

8. Prevalence and Treatment of Mental Health Problems

This chapter presents findings on mental health problems in the United States, including the prevalence and treatment of serious psychological distress (SPD) and major depressive episode (MDE) and the association of these problems with substance use and substance dependence or abuse (substance use disorder).

SPD is an overall indicator of past year psychological distress that is derived from the K6 scale administered to adults aged 18 or older in the National Survey on Drug Use and Health (NSDUH). Numerical scores derived from responses to these six questions range from 0 to 24. For this report, a score of 13 or higher is considered SPD. It is notable that the data related to SPD in 2005 and 2006 are not directly comparable with data from earlier years because of study design changes. Further information on the measurement of SPD, the scoring algorithm, and the study design changes is provided in [Section B.4.4](#) of [Appendix B](#).

A module of questions designed to obtain measures of lifetime and past year prevalence of MDE, severity of the MDE as measured by role impairments, and treatment for depression was administered to adults aged 18 or older and youths aged 12 to 17 in 2006. Some questions in the adolescent depression module were modified slightly to make them more appropriate for youths. Given these differences, adult and youth depression estimates are presented separately in this chapter.

MDE is defined as a period of at least 2 weeks when a person experienced a depressed mood or loss of interest or pleasure in daily activities and had symptoms that met the criteria for major depressive disorder as described in the 4th edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV) (American Psychiatric Association [APA], 1994). It should be noted that no exclusions were made for MDE caused by medical illness, bereavement, or substance use disorders.

Although there is substantial overlap in the populations classified with SPD and MDE, there are important distinctions between the definitions of the two. Meeting the criteria for SPD indicates that the respondent endorsed having symptoms at a level known to be indicative of having a mental disorder (i.e., any disorder such as an anxiety or mood disorder). Meeting the criteria for MDE indicates that the respondent had the specific physical and emotional symptom profile indicative of MDE in the past 12 months. MDE is known to be a fairly common disorder that often has a significant impact on a person's work, home, and social life. The questions used to

measure MDE and role impairment and the scoring algorithm for these responses are included in [Section B.4.5](#) of [Appendix B](#).

This chapter also presents data on the receipt of treatment for any type of mental health problem among adults and adolescents. This may be different from the treatment received specifically for MDE, and it is possible for a respondent to have indicated receipt of treatment for depression without having indicated that he or she received treatment for any mental health problems. Different questions and definitions of treatment and counseling are used for adults and youths. Treatment for adults aged 18 or older is defined as the receipt of treatment or counseling for any problem with emotions, "nerves," or mental health in the past year in any inpatient or outpatient setting or the use of prescription medication for a mental or emotional condition. Treatment for youths aged 12 to 17 is defined as receiving treatment or counseling for problems with behaviors or emotions from specific mental health or other health professionals in school, home, or from other outpatient or inpatient settings within the past year. Both the youth and the adult questions specifically exclude treatment for problems with substance use, which is asked about elsewhere in the interview. Estimates of unmet need for treatment are reported separately for all adults and for adults with SPD. Unmet need is defined using a question in the 2006 NSDUH that asks whether the respondent perceived a need for mental health treatment or counseling at any time in the 12 months prior to the interview but did not receive it.

It is important to note that because the survey covers only the U.S. civilian, noninstitutionalized population, persons who were residing in long-term psychiatric or other institutions at the time of the interview were not included in the NSDUH sample.

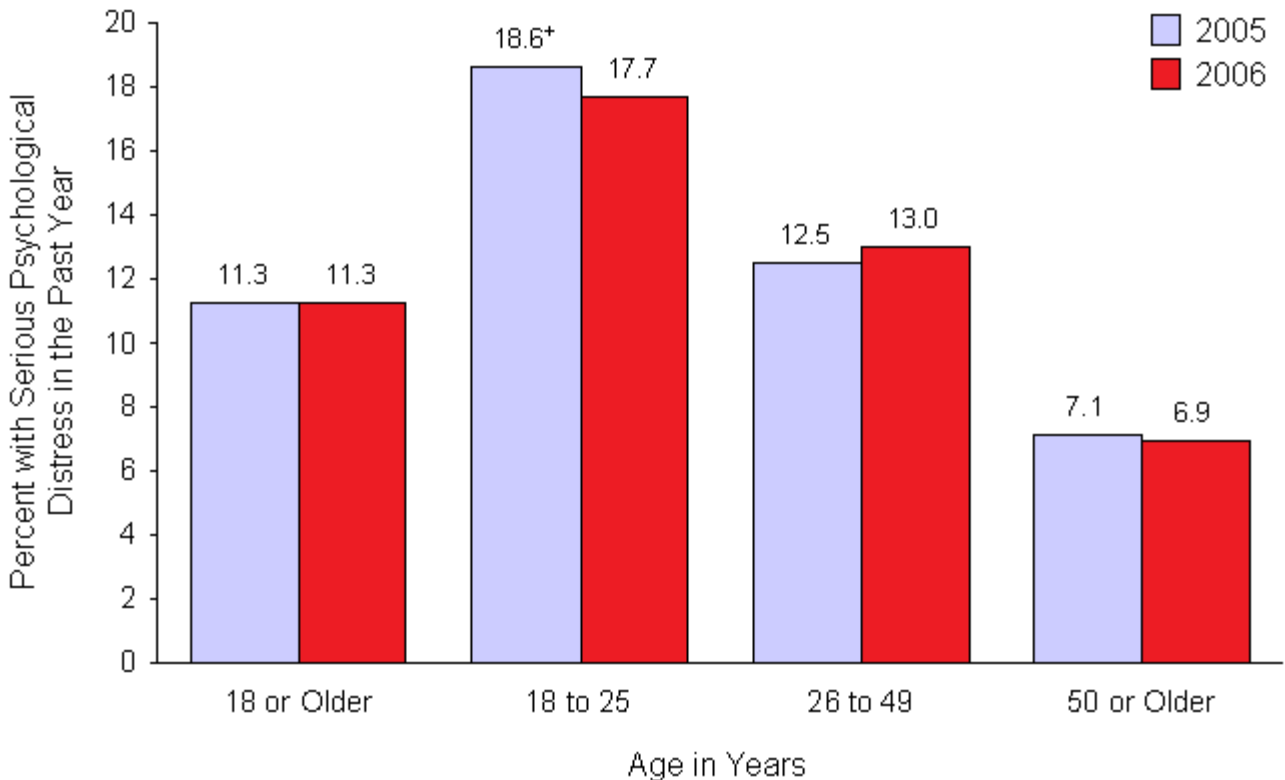
8.1 Adults Aged 18 or Older

Prevalence of Serious Psychological Distress

- In 2006, there were an estimated 24.9 million adults aged 18 or older in the United States with SPD in the past year. This represents 11.3 percent of all adults in this country, a rate equal the rate of SPD in 2005 ([Figure 8.1](#)).

Below is a bar graph. [Click here](#) for the text describing this graph.

Figure 8.1 Rates of Serious Psychological Distress in the Past Year among Adults Aged 18 or Older, by Age: 2005-2006



*Difference between this estimate and the 2006 estimate is statistically significant at the .05 level.

- Rates of SPD in 2006 were highest for adults aged 18 to 25 (17.7 percent) and lowest for adults aged 50 or older (6.9 percent).
- The prevalence of SPD among women aged 18 or older (13.7 percent) was significantly higher than that among men in that age group (8.7 percent).
- In 2006, rates of past year SPD were lowest among Asians at 7.8 percent. Rates for other racial/ethnic groups were 10.5 percent among blacks, 10.8 percent among Hispanics and among Native Hawaiians and Other Pacific Islanders, 11.4 percent among whites, 25.3 percent among persons reporting two or more races, and 25.9 percent among American Indians or Alaska Natives.

Treatment among Adults with Serious Psychological Distress

- Among the 24.9 million adults aged 18 or older with SPD in 2006, 10.9 million (44.0 percent) received treatment for a mental health problem in the past year. Among adults with SPD, 39.0 percent received a prescription medication, 27.2 percent received outpatient treatment, and 3.9 percent received inpatient treatment for a mental health problem in the past year. Respondents could report more than one type of treatment.

Serious Psychological Distress and Substance Use and Dependence or Abuse

- Past year illicit drug use was higher among adults aged 18 or older with SPD (27.2 percent) than among adults without SPD (12.3 percent). Similarly, the rate of past month cigarette use was higher among adults with SPD (44.2 percent) than among adults without SPD (24.5 percent).

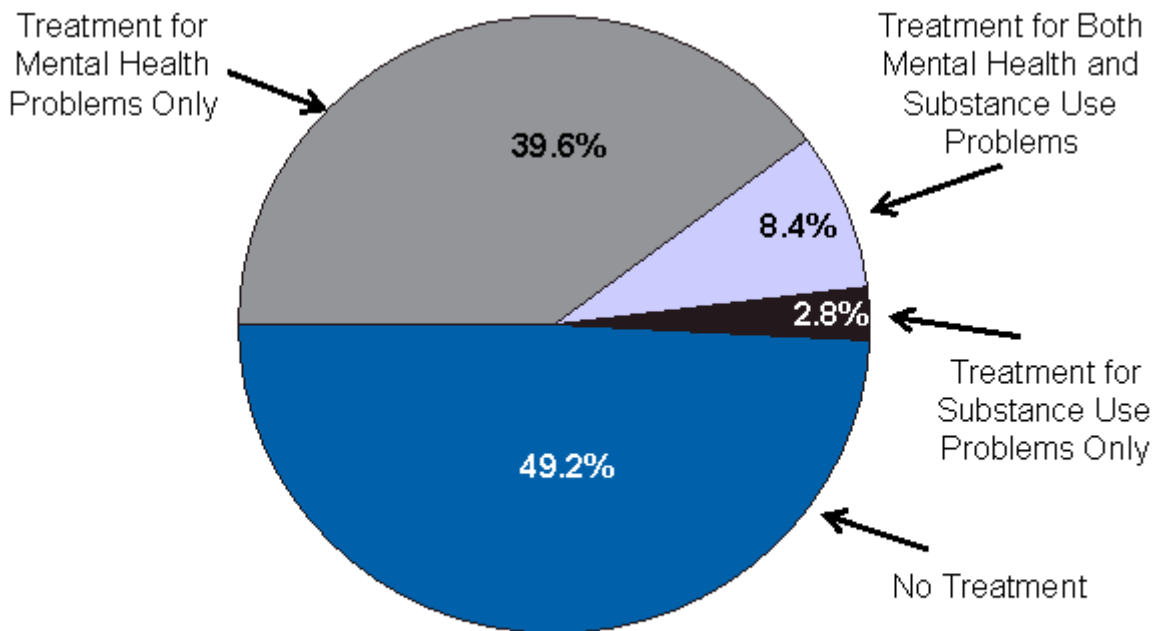
- Among adults aged 18 or older with SPD, the rate of binge alcohol use (drinking five or more drinks on the same occasion on at least 1 day in the past 30 days) was 28.8 percent, higher than the 23.9 percent among adults who did not meet the criteria for SPD. Similarly, the rate of heavy alcohol use (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 each of 5 or more days in the past 30 days) among adults with SPD in the past year was higher (9.4 percent) than the rate reported among adults without SPD in the past year (7.2 percent).
- SPD in the past year was associated with past year substance dependence or abuse in 2006. Among adults aged 18 or older with SPD, 22.3 percent were dependent on or abused illicit drugs or alcohol. The rate among adults without SPD was 7.7 percent.

Treatment among Adults with Co-Occurring Serious Psychological Distress and Substance Use Disorders

- Among the 5.6 million adults aged 18 or older with both SPD and substance dependence or abuse (i.e., a substance use disorder) in 2006, half (50.8 percent) received mental health treatment or substance use treatment at a specialty facility; 8.4 percent received both treatment for mental health problems and specialty substance use treatment, 39.6 percent received only treatment for mental health problems, and 2.8 percent received only specialty substance use treatment ([Figure 8.2](#)).

Below is a pie chart. [Click here](#) for the text describing this graph.

Figure 8.2 Past Year Treatment among Adults Aged 18 or Older with Both Serious Psychological Distress and a Substance Use Disorder: 2006



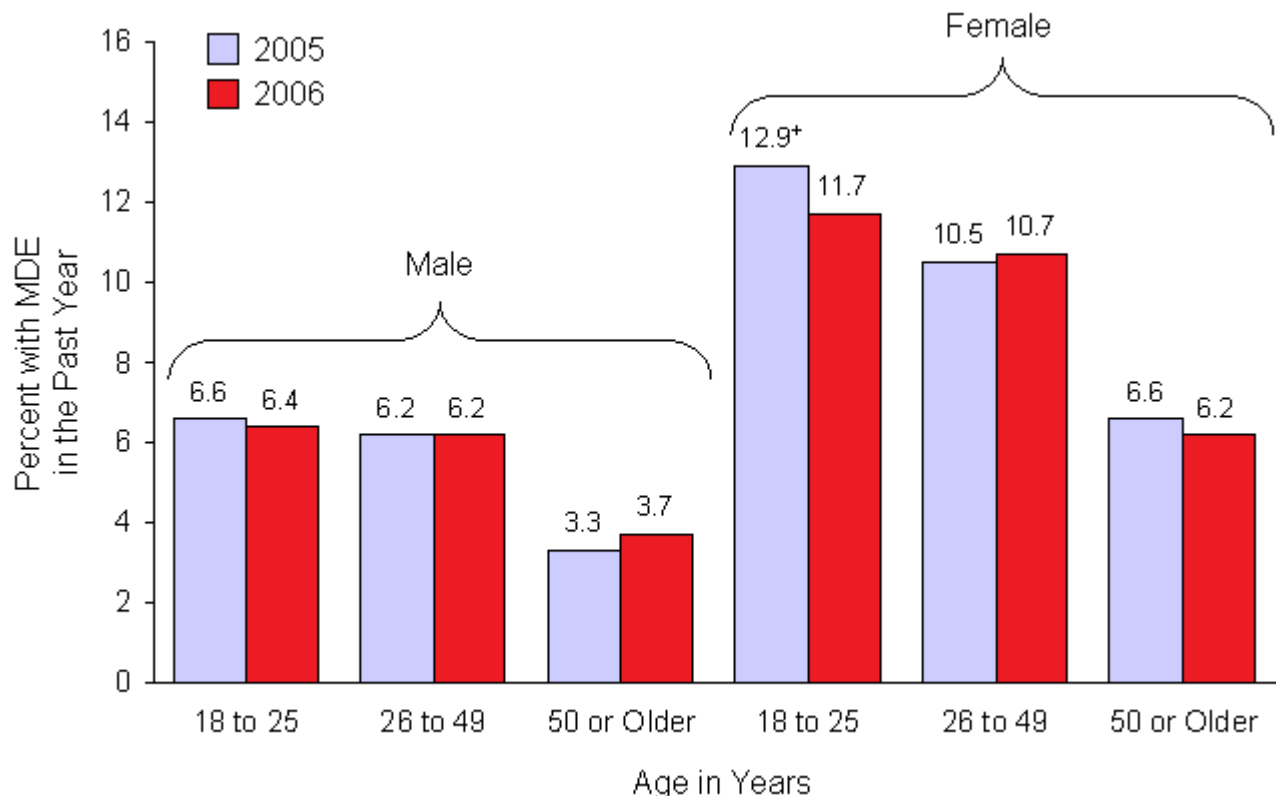
5.6 Million Adults with Co-Occurring SPD and Substance Use Disorder

Prevalence of Major Depressive Episode

- In 2006, 15.8 million adults (7.2 percent of persons aged 18 or older) had at least one MDE in the past year. After a statistically significant decline in the rate of past year MDE between 2004 and 2005 (8.0 and 7.3 percent, respectively), the rate of past year MDE was stable between 2005 and 2006.
- In 2006, an estimated 30.4 million adults had at least one MDE in their lifetime (13.9 percent of persons aged 18 or older). The rate was 15.0 percent among persons aged 18 to 25, 15.9 percent among persons aged 26 to 49, and 11.1 percent among persons aged 50 or older.
- The past year prevalence of MDE in 2006 was lowest for those aged 50 or older (5.1 percent). The rates were similar among persons aged 18 to 25 (9.0 percent) and those aged 26 to 49 (8.5 percent).
- The past year prevalence of MDE was higher among adult females than among adult males (9.0 vs. 5.3 percent). Among women aged 18 to 25, the past year MDE rate decreased from 12.9 percent in 2005 to 11.7 percent in 2006 ([Figure 8.3](#)).

Below is a bar graph. [Click here](#) for the text describing this graph.

Figure 8.3 Major Depressive Episode in the Past Year among Adults Aged 18 or Older, by Age and Gender: 2005-2006



*Difference between this estimate and the 2006 estimate is statistically significant at the .05 level.

- Among adults aged 18 or older, past year prevalence of MDE varied by race/ethnicity in 2006. The rate of MDE was lowest among Asians (3.0 percent), while rates for other groups were 14.3 percent among persons reporting two or more races, 12.1 percent among American Indians or Alaska Natives, 7.8 percent among whites, 6.3 percent

among blacks, 5.8 percent among Native Hawaiians or Other Pacific Islanders, and 5.4 percent among Hispanics.

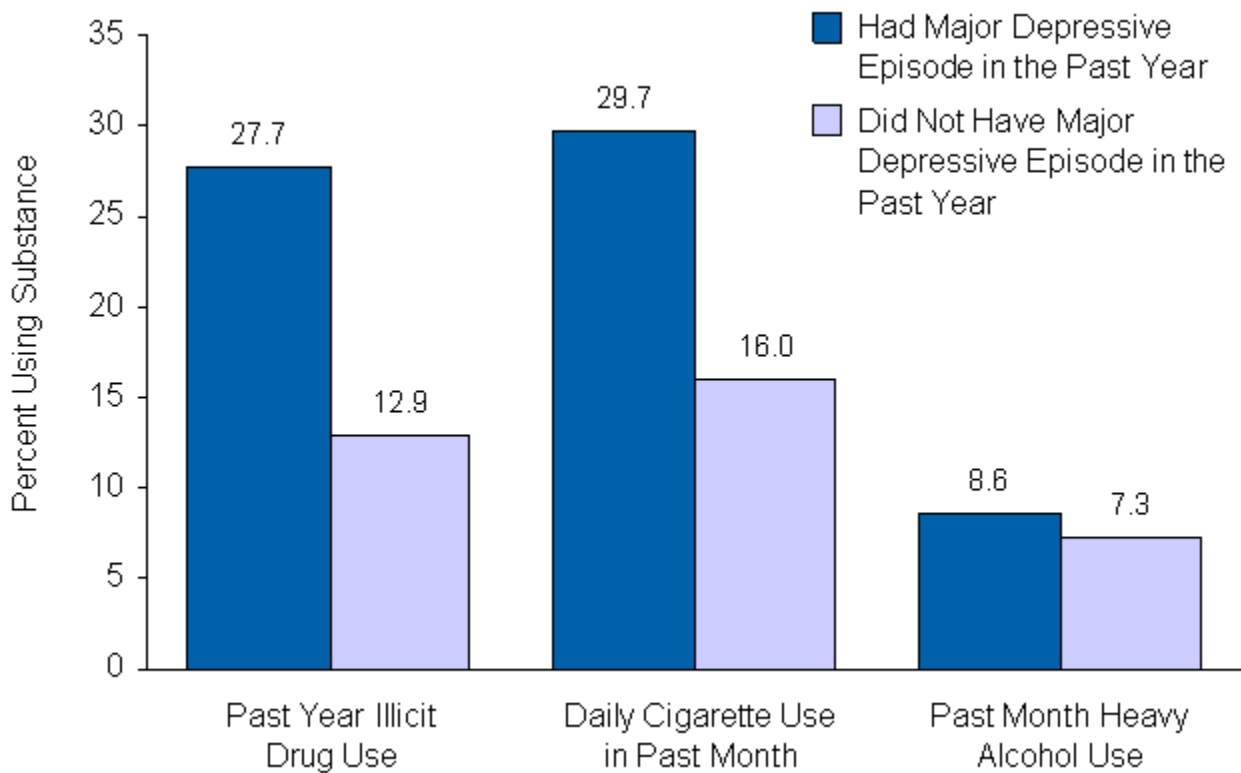
- Among adults aged 18 or older, past year prevalence of MDE was higher among unemployed persons (11.6 percent) than among persons employed full time (6.6 percent), persons employed part time (7.6 percent), and persons not in the labor force (7.8 percent).

Major Depressive Episode and Substance Use and Dependence or Abuse

- In 2006, adults aged 18 or older with MDE in the past year were more likely than those without MDE to have used an illicit drug in the past year (27.7 vs. 12.9 percent) ([Figure 8.4](#)). A similar pattern was observed for specific types of past year illicit drug use, such as marijuana, cocaine, hallucinogens, inhalants, and the nonmedical use of prescription-type psychotherapeutics.

Below is a bar graph. [Click here](#) for the text describing this graph.

Figure 8.4 Substance Use among Adults Aged 18 or Older, by Major Depressive Episode in the Past Year: 2006



- Past month heavy alcohol use also was associated with MDE in the past year in 2006. Among adults aged 18 or older with MDE in the past year, 8.6 percent were heavy alcohol users, higher than the 7.3 percent of adults without MDE in the past year. Similarly, among adults with MDE, the rate of daily cigarette use in the past month was 29.7 percent, while the rate was 16.0 percent among adults without MDE.
- Having MDE in the past year was associated with past year substance dependence or abuse. Among adults aged 18 or older who had MDE in 2006, 24.3 percent were

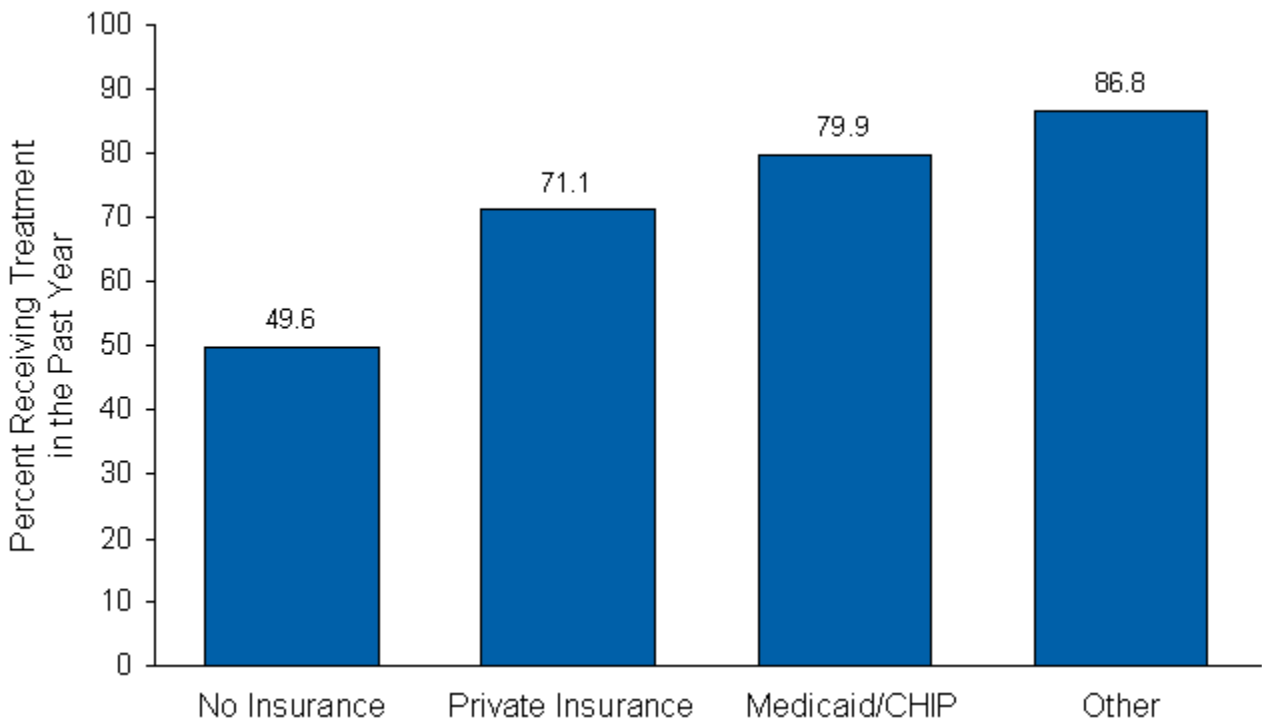
dependent on or abused alcohol or illicit drugs, while among adults without MDE only 8.1 percent were dependent on or abused alcohol or illicit drugs. Adults with MDE were more likely than those without MDE to be dependent on or abuse illicit drugs (9.4 vs. 2.1 percent) and alcohol (19.3 vs. 7.0 percent).

Treatment for Major Depressive Episode

- Among adults aged 18 or older who had MDE in the past year, 69.1 percent received treatment (i.e., saw or talked to a medical doctor or other professional or used prescription medication) for depression in the same time period. The treatment rate in 2006 was higher than in 2005 (65.6 percent), particularly for persons 50 years or older (85.4 vs. 78.2 percent).
- In 2006, women who had MDE in the past year were more likely than men to receive treatment for depression in the past year (73.7 vs. 60.8 percent).
- Among adults aged 18 or older with MDE in the past year, approximately half of those with no insurance (49.6 percent) received treatment for depression in the past year compared with higher rates for those with insurance: 71.1 percent of adults with private insurance, 79.9 percent of adults covered by Medicaid or CHIP, and 86.8 percent of adults with other health insurance (including Medicare, CHAMPUS, TRICARE, CHAMPVA, VA, and other sources of health care or insurance) ([Figure 8.5](#)).

Below is a bar graph. [Click here](#) for the text describing this graph.

Figure 8.5 Past Year Treatment for Major Depressive Episode (MDE) among Adults Aged 18 or Older with MDE in the Past Year, by Insurance Status: 2006

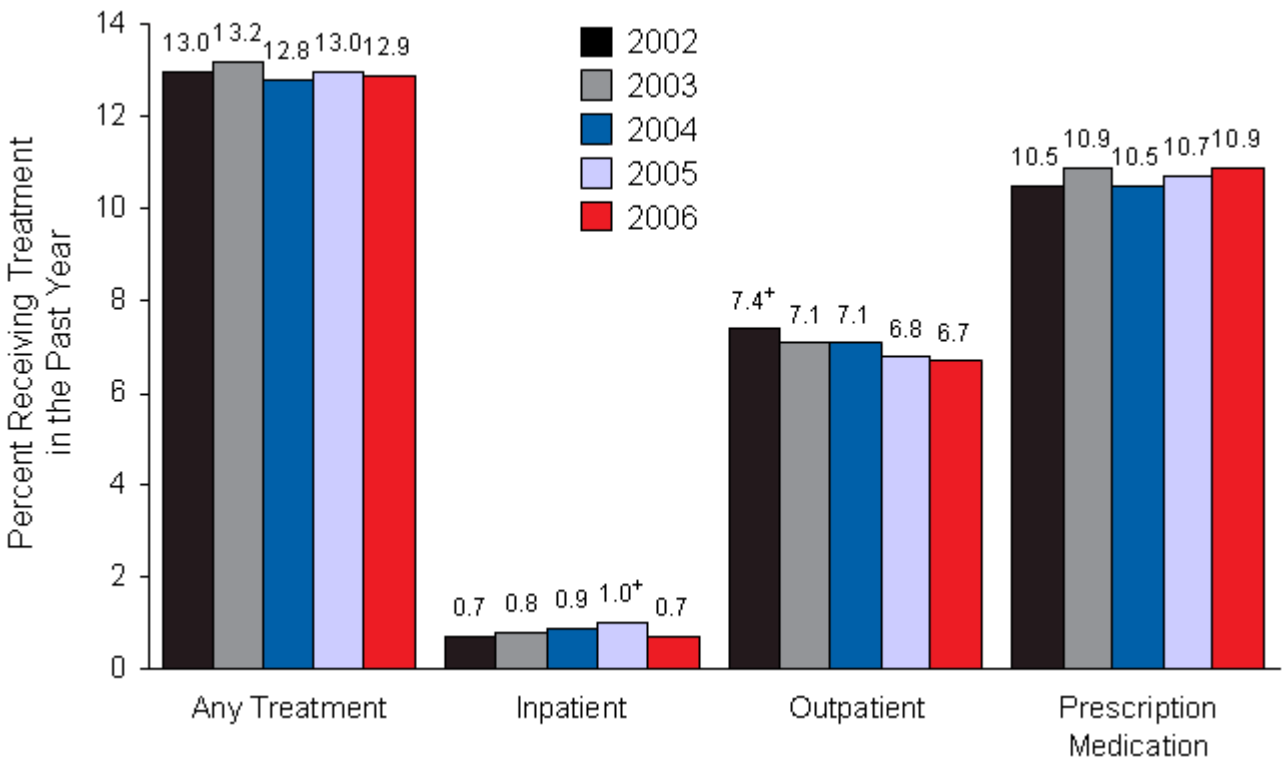


Treatment for Mental Health Problems and Unmet Treatment Need among Adults

- In 2006, 28.3 million adults (12.9 percent of the population 18 years or older) received treatment for mental health problems during the past 12 months ([Figure 8.6](#)). This is similar to the rate in 2005 (13.0 percent).

Below is a bar graph. [Click here](#) for the text describing this graph.

Figure 8.6 Past Year Treatment for Mental Health Problems among Adults Aged 18 or Older, by Type of Treatment: 2002-2006



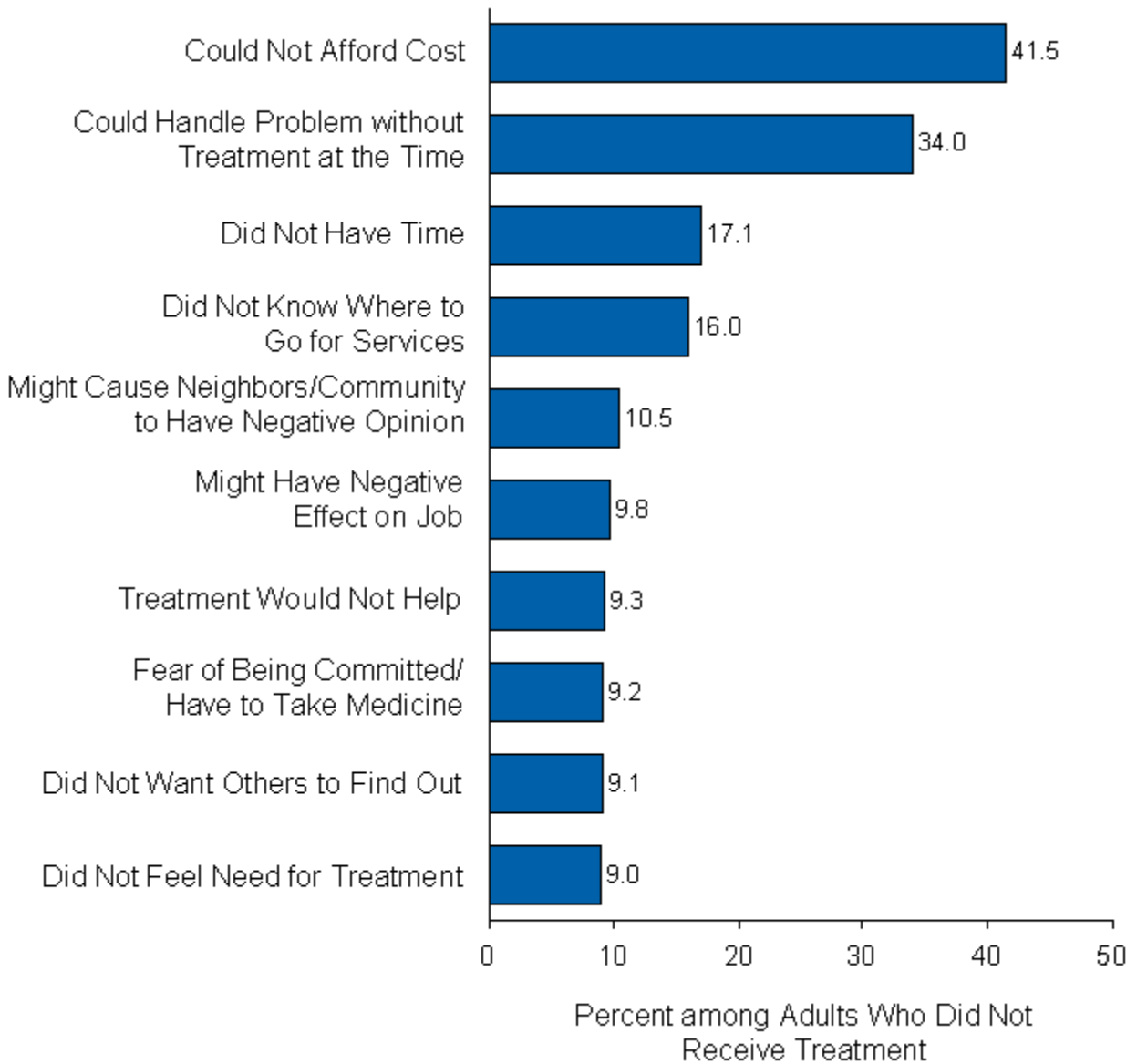
[†]Difference between this estimate and the 2006 estimate is statistically significant at the .05 level.

- In 2006, the treatment type most often reported by adults aged 18 or older was prescription medication (10.9 percent), followed by outpatient treatment (6.7 percent). Rates of prescription medication and outpatient treatment in 2006 were similar to the rates in 2005 (10.7 and 6.8 percent, respectively). Respondents could report more than one type of treatment.
- About 1.6 million adults (0.7 percent of the population 18 years or older) received inpatient care for mental health problems during the past year. This was significantly lower than the rate of inpatient treatment in 2005 (1.0 percent, or 2.1 million adults). Declines were particularly prominent among women (1.1 percent in 2005 vs. 0.7 percent in 2006), persons living in the South (1.3 vs. 0.7 percent), persons with a family income of less than \$20,000 (2.7 vs. 1.9 percent), and persons receiving government assistance (3.3 vs. 2.2 percent).

- Rates of treatment for mental health problems varied by age for adults aged 18 or older: 10.8 percent for adults aged 18 to 25, 14.0 percent for adults aged 26 to 49, and 12.4 percent for adults aged 50 or older.
- Men were less likely than women to receive outpatient treatment (4.8 vs. 8.4 percent) and prescription medication (7.2 vs. 14.2 percent) for mental health problems in the past year. There was no significant gender difference in inpatient treatment (0.8 vs. 0.7 percent).
- Among racial/ethnic groups, the rates of treatment for adults aged 18 or older in 2006 were 21.6 percent for persons reporting two or more races, 15.2 percent for whites, 11.9 percent for American Indians or Alaska Natives, 7.4 percent for blacks, 7.0 percent for Native Hawaiians or Other Pacific Islanders, 7.0 percent for Hispanics, and 5.6 percent for Asians.
- In 2006, there were 10.5 million adults aged 18 or older (4.8 percent) who reported an unmet need for treatment or counseling for mental health problems in the past year. This included 4.8 million adults who did not receive mental health treatment and 5.6 million adults who did receive some type of treatment or counseling for a mental health problem in the past year. That is, about 20 percent of the 23.8 million adults that received treatment for a mental health problem in the past 12 months reported an unmet need. (Unmet need among adults who received treatment may reflect a delay in treatment or a perception of insufficient treatment.)
- Among the 4.8 million adults who reported an unmet need for treatment or counseling for mental health problems and did not receive treatment in the past year, several barriers to treatment were reported. These included an inability to afford treatment (41.5 percent), believing at the time that the problem could be handled without treatment (34.0 percent), not having the time to go for treatment (17.1 percent), and not knowing where to go for services (16.0 percent) ([Figure 8.7](#)).

Below is a bar graph. [Click here](#) for the text describing this graph.

Figure 8.7 Reasons for Not Receiving Mental Health Treatment in the Past Year among Adults Aged 18 or Older with an Unmet Need for Treatment Who Did Not Receive Treatment: 2006



Appendix B

B.4.4 Serious Psychological Distress

For this 2006 NSDUH report, serious psychological distress (SPD) was measured using the K6 screening instrument for nonspecific psychological distress (Kessler et al., 2003a). In NSDUH reports prior to 2004, the K6 scale was used to measure serious mental illness (SMI). For a discussion of the reasons that the K6 was used to measure SPD instead of SMI for the 2004 and later NSDUH reports, as well as details on a methodological study of the measurement of SMI, see Section B.4.4 of Appendix B in the 2004 NSDUH national results report (OAS, 2005b).

The K6 consists of six questions that ask respondents how frequently they experienced symptoms of psychological distress during the 1 month in the past year when they were at their worst emotionally. The use of this scale for SPD (or SMI prior to 2004) was based on a methodological study designed to evaluate several screening scales for measuring SMI in

NSDUH. These scales evaluated in this methodological study consisted of a truncated version of the World Health Organization (WHO) Composite International Diagnostic Interview Short Form (CIDI-SF) scale (Kessler, Andrews, Mroczek, Üstün, & Wittchen, 1998), the K10/K6 scale of nonspecific psychological distress (Kessler et al., 2003a), and a truncated version of the WHO Disability Assessment Schedule (WHO-DAS) (Rehm et al., 1999). Overall, the K6 scale exhibited sound psychometric properties.

The six questions comprising the K6 scale are given as follows:

DSNERV1

Most people have periods when they are not at their best emotionally. Think of 1 month in the past 12 months when you were the most depressed, anxious, or emotionally stressed. If there was no month like this, think of a typical month.

During that month, how often did you feel nervous?

- 1 All of the time
- 2 Most of the time
- 3 Some of the time
- 4 A little of the time
- 5 None of the time

DK/REF

Response categories are the same for the following questions:

DSHOPE

During that same month when you were at your worst emotionally...how often did you feel hopeless?

DSFIDG

During that same month when you were at your worst emotionally...how often did you feel restless or fidgety?

DSNOCHR

During that same month when you were at your worst emotionally...how often did you feel so sad or depressed that nothing could cheer you up?

DSEFFORT

During that same month when you were at your worst emotionally...how often did you feel that everything was an effort?

DSDOWN

During that same month when you were at your worst emotionally...how often did you feel down on yourself, no good, or worthless?

To create a score, the six items (DSNERV1, DSHOPE, DSFIDG, DSNOCHR, DSEFFORT, and DSDOWN) on the K6 scale were coded from 0 to 4 so that "all of the time" was coded 4, "most of the time" 3, "some of the time" 2, "a little of the time" 1, and "none of the time" 0, with "don't know" and "refuse" also coded 0. Summing across the transformed responses resulted in a score with a range from 0 to 24. Respondents with a total score of 13 or greater were classified as having past year SPD (or SMI prior to 2004). This cut point was chosen to equalize false positives and false negatives.

In the 2003 NSDUH, the mental health module (i.e., the serious mental illness module) contained a truncated version of the CIDI-SF scale, the K10/K6 scale, and a truncated version of the WHO-DAS scale (in this order) to mirror the questions used by Kessler et al. (2003a). Thus, the module contained a broad array of questions from the CIDI-SF about mental health (i.e., panic attacks, depression, mania, phobias, generalized anxiety, posttraumatic stress disorder, and use of mental health services) that preceded the K6 items, and the four extra questions in the K10 scale were interspersed among the items in the K6 scale. In the 2004 NSDUH, the sample of respondents 18 or older was split evenly between the "long form" module, which included all items in the mental health module used in the 2003 NSDUH (sample A), and a "short form" module consisting only of the K6 items (sample B). The "short form" version was introduced to reduce interview time, removing questions that were not needed for estimation of SPD, and to provide space for a new module on depression. Inclusion of the "long form" version in half of the sample was to measure the impact on the K6 responses of changing the context of the K6.

Results from the 2004 NSDUH showed large differences between the two samples in both the K6 total score and the proportion of respondents with a K6 total score of 13 or greater. These differences were most pronounced in the 18 to 25 age group. These contextual differences suggest that the K6 scale is sensitive to item ordering in relation to other questions in the module; that is, respondents appear to respond to the K6 items differently depending on whether the scale is preceded by a broad array of other mental health questions.

Given the difference in K6 reporting between the A (long form) and B (short form) samples, the 2004 SPD estimates presented in the 2004 detailed tables and 2004 NSDUH national results report are based only on the A sample, which used a mental health module identical to that used in 2002 and 2003. In the 2005 and 2006 NSDUHs, only the "short form" SPD module was used; therefore, the 2004 SPD estimates presented in the 2005 and 2006 detailed tables and in the corresponding NSDUH national results reports are based on the B sample, so that the estimates are comparable. Note that the 2004 SPD estimates reported in the 2004 detailed tables (OAS, 2005a) are different from the 2004 SPD estimates reported in the 2005 and 2006 detailed tables (OAS, 2006a, 2007a), and SPD estimates reported in the 2005 and 2006 detailed tables are not comparable with estimates reported in previous years.

B.4.5 Major Depressive Episode

Beginning in 2004, modules related to major depressive episode (MDE) derived from DSM-IV (APA, 1994) criteria for major depression were included in the questionnaire. These questions permit estimates to be calculated of the lifetime and past year prevalence of MDE and treatment for MDE. Separate modules were administered to adults aged 18 or older and adolescents aged 12 to 17. The adult questions were adapted from the depression section of the National Comorbidity Survey–Replication (NCS-R; Harvard School of Medicine, 2005), and the adolescent questions were adapted from the depression section of the National Comorbidity Survey–Adolescent (NCS-A; Harvard School of Medicine, 2005). To make the modules developmentally appropriate for adolescents, there are minor wording differences in a few questions between the adult and adolescent modules. Revisions to the questions in both modules were made primarily to reduce its length and to modify the NCS questions, which are interviewer-administered, to the ACASI format used in NSDUH. In addition, some revisions,

based on cognitive testing, were made to improve comprehension. Furthermore, even though titles similar to those used in the NCS were used for the NSDUH modules, the results of these items may not be directly comparable. This is mainly due to differing modes of administration in each survey (ACASI in NSDUH vs. computer-assisted personal interviewing [CAPI] in NCS), revisions to wording necessary to maintain the logical processes of the ACASI environment, and possible context effects resulting from deleting questions not explicitly pertinent to severe depression.

In 2004, a split-sample design was implemented where adults in sample B received the depression module while adult respondents in sample A did not. All adolescents were administered the adolescent depression module. In 2005 and 2006, all adult and adolescent respondents were administered their respective depression modules.

According to DSM-IV, a person is defined as having had MDE in his or her lifetime if he or she has had at least five or more of the following nine symptoms nearly every day in the same 2-week period, where at least one of the symptoms is a depressed mood or loss of interest or pleasure in daily activities (APA, 1994): (1) depressed mood most of the day; (2) markedly diminished interest or pleasure in all or almost all activities most of the day; (3) significant weight loss when not sick or dieting, or weight gain when not pregnant or growing, or decrease or increase in appetite; (4) insomnia or hypersomnia; (5) psychomotor agitation or retardation; (6) fatigue or loss of energy; (7) feelings of worthlessness; (8) diminished ability to think or concentrate or indecisiveness; and (9) recurrent thoughts of death or suicidal ideation. In addition to lifetime MDE, NSDUH measures past year MDE. Respondents who have had MDE in their lifetime are asked if, during the past 12 months, they had a period of depression lasting 2 weeks or longer while also having some of the other symptoms mentioned.

NSDUH measures the nine attributes associated with MDE as defined in DSM-IV with the following questions. Note that the questions shown are taken from the adult depression module. A few of the questions in the adolescent module were modified slightly to use wording more appropriate for youths. It should be noted that no exclusions were made for MDE caused by medical illness, bereavement, or substance use disorders.

1. Depressed mood most of the day

The following questions refer to the worst or most recent period of time when the respondent experienced any or all of the following: sadness, discouragement, or lack of interest in most things.

During that [worst/most recent] period of time...

- a. ... did you feel sad, empty, or depressed **most of the day nearly every day**?
- b. ... did you feel discouraged about how things were going in your life **most of the day nearly every day**?

2. Markedly diminished interest or pleasure in all or almost all activities most of the day

- a. ... did you lose interest in almost all things like work and hobbies and things you like to do for fun?
- b. ... did you lose the ability to take pleasure in having good things happen to you, like winning something or being praised or complimented?

3. Weight

In answering the next questions, think about the [worse/most recent] period of time.

- a. Did you have a much smaller appetite than usual nearly every day during that time?
- b. Did you have a much **larger** appetite than usual nearly every day?
- c. Did you gain weight without trying to during that [worst/most recent] period of time?
 - a. because you were growing?
 - b. because you were pregnant?
 - c. How many pounds did you gain?
- d. Did you lose weight without trying to?
 - a. because you were sick or on a diet?
 - b. How many pounds did you lose?

4. Insomnia or hypersomnia

- a. Did you have a lot more trouble than usual falling asleep, staying asleep, or waking too early nearly every night during that [worst/most recent] period of time?
- b. During that [worst/most recent] period of time, did you sleep a lot more than usual nearly every night?

5. Psychomotor agitation or retardation

- a. Did you talk or move more slowly than is normal for you nearly every day?
- b. Were you so restless or jittery nearly every day that you paced up and down or couldn't sit still?

6. Fatigue or loss of energy

- a. During that [worst/most recent] period of time, did you feel tired or low in energy nearly every day even when you had not been working very hard?

7. Feelings of worthlessness

- a. Did you feel that you were not as good as other people nearly every day?
- b. Did you feel totally worthless nearly every day?

8. Diminished ability to think or concentrate or indecisiveness

- a. During that [worst/most recent] time period, did your thoughts come much more slowly than usual or seem confused nearly every day?
- b. Did you have a lot more trouble concentrating than usual nearly every day?
- c. Were you unable to make decisions about things you ordinarily have no trouble deciding about?

9. Recurrent thoughts of death or recurrent suicidal ideation

- a. Did you often think about death, either your own, someone else's, or death in general?
- b. During that period, did you ever think it would be better if you were dead?
- c. Did you think about committing suicide?