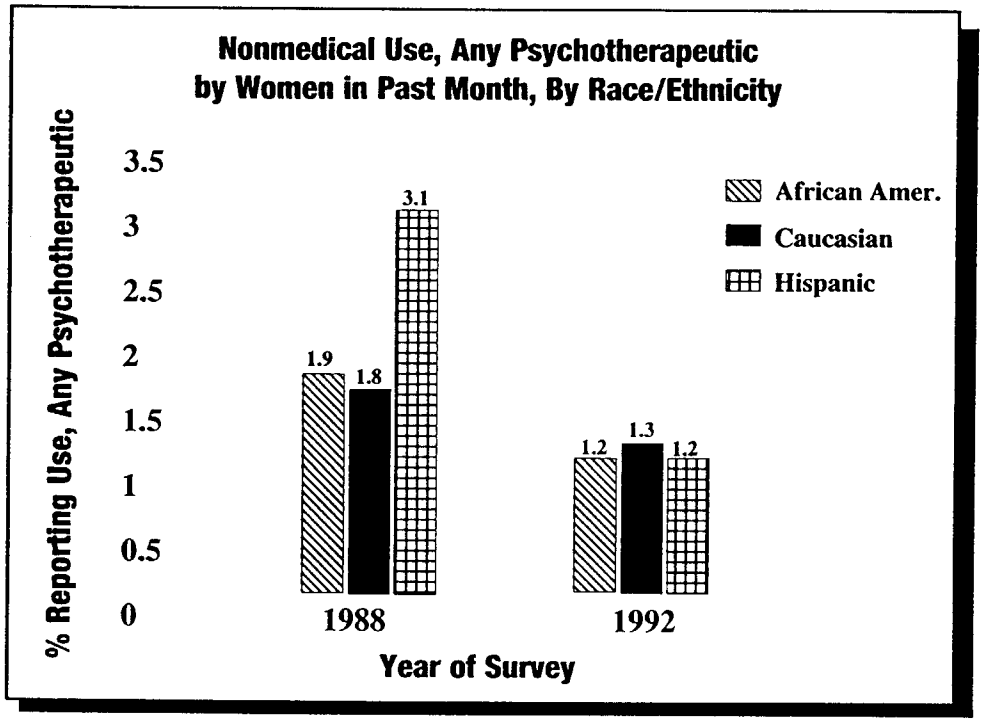
Figure 6



National Household Survey on Drug Abuse: Population Estimates 1992, 55. National Household Survey on Drug Abuse: Population Estimates 1998, 53.

having used heroin, compared to 1.2 million men, 1.2 percent of the male population 12 years old or older.[28]

Unfortunately, because the prevalence estimates are so small, it is not possible to compare heroin use by women and men in different age groups or among women in different age groups. However, an estimated 27,000 adolescents between the ages of 12 and 17 used heroin in the past year, as did 152,000 young adults between the ages of 18 and 25.[29] This is particularly disturbing because household surveys underreport the use of illegal drugs. As with several other estimates from the NHSDA, the samples are too small to ensure reliability.

According to the NHSDA, the proportion of women reporting lifetime heroin use has remained relatively constant over the last seven years (see Figure 5).

2.1.5 Prescription and Over-the-Counter Drugs

The 1992 NHSDA indicates that an estimated 1.3 million women (1.2 percent of female respondents) used psychotherapeutic drugs for nonmedical reasons during the month before the survey.[30] This figure indicates a 35 percent decrease in reported use since 1988 (see Figure 6).[31] These data represent rates of nonmedical use of prescription drugs, defined in the survey as "on your own, either without your own prescription from a doctor, or in greater amounts or more often than prescribed, or for any reason other than a doctor said you should take them."

Twice as many women as men receive and use prescriptions for drugs.

Although some studies have demonstrated that women are much more likely than men to abuse psychotherapeutic drugs (defined by SAMHSA to include stimulants, sedatives, tranquilizers, and analgesics), the 1992 NHSDA shows no statistically significant differences: An estimated 1.3 million men (1.3 percent of male respondents) reported nonmedical use in the previous month.[32] However, the possibility of nonmedical use of prescription drugs is greater for women than for men. Twice as many women as men receive and use prescriptions for drugs; women receive more multiple and repeat prescriptions than men; and women are more likely than men to receive prescriptions for excessive dosages.[33]

Women are twice as likely as men to be addicted to prescription drugs in combination with alcohol.

According to Roth, approximately "70 percent of the prescriptions for tranquilizers, sedatives, and stimulants are written for women." Moreover, "women are twice as likely as men to be addicted to prescription drugs in combination with alcohol."[34] Given the health risks of combining alcohol with prescription drugs, this fact represents a serious health problem for women.

2.1.6 Polydrug Use

Although only 5.3 percent of the 1991 NHSDA respondents reported using alcohol in combination with other drugs in the previous month, 13.9 percent were 18 to 25 years old. Moreover, 1.4 percent reported using three or more different substances in the past month.[35] Unfortunately, gender-disaggregated data for polydrug use (also referred to as co-occurring drug dependencies) are not reported by SAMHSA. However, according to Ross, alcoholic women in treatment are more likely to be abusing barbituates, sedatives, or minor tranquilizers at the time of entry into treatment than alcoholic men, who are more likely to be abusing marijuana.[36]

2.1.7 Women in Treatment

During 1992, 2.8 million people needed substance abuse treatment,[37] but there were fewer than 600,000 treatment slots at any given point in time. Unfortunately, data on the number of women in treatment versus treatment capacity needs are not readily available.

According to the 1990 Institute of Medicine report on alcohol problems of women, specialized treatment programs for women in the U.S. increased only slightly between 1982 and 1987 from 23 percent to 28 percent of the nearly 5,800 programs reporting to NIDA/NIAAA.[38] Nonetheless, women are increasingly entering treatment, as evidenced by several data sets and as reported by the Institute of Medicine.[39] For example, the 1990 survey of the National Association of State Alcohol and Drug Abuse Directors (NASADAD) revealed the following information on the 1.2 million admissions to 7,743 treatment units:

- 22.3 percent of admissions for treatment of alcoholism were women;

- 33 percent of admissions to programs for treatment of other substance abuse were women; and

- younger clients admitted for treatment of alcoholism were more likely to be women than those in older age groups (38 percent in the under 18 age group, versus 18 percent in the 45 to 54 and 55 to 64 age groups).[40]

Of clients admitted for treatment of other substance abuse, however, 41 percent of those 18 and under were female, and women consistently represented 26 percent to 37 percent of the age cohorts. In fact, 37.2 percent of those over 65 were women.[41] Notably, these data indicate that women are under-represented in the treatment population. Moreover, because the proportion of women in treatment has not substantially changed in over a decade, it is clear that the dearth of treatment slots for women continues to be a serious problem.

According to the 1990 Drug Services Research Survey (DSRS) of 120 substance abuse treatment programs, approximately 25 percent of the 2,182 clients in the sample were women. Notably, 33.5 percent of clients in methadone treatment programs (serving heroin addicted persons) were women while 20 percent of those in programs treating alcohol addiction only were women.[42] According to the 1992 NHSDA, 27 percent of those reporting heroin use in the previous month were women,[43] and 22 percent of those reporting heavy drinking in the past month were women.[44] A 1992 evaluation of a Health Care Financing Administration (HCFA) demonstration project for Medicare coverage of alcoholism services found that 20 percent of the 2,977 clients enrolled in the study were women. In that study, women were more likely to be enrolled in outpatient programs (26 percent) and less likely to be enrolled in the combined inpatient and outpatient treatment programs (17 percent).[45] In 1992, approximately 35 percent of persons participating in Alcoholics Anonymous (AA) programs were women; 43 percent of those 30 and under were women.[46]

2.2 Correlates of Substance Use Among Women

Patterns of substance abuse for both women and men vary by sex, age, race/ethnicity, educational status, and employment status.

2.2.1 Age

Patterns of alcohol and other drug use vary by age group for both women and men. According to the 1992 NHSDA, for example, the proportion of female respondents aged 18 to 25 who reported having used any illicit drug in the month before the survey was higher than respondents in the 12 to 17 and 26 to 34 age categories: 9.5 percent versus 6.5 percent and 7.6 percent, respectively. The proportion was significantly lower for those age 35 and over (1.4 percent).[47] Women in the age groups 18 to 25 and 26 to 34 were much more likely to have abused any psychotherapeutic drug in the previous month (2.2 percent and 2.4 percent, respectively) than those 12 to 17 (1.8 percent) and over 35 (.6 percent).[48] Young women 18 to 25 were most likely to have engaged in heavy drinking: 6.5 percent versus 2.1 percent for female respondents overall.[49]

Furthermore, according to the 1992 NHSDA, adolescent girls, aged 12 to 17, were about as likely to have used an illicit drug in the previous month as adolescent boys (661,000 adolescent girls or 6.5 percent, compared to 608,000 adolescent boys or 5.7 percent).[50]

In some studies of high school students, teenage girls are less likely to identify themselves as drinkers than teenage boys, but the degrees of difference vary. Some studies show very small differences. Age of first use and age of onset of problems among girls are decreasing. Most adolescents (regardless of gender) are introduced to alcohol between the ages of 10 and 15, usually with parents at home during a meal, a celebration, or a ceremony, but without any discussion of appropriate use.[51] This method of introduction may vary by culture.

Use of alcohol, marijuana, and cocaine has decreased among female high school seniors since 1985; for example, in that year, 8.2 percent of female students reported having used cocaine in the previous month—by 1990, that proportion had decreased to 3.3 percent. However, it is important to note that there is no comparable survey of high school dropouts, a highly vulnerable population for substance abuse.[52] According to a 1992 survey of 8th and 10th grade students, there are few gender differences in the use of drugs. This may be because female students tend to date older male students who are more likely to use drugs. There is little male-female difference in 8th and 10th grades, respectively, in the use of inhalants, cocaine, and crack. As with adults, stimulant and tranquilizer use are higher among adolescent females.[53]

2.2.2 Socioeconomic Factors

Although socioeconomic factors are increasingly viewed as related both directly and indirectly to substance abuse, research-based data are scarce, and many of the published reports are based on data that are at least 10 years old. Few studies that would provide adequate data on which to ascertain socioeconomic factors related to substance abuse have been funded by either the public or private sector. However, data from the SAMHSA survey and other sources demonstrate some associations between prevalence of abuse of alcohol and other drugs and various indicators of socioeconomic status, including education, employment, and income levels. Importantly, the relationship among these factors is seen as having changed over time. For example, according to Galbraith:

> the misuse of legal drugs was once thought to be the domain of middle- and upper-class women who could afford psychiatrists. Some prevention programs, however, are reporting high rates of misuse among women in low-income communities as a result of doctors' writing prescriptions for women on Medicaid, sometimes in lieu of a thorough medical assessment.[54]

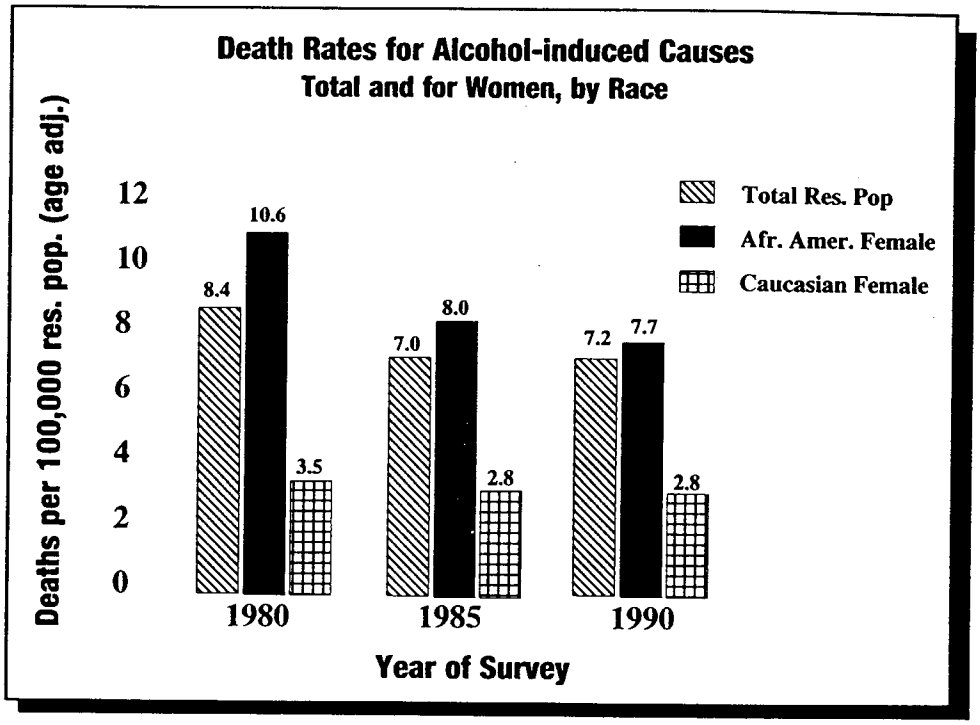
Women who are unemployed are at higher risk of becoming heavy drinkers, while women who are drinking but who work full-time outside the home evidenced fewer alcohol dependence symptoms than those working in part-time jobs.[55] However, this finding may be misleading because women who are at higher risk of becoming heavy drinkers may be more likely to be unemployed because they have already begun to experience problems associated with drinking (e.g., tardiness or absence from work). In a study that included both Caucasian and African American women entering treatment for heroin addiction, most of the women lacked education and job experience.[56]

Among older women, there are clear relationships between abuse of prescription drugs and education and income. One researcher reports "higher rates of frequency and duration of use among older, unemployed, and less educated women."[57] However, the author does not indicate how "unemployed" is defined; that is, whether this term includes retirees or those whose income is normally derived from employment; nor does she indicate if adjustments were made for those beyond the age of retirement (generally, 65 or over). These findings also reportedly conflict with the clinical experience of treatment program personnel.

2.3 Health Impact of Substance Use on Women

This section describes the physiological and the psychological effects of substance abuse on women. This information is critical to understanding the medical and mental health needs and service requirements of women in treatment.

Figure 7



Health United States and Healthy People 2000 Review 1992, 56.

2.3.1 Physiological Effects

Women suffer severe physiological consequences as a result of substance abuse.

Women suffer severe physiological consequences as a result of substance abuse. However, because much more data are available on the effects of alcohol abuse than that of other drugs, the focus of this section focuses on physiological consequences of alcohol abuse. As was mentioned in the introduction to this chapter, in 1990, the death rate associated with alcohol-related causes was 2.8/100,000 for Caucasian females and 7.7/100,000 for African American females. The death rate for other drug induced causes was 2.5 per 100,000 for Caucasian women and 3.4 per 100,000 for African American women. Notably, the alcohol-induced death rate for African American females is higher than that for the total population (see Figure 7)[58].

The medical consequences of alcohol abuse and alcoholism are many, as is evidenced by a number of data sources. For example, alcohol- related medical consequences presented by 20 percent or more of all admissions to short-stay hospitals from 1979 to 1984 included the following: thiamine deficiency (66 percent); liver abscess and sequelae of chronic liver disease (56 percent); varicose veins (other than lower extremities); hemorrhoids; phlebitis or other venous thrombosis (49 percent); spinocerebellar disease (29 percent); hypothermia (25 percent); necrosis of the liver (23 percent); and diseases of the pancreas (20 percent).[59] Heavy alcohol use has also been associated with peptic ulcers;[60] nutritional deficiencies affecting anemia; neuropathy; depressed cellular and hormonal functions;[61] hypertension; ischemic heart disease; cerebrovascular disorders;[62] cancer of the liver; esophagus; nasopharynx; and larynx;[63] and neurologic disorders.[64]

The degree of gender disparity in the prevalence of all of these medical consequences is not fully known. However, differences in susceptibility to alcohol-related liver damage have been identified. For example, women have been found to develop severe liver disease with shorter durations of alcohol use and lower levels of consumption than do men, and alcohol-dependent women have a higher prevalence and greater severity of alcohol-related liver disease than do their male counterparts. Women with alcohol problems are disabled more frequently and for longer periods than are men, and women have higher death rates from alcohol-related damage.

Women with alcohol problems are disabled more frequently and for longer periods than are men, and women have higher death rates from alcohol-related damage.

In women, alcohol reaches higher peak levels in the blood faster than it does for men, even when the same amount of absolute alcohol per pound of body weight is consumed. There are several reasons for this difference in alcohol metabolism. In general, a woman's body has a higher ratio of fat-to-water composition. Women who use oral contraceptives show slower rates of alcohol metabolism. Recent research has also identified gender differences in the stomach's capacity to oxidize alcohol.[65]

Heavy alcohol consumption also has been linked to osteoporosis (more common in women than in men)[66] and reproductive difficulties (e.g., infertility, amenorrhea, failure to ovulate, dysfunction in the post-ovulation phase of the menstrual cycle, pathologic ovary changes, premenstrual syndrome, and early menopause). However, the reasons for these links are not known.[67]

Research indicates that the chronic female drinker not only has a decrease in sexual functioning, but she also experiences serious sexual dysfunction. Researchers also have found relationships between alcoholism among women and sexual dysfunction, including high rates of anorgasm. The studies do not usually identify the onset of sexual dysfunction in terms of progression of the woman's alcoholism.

The remainder of this section (2.3.1) summarizes information on sexually transmitted diseases (STDs) and tuberculosis (TB) among women, as they relate to substance abuse.

2.3.1.1 Sexually Transmitted Diseases

STDs have a particularly significant impact on women who suffer more frequent and severe long-term consequences than men.

STDs have a particularly significant impact on women who "suffer more frequent and severe long-term consequences than men...because women tend to show fewer symptoms and as a consequence they go untreated for longer periods of time."[68] STDs are of particular concern with respect to pregnant women because the "transmission of an STD to an unborn child or during childbirth can have devastating effects."[69]

During the 1980s, reported rates of primary and secondary syphilis for both genders increased dramatically in the United States, from 13.7/100,000 population in 1981 to 20.3/100,000 in 1990.[70] In 1991, the rate began to decline; in that year, it was 17.3/100,000 and in 1992 it fell