

The NSDUH Report

January 24, 2008

Nicotine Dependence: 2006

In the United States, tobacco is used more widely than illicit drugs, and it is implicated in more deaths each year than alcohol and illicit drugs combined.^{1,2} In 2006, 72.9 million Americans aged 12 or older (29.6 percent of the population) were current (i.e., past month) users of tobacco, and 84.5 percent of these users smoked cigarettes.³ Nicotine dependence, which is measured for cigarette users, has been found to be

associated with increased risk of alcohol and illicit drug use and of mental disorders.^{4,5}

The National Survey on Drug Use and Health (NSDUH) asks respondents aged 12 or older to report their past month substance use, including their use of tobacco, alcohol, and illicit drugs. Questions about the use of tobacco products cover cigarettes, chewing tobacco, snuff, cigars, and pipe tobacco. For persons who are current cigarette smokers, NSDUH measures past month nicotine dependence using criteria derived from the Nicotine Dependence Syndrome Scale (NDSS) and the Fagerstrom Test of Nicotine Dependence (FTND).⁶ Binge alcohol use is defined by NSDUH as drinking five or more drinks on the same occasion (i.e., at the same time or within a couple of hours of each other) on at least 1 day in the past 30 days. Heavy alcohol use is defined as drinking five or more drinks on the same occasion on each of 5 or more days in the past 30 days; all heavy alcohol users are also binge alcohol users.

NSDUH defines illicit drug use as use of marijuana/hashish, cocaine (including crack), inhalants, hallucinogens, heroin, or prescription-type drugs used nonmedically.⁷

NSDUH also includes questions to assess serious psychological distress (SPD) and major depressive episode (MDE). SPD is an overall indicator of past year nonspecific psychological distress that is constructed from the K6 scale administered to adults aged 18 or older in NSDUH.⁸ Past year MDE is assessed separately

In Brief

- Among past month cigarette smokers aged 12 or older, 57.7 percent met the criteria for past month nicotine dependence
- Persons aged 12 or older who were dependent on nicotine in the past month were more likely than those who were not nicotine dependent to have engaged in alcohol use (61.7 vs. 49.1 percent), binge alcohol use (40.1 vs. 20.1 percent), and heavy alcohol use (14.9 vs. 5.5 percent) in the past month
- Persons aged 18 or older who were nicotine dependent in the past month were more than twice as likely as their counterparts who were not dependent on nicotine to have experienced serious psychological distress in the past year (21.2 vs. 9.4 percent)

for youths aged 12 to 17 and adults aged 18 or older using the diagnostic criteria from the 4th edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV). These criteria specify a period of 2 weeks or longer during which there is either depressed mood or loss of interest or pleasure and at least four other symptoms that reflect a change in functioning, such as problems with sleep, eating, energy, concentration, and self-image.^{9,10}

This report examines the rates of past month nicotine dependence among all persons aged 12 or older and among past month cigarette smokers in that age range. The report also explores the association between nicotine dependence and substance use, SPD, and MDE. All findings are based on 2006 NSDUH data.

Cigarette Use and Nicotine Dependence

In 2006, 25.0 percent of persons aged 12 or older (an estimated 61.6 million persons) used cigarettes in the past month, and 14.4 percent (an estimated 35.5 million persons) met the criteria for nicotine dependence in the past month.

Nicotine Dependence among Cigarette Smokers

Among past month cigarette smokers aged 12 or older, 57.7 percent met the criteria for past month nicotine dependence (Table 1). Although male and female past month smokers were equally likely to be dependent on nicotine in the past month (57.7 and 57.8 percent, respectively), there were differences in the rates of dependence by other demographic characteristics. Among past month cigarette smokers, past month nicotine dependence generally increased with age; the rate was highest among smokers aged 50 to 64 and lowest among those aged 12 to 17. Hispanic and Asian past month smokers were less likely than their white and black counterparts to have been nicotine dependent in the past month, and smokers who reported two

Table 1. Past Month Nicotine Dependence among Past Month Cigarette Users Aged 12 or Older, by Age Group, Race/Ethnicity, and Annual Family Income: 2006

Demographic Characteristic	Past Month Nicotine Dependence among Past Month Cigarette Users	
	Percent	Standard Error
Total	57.7	0.62
Age Group		
12 to 17	36.4	1.25
18 to 25	44.7	0.79
26 to 34	52.8	1.33
35 to 49	65.3	1.14
50 to 64	69.1	1.79
65 or Older	57.3	4.16
Race/Ethnicity*		
White	61.7	0.73
Black or African American	57.3	2.20
Asian	44.7	5.43
Two or More Races	57.2	5.02
Hispanic	38.2	2.06
Annual Family Income		
Less Than \$20,000	63.0	1.21
\$20,000 to \$49,999	59.6	1.02
\$50,000 to \$74,999	54.6	1.78
\$75,000 or More	49.6	1.52

Source: SAMHSA, 2006 NSDUH.

or more races were more likely than Hispanic smokers to have been nicotine dependent in the past month.¹¹ Rates of past month nicotine dependence among current smokers generally declined with increasing family income. The rate was highest among smokers with annual family incomes of less than \$20,000 and lowest among those with annual family incomes of \$75,000 or more.

Substance Use and Nicotine Dependence

Persons aged 12 or older who were dependent on nicotine in the past month were more likely than those who were not nicotine dependent to have engaged in alcohol use (61.7 vs. 49.1 percent), binge alcohol use (40.1 vs. 20.1 percent), and heavy alcohol use (14.9 vs. 5.5 percent) in the past month

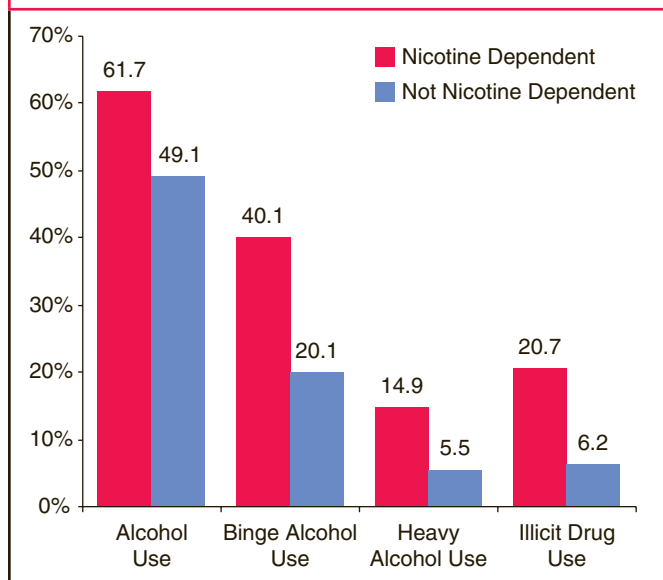
(Figure 1). In addition, persons aged 12 or older who were nicotine dependent in the past month were over 3 times more likely than those who were not nicotine dependent to have used an illicit drug in the past month (20.7 vs. 6.2 percent).

SPD, MDE, and Nicotine Dependence

Persons aged 18 or older who were nicotine dependent in the past month were more than twice as likely as their counterparts who were not dependent on nicotine to have experienced SPD in the past year (21.2 vs. 9.4 percent).

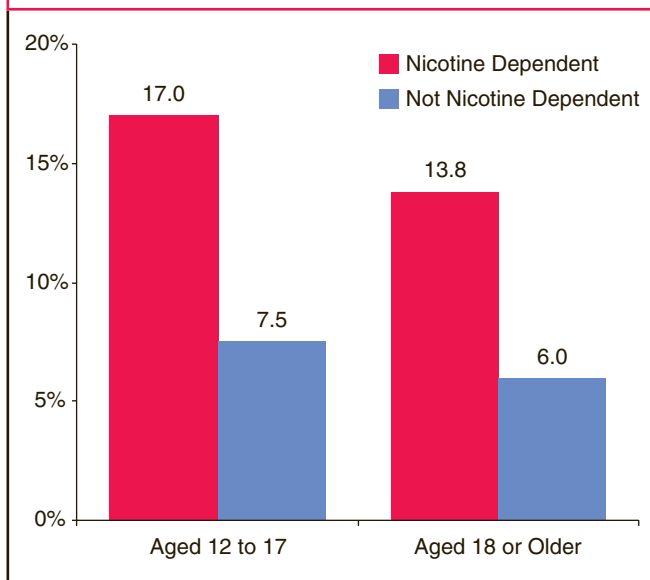
Nicotine dependence and MDE also were related.¹² Youths aged 12 to 17 who were nicotine dependent in the past month were over twice as likely as those who were not nicotine dependent to have met the criteria for past year

Figure 1. Past Month Alcohol, Binge Alcohol, Heavy Alcohol, and Illicit Drug Use among Persons Aged 12 or Older, by Past Month Nicotine Dependence: 2006



Source: SAMHSA, 2006 NSDUH.

Figure 2. Past Year Major Depressive Episode (MDE) among Youths Aged 12 to 17 and Adults Aged 18 or Older, by Past Month Nicotine Dependence: 2006**



Source: SAMHSA, 2006 NSDUH.

MDE (17.0 vs. 7.5 percent) (Figure 2). A similar pattern was found for adults aged 18 or older, with 13.8 percent of those who were nicotine dependent experiencing a past year MDE, compared with 6.0 percent of those who were not nicotine dependent.

End Notes

- ¹ Office of Applied Studies. (2006). *Results from the 2005 National Survey on Drug Use and Health: National findings* (DHHS Publication No. SMA 06-4194, NSDUH Series H-30). Rockville, MD: Substance Abuse and Mental Health Services Administration.
- ² Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health. (2007, February 28). *Smoking & Tobacco Use Fact Sheet: Tobacco-related mortality (updated September 2006)*. Retrieved October 5, 2007, from http://www.cdc.gov/tobacco/data_statistics/Factsheets/tobacco_related_mortality.htm
- ³ Office of Applied Studies. (2007). Table 2.1A – Tobacco product and alcohol use in lifetime, past year, and past month among persons aged 12 or older: Numbers in thousands, 2005 and 2006. In *Results from the 2006 National Survey on Drug Use and Health: Detailed tables*. Rockville, MD: Substance Abuse and Mental Health Services Administration. [Available at <http://oas.samhsa.gov/WebOnly.htm>]
- ⁴ Grant, B. F., Hasin, D. S., Chow, S. P., Stinson, F. S., & Dawson, D. A. (2004). Nicotine dependence

and psychiatric disorders in the United States: Results from the National Epidemiologic Survey on Alcohol and Related Conditions. *Archives of General Psychiatry*, 61, 1107-1115.

- ⁵ Office of Applied Studies. (2007). *Results from the 2006 National Survey on Drug Use and Health: National findings* (DHHS Publication No. SMA 07-4293, NSDUH Series H-32). Rockville, MD: Substance Abuse and Mental Health Services Administration.
- ⁶ The 2005 NSDUH included questions designed to measure nicotine dependence among current cigarette smokers based on criteria derived from the NDSS or the FTND. The criteria first were used in NSDUH in 2003. Smokers who met the criteria for either the NDSS or the FTND were defined as having nicotine dependence in the past month. For details, see Section B.4.2 of Appendix B of the report listed in End Note 5.
- ⁷ NSDUH defines nonmedical use of prescription-type drugs as use not prescribed for the respondent by a physician or used only for the experience or feeling they caused. Nonmedical use of any prescription-type pain reliever, sedative, stimulant, or tranquilizer does not include over-the-counter drugs. Nonmedical use of stimulants includes methamphetamine use.
- ⁸ The K6 scale consists of six questions that gather information on how frequently respondents experienced symptoms of psychological distress during the 1 month in the past 12 months when they were at their worst emotionally. For details on the K6 scale's use in NSDUH, see Section B.4.4 of Appendix B in the report listed in End Note 5. Also, see the following paper: Kessler, R. C., Barker, P. R., Colpe, L. J., Epstein, J. F., Gfroerer, J. C., Hiripi, E., Howes, M. J., Normand, S. L., Manderscheid, R. W., Walters, E. E., & Zaslavsky, A. M. (2003). Screening for serious mental illness

in the general population. *Archives of General Psychiatry*, 60, 184-189.

- ⁹ In assessing MDE, no exclusions were made for MDE caused by medical illness, bereavement, or substance use disorders. For details on how MDE is measured in NSDUH, see Section B.4.5 of Appendix B in the report listed in End Note 5.
- ¹⁰ American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders (DSM-IV)* (4th ed.). Washington, DC: Author.
- ¹¹ Race/ethnicity categories are determined by combining the responses from two separate questions. For this report, respondents identifying themselves as Hispanic were assigned to the Hispanic group regardless of their racial identification. Respondents identifying themselves as non-Hispanic were grouped according to their racial identification. Thus, "white" refers to those identifying themselves as non-Hispanic and white. Rates for American Indians or Alaska Natives and for Native Hawaiians or Other Pacific Islanders were suppressed because of low precision.
- ¹² Persons with unknown MDE information were excluded from this analysis.

Figure Notes

- * See End Note 11.
- ** See End Note 12.

Suggested Citation

Substance Abuse and Mental Health Services Administration, Office of Applied Studies. (January 24, 2008). *The NSDUH Report: Nicotine Dependence: 2006*. Rockville, MD.

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Research findings from the SAMHSA 2006 National Survey on Drug Use and Health (NSDUH)

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The National Survey on Drug Use and Health (NSDUH) is an annual survey sponsored by the Substance Abuse and Mental Health Services Administration (SAMHSA). The 2006 data used in this report are based on information obtained from a total of 67,802 persons aged 12 or older. The survey collects data by administering questionnaires to a representative sample of the population through face-to-face interviews at their place of residence.

The NSDUH Report is prepared by the Office of Applied Studies (OAS), SAMHSA, and by RTI International in Research Triangle Park, North Carolina. (RTI International is a trade name of Research Triangle Institute.)

Information on NSDUH used in compiling data for this issue is available in the following publication:

Office of Applied Studies. (2007). *Results from the 2006 National Survey on Drug Use and Health: National findings* (DHHS Publication No. SMA 07-4293, NSDUH Series H-32). Rockville, MD: Substance Abuse and Mental Health Services Administration.

Also available online: <http://oas.samhsa.gov>.

Because of improvements and modifications to the 2002 NSDUH, estimates from the 2002 through 2006 surveys should not be compared with estimates from the 2001 or earlier versions of the survey to examine changes over time.



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