

MENTAL HEALTH SERVICE USE AMONG ADULTS NOT CLASSIFIED AS HAVING ANY MENTAL ILLNESS IN THE NATIONAL SURVEY ON DRUG USE AND HEALTH

Substance Abuse and Mental Health Services Administration
Center for Behavioral Health Statistics and Quality
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RTI Authors:

Cristie Glasheen
Greta Kilmer Miller
Erica Hirsch
Jessica Roycroft
Valerie Forman-Hoffman
Michael A. Pemberton

RTI Project Director:

David Hunter

SAMHSA Project Officer:

Peter Tice

SAMHSA Authors:

Jonaki Bose
Sarrah Hedden

For questions about this report, please e-mail Peter.Tice@samhsa.hhs.gov.

Prepared for Substance Abuse and Mental Health Services Administration,
Rockville, Maryland

Prepared by RTI International, Research Triangle Park, North Carolina

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Table of Contents

Section	Page
Executive Summary	1
1. Introduction.....	1
2. Methods.....	3
2.1 Data	3
2.1.1 National Survey on Drug Use and Health.....	3
2.1.2 Mental Health Surveillance Study	3
2.2 Measures	4
2.2.1 Past Year Mental Illness	4
2.2.2 Mental Health Service Use	5
2.2.3 Variables Associated with Mental Health Service Use	5
2.3 Analyses.....	8
3. Results.....	11
3.1 Characteristics of Adult Service Users in NSDUH	11
3.1.1 Estimates of Mental Health Service Use by AMI.....	11
3.1.2 Demographic and Socioeconomic Characteristics.....	11
3.1.3 Mental Health Characteristics.....	15
3.1.4 Substance Use Characteristics	18
3.1.5 Cumulative Indicators of Possible Service Need in NSDUH.....	23
3.2 Characteristics of Mental Health Service Use in NSDUH	24
3.3 Characteristics of Adult Service Users in MHSS by SCID Mental Illness	28
3.3.1 Demographic Characteristics	28
3.3.2 Mental Health Characteristics.....	31
3.3.3 Substance Use Characteristics	33
3.3.4 Cumulative Indicators of Possible Service Need.....	35
4. Discussion.....	37
References.....	41

Appendix

A: Comparison of Estimates of Mental Health Service Use by NSDUH AMI and SCID Mental Illness	45
B: Estimates of Service Use and Mental Illness	47
C: Characteristics of Adults Using Mental Health Services.....	51
D: Characteristics of Services Used.....	67

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List of Tables

Table	Page
1. Demographic Characteristics of Adults Aged 18 or Older, by Any Mental Illness (AMI) and Mental Health Service Use Status: Percentages and Standard Errors: 2008-2012 NSDUH	12
2. Mental Health Characteristics of Adults Aged 18 or Older, by Past Year Any Mental Illness (AMI) and Mental Health Service Use Status: Percentages and Standard Errors, 2008-2012 NSDUH	16
3. Alcohol Use Characteristics of Adults Aged 18 or Older, by Any Mental Illness (AMI) and Mental Health Service Use Status: Percentages and Standard Errors, 2008-2012 NSDUH	20
4. Drug Use Characteristics of Adults Aged 18 or Older, by Any Mental Illness (AMI) and Mental Health Service Use Status: Percentages and Standard Errors, 2008-2012 NSDUH.....	22
5. Characteristics of Past Year Mental Health Service Use, by Past Year Any Mental Illness (AMI) among Adults Aged 18 or Older Who Used Mental Health Services: Percentages and Standard Errors, 2008-2012 NSDUH	24
6. Demographic Characteristics of Adults Aged 18 or Older, by SCID Mental Illness (MI) and Mental Health Service Use Status: Percentages and Standard Errors, 2008-2012 MHSS	29
7. Mental Health Characteristics of Adults Aged 18 or Older, by SCID Mental Illness (MI) and Mental Health Service Use Status: Percentages (or Average) and Standard Errors, 2008-2012 MHSS	31
8. Substance Use Characteristics of Adults Aged 18 or Older, by Past Year SCID Mental Illness (MI) and Mental Health Service Use Status: Percentages and Standard Errors, 2008-2012 MHSS	34
B.1 Past Year Mental Health Service Use among Adults Aged 18 or Older, by Any Mental Illness (AMI) Status: Percentages, Standard Errors of Percentages, Numbers, and Weighted Estimates (in Thousands), 2008-2012 NSDUH	49
B.2 Past Year Mental Health Service Use among Adults Aged 18 or Older, by Past Year SCID/Any Mental Illness (AMI) Status: Percentages, Standard Errors of Percentages, and Numbers, 2008-2012 MHSS.....	50
C.1 Demographic, Mental Health, and Substance Use Characteristics of Adults Aged 18 or Older, by Any Mental Illness (AMI) and Mental Health Service Use Status: Percentages and Standard Errors, 2008-2012 NSDUH	53
C.2 Demographic, Mental Health, and Substance Use Characteristics of Adults Aged 18 or Older, by SCID Mental Illness (MI) and Mental Health Service Use Status: Percentages and Standard Errors, 2008-2012 MHSS	60

List of Tables (continued)

Table	Page
D.1 Types of Past Year Mental Health Service Use, by Past Year Any Mental Illness (AMI) among Adults Aged 18 or Older Who Used Mental Health Services: Percentages and Standard Errors, 2008-2012 NSDUH	69
D.2 Frequency of Past Year Mental Health Service Use, by Past Year Any Mental Illness (AMI) among Adults Aged 18 or Older Who Used Mental Health Services: Percentages and Standard Errors, 2008-2012 NSDUH	71

List of Figures

Figure	Page
1. Past Year Any Mental Illness (AMI) and Past Year Mental Health Service Use among Adults Aged 18 or Older: 2008-2012 NSDUH.....	11
2. Socioeconomic Characteristics of Adults Aged 18 or Older, by Past Year Any Mental Illness (AMI) and Past Year Mental Health Service Use: 2008-2012 NSDUH.....	14
3. Health Insurance Characteristics of Adults Aged 18 or Older, by Past Year Any Mental Illness (AMI) and Past Year Mental Health Service Use: 2008-2012 NSDUH.....	15
4. Past Year K6 Psychological Distress and WHODAS Functional Impairment Levels among Adults Aged 18 or Older without Any Mental Illness, by Past Year Mental Health Service Use: 2008-2012 NSDUH	18
5. Number of Substances Used in the Past Year among Adults Aged 18 or Older, by Past Year Any Mental Illness (AMI) and Past Year Mental Health Service Use: 2008-2012 NSDUH	19
6. Past Year Substance Use Disorder Criteria among Adults Aged 18 or Older, by Past Year Any Mental Illness (AMI) and Past Year Mental Health Service Use: 2008-2012 NSDUH	21
7. Estimates of Number of Indicators of Possible Service Need among Adults Aged 18 or Older, by Past Year Any Mental Illness (AMI) and Past Year Mental Health Service Use: 2008-2012 NSDUH	23
8. Types of Mental Health Services Used by Adults Aged 18 or Older Who Had Past Year Mental Health Service Use, by Past Year Any Mental Illness (AMI) Status: 2008-2012 NSDUH	26
9. Frequency of Mental Health Service Use among Adults Aged 18 or Older Who Had Past Year Mental Health Service Use, by Past Year Any Mental Illness (AMI) Status: 2008-2012 NSDUH	27
10. Frequency of Perceived Unmet Need for Mental Health Services among Adults Aged 18 or Older Who Used Services, by Past Year Any Mental Illness (AMI) Status and Past Year Service Use: 2008-2012 NSDUH	27
11. Past Year Psychological Distress and Functional Impairment among Adults Aged 18 or Older, by Past Year SCID Mental Illness and Mental Health Service Use: 2008-2012 MHSS	32
12. Number of Substances Used in the Past Year among Adults Aged 18 or Older, by Past Year SCID Mental Illness and Mental Health Service Use: 2008-2012 MHSS	33
13. Estimates of Number of Indicators of Possible Service Need among Adults Aged 18 or Older, by Past Year SCID Mental Illness and Mental Health Service Use: 2008-2012 MHSS	35

List of Figures (continued)

Figure	Page
14. Estimates of SCID Mental Illness and Indicators of Possible Service Need among Adults Aged 18 or Older with No Past Year Any Mental Illness Who Used Mental Health Services in the Past Year: 2008-2012 MHSS	36
A.1 Estimates of Past Year NSDUH Any Mental Illness (AMI) and SCID Mental Illness among Adults Aged 18 or Older with Past Year Mental Health Service Use: 2008-2012 MHSS	46

Executive Summary

Epidemiological surveys of mental illness in the population are used by policy makers and mental health treatment and service providers to evaluate disease burden and to plan for treatment and service needs. However, these surveys consistently demonstrate that a proportion of the population reporting mental health treatment and service use are not classified in the survey as having mental illness.

This report examines the characteristics of adults aged 18 or older who did not meet criteria for any mental illness (AMI) in the past year but used mental health services in the past year using data from the 2008-2012 National Surveys on Drug Use and Health (NSDUHs). Additional analyses examined the consistency of these results with data using diagnostic assessment of mental illness in the 2008-2012 Mental Health Surveillance Study (MHSS), which used the Structured Clinical Interview for DSM-IV-TR Axis I Disorders (SCID-I) (First, Spitzer, Gibbon, & Williams, 2002) to assess past year mental illness.

Estimates of Past Year Mental Health Service Use

- From 2008 to 2012, about 18.1 percent (41.5 million) of adults in the United States met criteria for NSDUH-measured AMI in the past year.
- An annual average of 13.8 percent (31.6 million) of adults reported using mental health services in the past year.
- An estimated 7.4 percent (17 million) of adults had AMI and used mental health services in the past year.
- About 6.4 percent (14.6 million) of adults did not have AMI but used mental health services in the past year, which corresponds to 46.1 percent of adults who used mental health services.
- These findings are consistent with other studies wherein almost half of adults who used mental health services in the past year did not meet criteria for mental illness.

Characteristics of Adults Using Mental Health Services

Demographic and Socioeconomic Characteristics

- Adults with no past year AMI who used mental health services differed by most demographic characteristics (e.g., age, race/ethnicity, marital status) compared with those with no AMI and no service use and those with AMI and service use.
- In general, adults with no AMI who used mental health services in the past year had a higher socioeconomic status than adults with no AMI and no service use and those with AMI and service use. For example, adults with no AMI who used mental health services were more likely to have earned a college degree than adults with no AMI and no service use and adults with AMI and service use (35.5 percent vs. 28.9 percent and 29.1 percent, respectively) and were less likely to live below the federal poverty level (11.1 percent vs. 12.1 percent and 18.9 percent, respectively).

- Adults with no past year AMI who used mental health services were more likely to have health insurance than those with no AMI and no service use and those with AMI and service use (92.0 percent vs. 84.0 percent and 86.7 percent, respectively).

Mental Health Characteristics

- Adults with no past year AMI who used mental health services in the past year were more likely than those with no AMI and no service use to have a history of depression or anxiety and report higher levels of past year psychological distress and functional impairment.
- Adults with no past year AMI who used mental health services in the past year were 12 times more likely to report that at some point in their life a doctor had told them they had depression than those with no AMI and no service use (44.0 percent vs. 3.7 percent; prevalence ratio test: 12.0, 95 percent confidence interval (CI) = 11.44-12.65).
- Adults with no AMI who used mental health services in the past year were more likely to have past year psychological distress compared with those with no AMI and no service use in the past year (90.6 percent vs. 70.3 percent).
- Adults with no AMI who used mental health services in the past year were more likely to have had past year functional impairment than those with no AMI and no service use (73.5 percent vs. 42.0 percent).
- The rate of lifetime doctor-diagnosed anxiety disorders was 14 times greater among those with no AMI who used mental health services compared with those with no AMI and no service use (32.8 percent vs. 2.3 percent; prevalence ratio test: 14.2, 95 percent CI = 13.30-15.17).

Substance Use Characteristics

- Regardless of AMI status, past year alcohol use and other substance use were more likely among adults with past year mental health service use compared with those with no service use.
- About 23.5 percent of adults with no AMI who used mental health services in the past year had not used any alcohol or illicit drugs in the past year compared with 29.1 percent of adults with no AMI and no service use and 25.5 percent of adults with AMI and service use.
- Past year alcohol use was more common among adults with no AMI who used mental health services in the past year (75.1 percent) compared with adults with no AMI and no service use and those with AMI and service use (70.0 percent and 71.5 percent, respectively).
- Adults with no AMI who used mental health services in the past year were more likely to have an alcohol use disorder than those with no AMI and no service use (9.0 percent vs. 5.4 percent) but were less likely to have an alcohol use disorder than those with AMI and service use (15.2 percent).
- Past year drug use was more common among adults with no AMI who used mental health services in the past year compared with those with no AMI and no service use (17.5 percent vs. 12.1 percent). However, adults with no AMI who used mental health

services reported fewer days of illicit drug use than those with no AMI and no service use.

Cumulative Indicators of Possible Service Need

- Because people may use mental health services for a variety of reasons and may have more than one reason for using mental health services, several indicators of possible mental health service need were examined in combination. This variable included a sum of having past year substance use disorder; history of depression or anxiety; having any past year psychological distress; having some functional impairment in the past year; past month binge drinking; past month heavy drinking; being in fair or poor overall health; having attacked someone with the intent to seriously harm them in the past year; having a past year arrest; being on probation or parole during the past year; and past year illicit drug use.
- Overall, adults with no past year NSDUH AMI who used mental health services in the past year had more indicators of possible need than those with no AMI and no service use but had fewer indicators than those with AMI and service use. For example, 1.8 percent of adults with no AMI who used mental health services had seven or more indicators of possible need compared with 0.5 percent of those with no AMI and no service use and 6.4 percent of those with AMI and service use.
- Only 2.9 percent of adults with no AMI who used mental health services had no indicators of possible service need; that is, 87.1 percent of adults with no AMI who used mental health services had one or more of the indicators of possible mental health need.

Characteristics of Mental Health Services Used by Adults with AMI and with No AMI

- The characteristics of the services used by adults in NSDUH were examined to determine whether the type or frequency of service use was different among mental health service users with no NSDUH AMI compared with those with AMI.
- Among adults who used mental health services in the past year, adults with no AMI were significantly less likely to report all types of mental health service use than those with AMI, with the exception of a few low-frequency service types such as work/employee assistance program services, the emergency room, or hospice.
- Among adult mental health service users, 38.2 percent of adults with no AMI used outpatient services compared with 56.9 percent of service users with AMI.
- Inpatient service use among those with no AMI was about half that of those with AMI (3.7 percent vs. 7.7 percent).
- An estimated 82.4 percent of mental health service users with no AMI reported prescription medication use compared with 86.9 percent of their counterparts with AMI.
- Adults with no AMI were more likely to report outpatient service use only (15.5 percent) and prescription medication use only (59.4 percent) than those with AMI (outpatient only: 11.2 percent; prescription medication only: 40.8 percent). Adults with no AMI were less likely to have used outpatient services and prescription medication (21.4 percent) and were less likely to use all three service types (inpatient,

- outpatient, and prescription medication: 0.9 percent) than those with AMI (40.4 and 4.8 percent, respectively).
- Overall, adults with no AMI who used outpatient mental health services had fewer outpatient visits than those with AMI (mean: 8.6 visits vs. 13.6 visits).
 - Adults with no AMI who used inpatient services were more likely to have stayed only 1 night (32.4 percent) and were less likely to have stayed 12 to 365 nights (14.2 percent) than those with AMI (1 night: 21.7 percent; 12 to 365 nights: 22.2 percent).
 - Despite the fewer number of visits, respondents with no AMI who used mental health services were less likely to report an unmet need for additional mental health services than adults with AMI who used services (5.7 percent vs. 29.5 percent).

Comparability with Mental Health Surveillance Study (MHSS) Results

- Additional analyses were conducted to compare the results of service use by AMI status, which for the NSDUH is a model-based estimate that has misclassification error; that is, there is some error in whether a person is predicted to have AMI or not. This model was developed based on a clinical study, where a clinical diagnostic-based estimate of any SCID mental illness was available for a subset of NSDUH respondents.
- Results comparing service use by SCID-based mental illness status were largely similar to those using NSDUH AMI. For example, an annual average of 17.9 percent of adults in the United States had SCID-measured mental illness in the past year, and of the 13.5 percent of adults who used mental health services, an estimated 46.8 percent reported mental health service use but did not meet criteria for SCID mental illness.
- Findings for the demographic, mental health, and substance use characteristics of adults who did and did not meet criteria for SCID mental illness by mental health service use also were similar to the findings using NSDUH AMI.
- Like the results for NSDUH AMI, the majority of adults with no past year SCID mental illness who used mental health services in the past year showed at least one indicator of possible service need.

Conclusion

Overall, adults who did not meet criteria for past year AMI who used mental health services in the past year showed higher levels of distress and functional impairment, had more drug and alcohol problems, and were more likely to have a history of depression or anxiety than those with no AMI and no service use. These findings support that these individuals have need of services, independent of their past year AMI status.

Characteristics of mental health service use differed among adults with no AMI compared with those with AMI. Overall, adults with no AMI used fewer services and used the services for shorter periods of time. This suggests that the amount of services used are largely in proportion to their indicators of need (more than those with no AMI and no service use, but less than those with AMI and service use). Adults with no AMI who used mental health services were 5 times less likely to perceive an unmet need for additional mental health services than

those with AMI and service use, suggesting that for this population, mental health service needs are largely being met (prevalence ratio test: 5.1, 95 percent CI = 4.7-5.7).

Evaluation of data from the MHSS found similar results to those using NSDUH AMI, despite using a different method (i.e., clinical diagnostic- versus model-based method) to assess mental illness. Additionally, these results were similar to the findings of older, large-scale studies of mental illness, such as the Epidemiological Catchment Area study and the World Mental Health surveys, which differed in procedures and diagnostic methods from NSDUH and the MHSS. This further substantiates these findings, suggesting that a small proportion of the population who do not meet criteria for mental illness use mental health services (between 6 and 7 percent), which is slightly less than half of those who use mental health services, and that the majority of these individuals do have indicators of a need for mental health services, despite not meeting any select set of criteria for mental illness.

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1. Introduction

Epidemiological surveys of mental illness in the population are often used by policy makers and mental health treatment and service providers to evaluate disease burden and to plan for treatment and service needs. However, these surveys have consistently demonstrated that a proportion of the population reporting mental health treatment and service use do not meet criteria for mental illness as assessed in surveys (Bijl et al., 2003; Bruffaerts et al., 2015; Edlund, Unutzer, & Curran, 2006; Harris et al., 2014; Kessler et al., 1994; Regier et al., 1993; ten Have, Nuyen, Beekman, & de Graaf, 2013; Wang et al., 2005).

One of the earliest studies to demonstrate this phenomenon was the 1980-1985 National Institute of Mental Health (NIMH) Epidemiologic Catchment Area (ECA) study, which surveyed more than 20,800 people in the United States (Regier et al., 1984). The ECA assessed past year mental disorders based on the *Diagnostic and Statistical Manual of Mental Disorders*, third edition (DSM-III) (American Psychiatric Association, 1980), and on past year mental health treatment and service use among community dwelling and institutionalized people. Results indicated that about 6.6 percent of the U.S. population had used mental health services in the past year but did not meet criteria for any of the 12 disorders assessed (Regier et al., 1993). Furthermore, 44.9 percent of those who used mental health services in the past year did not meet criteria for the 12 mental disorders that were assessed. In the 1990-1992 nationally representative National Comorbidity Survey (NCS), which assessed 11 DSM-III-R (third edition, revised) (American Psychiatric Association, 1987) disorders among community dwelling individuals aged 15 to 54 in the United States (Kessler et al., 1994), results indicated that 12.9 percent of the population had used mental health services in the past year but did not meet criteria for a disorder (Katz et al., 1997). Moreover, 7.0 percent of those who did not meet criteria for a past year mental illness had past year service use (Kessler et al., 1994).

Rates of mental health service use among those who did not meet criteria for a mental illness within the survey show some variation across different studies, possibly related to methodological differences between the surveys, the disorders assessed, and services included as a mental health treatment. For example, the National Comorbidity Survey Replication (NCS-R), conducted from 2001 to 2003, found that approximately 10.1 percent of respondents who did not meet DSM-IV-TR (fourth edition, text revision; American Psychiatric Association, 2000) criteria for past year mental illness reported using mental health services in the past year (Wang et al., 2005). This is higher than the rate found in the original 1990-1992 NCS. However, when service use rates are restricted to health care settings (i.e., mental health specialty settings and general medical settings) and exclude complementary and alternative medicine and human services (e.g., a religious or spiritual advisor, a social worker/counselor in any nonspecialty mental health setting), similar to the treatment definition in the original NCS, this rate is reduced to 8.3 percent, which is only modestly higher than the NCS rate, despite differences in diagnostic criteria across surveys (DSM-IV-TR vs. DSM-III-R [American Psychiatric Association, 1987], respectively).

The most up-to-date nationally representative survey of mental illness in the United States is the National Survey on Drug Use and Health (NSDUH), sponsored by the Substance Abuse and Mental Health Services Administration (SAMHSA), which collects data on approximately 67,500 people annually to provide national, state-level, and substate data on

substance use and mental illness. Consistent with the other studies, estimates generated using 2012 NSDUH data suggest that about 7.8 percent of adults who were not determined to have any mental illness (AMI) in the past year reported mental health service use in the past year, which is almost half (46.1 percent) of adults using mental health services. The consistency of this phenomenon, both over time and across studies, is striking, and a better understanding of what may be the cause is needed for policy makers, mental health treatment and service providers, and researchers alike. NSDUH data are used by policy makers and other stakeholders to plan for service needs. Therefore, service use by individuals not meeting criteria for a disorder can be concerning for both policy makers and researchers because it may indicate problems with data accuracy that could interfere with estimates of service use and need (Bruffaerts et al., 2015; Druss et al., 2007). However, these are not the only possible explanations for service use among adults who did not meet criteria for a mental illness. Other possible explanations include continuing treatment for disorders that met criteria more than 12 months prior but no longer meet criteria possibly due to successful treatment, seeking treatment for subthreshold disorders, seeking treatment for disorders not assessed in the survey (e.g., developmental disorders), or mismatching of diagnostic criteria used by treatment and service providers versus the survey (e.g., if clinicians are using criteria other than DSM when prescribing treatment but the survey relies on DSM-based criteria). To evaluate these possibilities, this report examines the types and nature of mental health services used by adults who do not meet criteria for AMI and the potential reasons that may account for individuals using mental health services without meeting these criteria in NSDUH. Specifically, it examines possible indicators of subthreshold or nonassessed disorders (e.g., subthreshold psychological distress or functional impairment, traumatic life events), treatment continuation for prior disorders (e.g., lifetime diagnoses of depression or anxiety, types of treatment), and possible misclassification (discussed in Appendix A) of AMI status in NSDUH using data from a subsample of NSDUH respondents who were administered a full clinical interview.

2. Methods

2.1 Data

2.1.1 National Survey on Drug Use and Health

The National Survey on Drug Use and Health (NSDUH) is the primary source of information on the use of tobacco, alcohol, and illicit drugs; substance use treatment; and mental health treatment and mental health service use and their correlates among the noninstitutionalized population of the United States aged 12 years old or older. The survey also includes several sections of questions that focus on mental health issues.

Most of the questions are administered with audio computer-assisted self-interviewing (ACASI). ACASI is designed to provide the respondent with a highly private and confidential mode for responding to questions in order to increase the level of honest reporting of illicit drug use and about other sensitive topics, including mental health issues. Less sensitive items are administered by interviewers using computer-assisted personal interviewing (CAPI).

It is important to note that because the survey covers the U.S. civilian, noninstitutionalized population, people residing in long-term psychiatric or other institutions continuously throughout the year were not included in the NSDUH sampling frame. However, people who were hospitalized or institutionalized for a period of time during the survey period, but who resided in households for most of the survey period, were eligible for inclusion in the survey. For more information on the NSDUH study design, see the 2012 national findings report (Center for Behavioral Health Statistics and Quality, 2013a).

2.1.2 Mental Health Surveillance Study

From 2008 to 2012, a subsample of NSDUH adult respondents was selected to participate in the Mental Health Surveillance Study (MHSS), which was a telephone interview that included semistructured diagnostic interviews administered by clinicians to assess the presence of selected mental disorders (Aldworth et al., 2010). The MHSS clinical component was designed to develop a statistical model to apply to the full NSDUH sample that would generate serious mental illness (SMI) prevalence estimates among adults (aged 18 years or older) at national and state levels. From this model, an estimate of any mental illness could also be obtained. SMI and any mental illness differ in that for SMI the mental illness is accompanied by serious functional impairment.

In addition to producing a model for NSDUH to yield model-based estimates of SMI among adults (Center for Behavioral Health Statistics and Quality, 2015a), the 2008-2012 MHSS clinical data can be used to generate nationally representative prevalence estimates of past year mental disorders among the adult civilian, noninstitutionalized population in 2008-2012 across a wide spectrum of diagnostic categories, including mood disorders (major depressive disorder, bipolar I disorder, and/or dysthymic disorder); anxiety disorders (posttraumatic stress disorder, panic disorder with and without agoraphobia, agoraphobia without history of panic disorder, social phobia, specific phobia, obsessive compulsive disorder, and/or generalized anxiety

disorder); eating disorders (anorexia nervosa and/or bulimia nervosa); substance use disorders (alcohol abuse and/or dependence, illicit drug abuse and/or dependence); intermittent explosive disorder; adjustment disorder; and psychotic symptoms (delusions and/or hallucinations). By the end of 2012, the Substance Abuse and Mental Health Services Administration had accumulated a nationally representative sample of about 5,500 respondents from clinical psychiatric diagnostic interviews to assess for the presence of mental disorders and functional impairment. More information on the MHSS clinical study is described in other reports including the MHSS design and estimation report, the MHSS operations report, and *Estimating Mental Illness among Adults in the United States: Revisions to the 2008 Estimation Procedures* (Center for Behavioral Health Statistics and Quality, 2014b; 2014c; 2016).

2.2 Measures

2.2.1 Past Year Mental Illness

2.2.1.1 Structured Clinical Interview for DSM-IV Mental Illness

To assess past year mental illness in the MHSS, a clinical interview using a modified version of the Structured Clinical Interview for DSM-IV-TR Axis I Disorders (SCID-I) (First, Spitzer, Gibbon, & Williams, 2002) was administered to all MHSS respondents. The SCID is a semistructured clinical interview that is considered the "gold standard" in psychiatric assessment. As a semistructured clinical interview, the SCID contains structured, standardized questions that are read verbatim and sequentially. The MHSS clinical study interviewers also were instructed to ask unstructured follow-up questions tailored to each respondent. Interviewers coded the presence or absence of each disorder based on their clinical judgment and respondent answers to both the structured and the unstructured questions. Diagnostic sections used in the MHSS clinical study version of the SCID were selected based on two primary considerations: (1) include as many of the more common disorders that are in the definition of SMI as possible (Alcohol, Drug Abuse, and Mental Health Administration [ADAMHA] Reorganization Act, 1992); and (2) keep the clinical interview to a reasonable length that would not be perceived as overly burdensome to respondents. The disorders assessed included the following: major depressive disorder (major depressive episode [MDE]), dysthymic disorder, bipolar I disorder (manic episode), specific phobia, social phobia, generalized anxiety disorder, panic disorder with and without agoraphobia, agoraphobia without history of panic disorder, obsessive compulsive disorder, posttraumatic stress disorder, anorexia nervosa, bulimia nervosa, adjustment disorder, intermittent explosive disorder, and psychotic symptoms (e.g., delusions and hallucinations). Respondents who met clinical criteria for any of these disorders or psychotic symptoms were classified as having any mental illness, referred to as SCID-measured mental illness in this report.

2.2.1.2 Past Year NSDUH AMI

NSDUH AMI indicators are model based, created from a prediction model fit on data from respondents to the MHSS clinical study. The model used short scales of psychological distress, the Kessler-6 (K6) (Kessler et al., 2003), and functional impairment, a modified version of the World Health Organization Disability Assessment Schedule (WHODAS) (Novak, 2007), in combination with the clinical diagnostic data. Specifically, the two short scales, an item on

suicidal thoughts, age, and NSDUH-measured MDE were used as predictor variables of SCID mental illness in a statistical model developed from the clinical subsample. The statistical model was then applied to the full NSDUH adult sample in order to classify each of the NSDUH adult respondents as having or not having NSDUH AMI. For more details on the development of AMI measurement in NSDUH, see *Revised Estimates of Mental Illness from the National Survey on Drug Use and Health, Past Year Mental Disorders among Adults in the United States: Results from the 2008-2012 Mental Health Surveillance Study*, the MHSS design and estimation report, the MHSS operations report, and *Estimating Mental Illness among Adults in the United States: Revisions to the 2008 Estimation Procedures* (Center for Behavioral Health Statistics and Quality, 2013b; 2014a; 2014b; 2014c; 2016). For clarity in this report, mental illness status as measured by the model-based approach is referred to as NSDUH-measured AMI, whereas clinically derived diagnoses are referred to as SCID-measured mental illness.

2.2.2 Mental Health Service Use

Adults aged 18 or older in NSDUH were asked whether they (1) received treatment or counseling for any problem with emotions, "nerves," or mental health in any inpatient or outpatient setting or (2) used prescription medication in the past 12-month period prior to the survey for a mental or emotional condition. For these questions, respondents are asked to not include treatment for use of alcohol or illicit drugs. The treatment questions in this section do not ask specifically about treatment for a particular mental health issue. Consequently, references to treatment or counseling for any problem with emotions, nerves, or mental health are described broadly as mental health service use. Questions in NSDUH on mental health service use are asked of all adults and are not limited to those with mental illness.

In addition to the general measure of mental health service use, characteristics of mental health service included past year receipt of services specifically in inpatient settings and/or outpatient settings, and prescription medications (for a mental or emotional condition) also were considered a type of service. Specific types of outpatient services were characterized further (e.g., outpatient medical clinic, outpatient mental health clinic or center, doctor's office—not part of a clinic). This analysis also looks at service use combinations that were characterized by use of a certain type of service alone and in combination with other services. Measures of the frequency and duration of mental health service use included the number of nights that respondents received inpatient treatment and the number of outpatient visits to various types of service providers in the past year.

2.2.3 Variables Associated with Mental Health Service Use

Demographic and socioeconomic characteristics examined in these analyses included age, gender, Hispanic or Latino origin/race, marital status, veteran status, number of moves in the past year, overall health, federal poverty level, employment, education, and health insurance. Information on whether NSDUH respondents were sampled from a shelter also was used.

Mental health and substance use characteristics included in these analyses were lifetime MDE, lifetime history of being told by a doctor that they had depression or anxiety, past year psychological distress (during the worst month), past year functional impairment due to distress,

indicators of possible antisocial behavior (e.g., past year arrest or being on probation or parole), alcohol and drug use characteristics, and substance use disorders.

MDE, as defined in NSDUH, is based on the definition of MDE in the *Diagnostic and Statistical Manual of Mental Disorders*, fourth edition (DSM-IV-TR; American Psychiatric Association, 2000). Lifetime MDE is defined as having at least five or more of nine symptoms of depression in the same 2-week period in a person's lifetime, in which at least one of the symptoms was a depressed mood or loss of interest or pleasure in daily activities. It should be noted that, unlike the DSM-IV-TR criteria for MDE, no exclusions are made in NSDUH for depressive symptoms caused by medical illness, bereavement, or substance use disorders (Center for Behavioral Health Statistics and Quality, 2015b, Section B). Other lifetime mental health indicators were assessed as part of a list of 20 health conditions,¹ and respondents were asked to read the list and select the specific conditions that a doctor or other medical professional had ever told the respondents that they had. Two mental health conditions were included in this checklist: anxiety disorder and depression. As described previously, two of the mental health indicators used as predictor variables in the model were psychological distress, measured by the K6, and functional impairment, measured by the WHODAS. The K6 scale in NSDUH consists of two sets of six questions that ask adult respondents how frequently they experienced symptoms of psychological distress during two different time periods: (1) during the past 30 days, and (2) if applicable, the 1 month in the past year when they were at their worst emotionally. Respondents were asked about the second time period only if they indicated that there was a month in the past 12 months when they felt more depressed, anxious, or emotionally stressed than they felt during the past 30 days. Six domains are covered by the questions on the K6 scale to determine how often the respondent felt nervous, hopeless, restless or fidgety, sad or depressed, or worthless and to what extent everything felt like an effort to the respondent. To create a score, the six items on the K6 scale were recoded from 0 to 4 so that "all of the time" was coded as 4, "most of the time" was coded as 3, "some of the time" was coded as 2, "a little of the time" was coded as 1, and "none of the time" was coded as 0. Responses of "don't know" and "refused" also were coded as 0. Summing across the transformed responses in these six items resulted in a score with a range from 0 to 24. A K6 score of 13 or higher is often used to define serious psychological distress (SPD) (Kessler, Chiu, Demler, & Walters, 2005). This report uses past year psychological distress scores, defined as the higher of the two K6 total scores for the past 30 days or past 12 months, in three ways: the mean distress score, the percentage with SPD, and any psychological distress ($K6 > 0$).

Past year functional impairment due to psychological distress that substantially interfered with or limited role functioning in one or more major life activities (subsequently referred to as functional impairment) was measured among those who reported experiencing psychological distress ($K6 > 0$) using an abbreviated WHODAS (Novak, Colpe, Barker, & Gfroerer, 2010). Eight WHODAS items were assessed on a scale of 0 to 3, with responses of "no difficulty," "don't know," and "refused" coded as 0; "mild difficulty" coded as 1; "moderate difficulty" coded as 2; and "severe difficulty" coded as 3. Some items had an additional category for respondents who did not engage in a particular activity (e.g., they did not leave the house on their own). Respondents who reported that they did not engage in an activity were asked a follow-up question to determine if they did not do so because of emotions, nerves, or mental health. Those

¹ The NSDUH questionnaire is available at <https://www.samhsa.gov/data/>.

who answered "yes" to this follow-up question were subsequently assigned to the "severe difficulty" category; otherwise (i.e., for responses of "no," "don't know," or "refused"), they were assigned to the "no difficulty" category. Summing across these codes for the eight responses resulted in a total score with a range from 0 to 24. Functional impairment scores were used in these analyses in three ways: an average impairment score, the percentage in each response tertile, and any functional impairment (WHODAS > 0).

Other relevant mental health-related behaviors, which may indicate a need for mental health services in NSDUH, included indicators of possible antisocial behavior, such as having attacked someone with the intent to seriously harm them in the past year, past year arrest, and past year probation or parole.

Alcohol use characteristics included past year use, number of days used, binge drinking, heavy drinking, driving under the influence of alcohol in the past year, and past year arrests related to alcohol use. NSDUH includes questions about the recency and frequency of consumption of alcoholic beverages, such as beer, wine, whiskey, brandy, and mixed drinks. A "drink" is defined as a can or bottle of beer, a glass of wine or a wine cooler, a shot of liquor, or a mixed drink with liquor in it. Times when the respondent only had a sip or two from a drink are not considered to be consumption. For this report, binge drinking is defined as 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 drinking is defined as five or more drinks on the same occasion on each of 5 or more days in the past 30 days. These levels are not mutually exclusive categories of use. Heavy use is included in estimates of binge and current (past 30 days) use, and binge use is included in estimates of current use.

Drug use characteristics included past year use; number of days used; past year arrests for possession, manufacture, or sale of drugs; selling drugs; and driving under the influence of drugs in the past year. NSDUH obtains information on nine categories of illicit drug use: use of marijuana, cocaine, heroin, hallucinogens, and inhalants, as well as the nonmedical use of prescription pain relievers, tranquilizers, stimulants, and sedatives.

Substance use disorder characteristics included past year alcohol use disorder (alcohol dependence or abuse) and drug use disorder (drug dependence or abuse) in addition to the number of criteria met for dependence or abuse. Questions are used to classify people as dependent on or abusing specific substances based on DSM-IV-TR criteria (American Psychiatric Association, 2000). The questions related to dependence ask about health and emotional problems associated with substance use, unsuccessful attempts to cut down on use, tolerance, withdrawal, reducing other activities to use substances, spending a lot of time engaging in activities related to substance use, or using the substance in greater quantities or for a longer time than intended. The questions on abuse ask about problems at work, home, and school; problems with family or friends; physical danger; and trouble with the law due to substance use. Dependence is considered to be a more severe substance use problem than abuse because it involves the psychological and physiological effects of tolerance and withdrawal. A subthreshold drug dependence classification was assigned to a respondent who did not meet the criteria for dependence or abuse of an illicit substance but endorsed one or two of the dependence criteria. A respondent was defined as having dependence if he or she met three or more dependence criteria. For each illicit drug and for alcohol, a respondent was defined as

having "abused" that substance if he or she met one or more of the abuse criteria and was determined not to be dependent on the respective substance in the past year. The number of abuse and dependence criteria endorsed by respondents was also examined.

An additional measure was generated that summed the number of potential mental health service use need indicators, including being in fair or poor overall health; history of depression or anxiety; having any past year psychological distress; having some functional impairment from psychological distress in the past year; having attacked someone with the intent to seriously harm them in the past year; having a past year arrest; being on probation or parole during the past year; past month binge drinking; past month heavy drinking; past year illicit drug use; and past year substance use disorder. This measure could range from 0 (no indicators of need) to 11.

2.3 Analyses

NSDUH employed a state-based design with an independent, multistage area probability sample within each state and the District of Columbia. In all states and the District of Columbia, the design oversampled youths and young adults. Each state's sample was approximately equally distributed among three age groups: 12 to 17 years, 18 to 25 years, and 26 years or older. The calculation of NSDUH person-level weights includes a calibration step that results in weights that are consistent with population control totals from annual updates to the most recently available decennial census (2000 census for 2008-2010 and 2010 census for 2011-2012). All text, figures, and tables present weighted estimates for the population.

The national estimates, along with the associated standard errors (SEs), were computed using a multiprocedure package, SUDAAN[®] Software for Statistical Analysis of Correlated Data (RTI International, 2013). This software accounts for the complex survey design in NSDUH in estimating the SEs. The final, nonresponse-adjusted, and poststratified analysis weights were used in SUDAAN to compute unbiased design-based estimates. Estimates from NSDUH that are designated as imprecise are not shown in this report and are noted by asterisks (*) in figures and tables containing these estimates. Rules for determining the precision of estimates and determining this suppression are noted in the statistical inference report (Center for Behavioral Health Statistics and Quality, 2015a).

Statistical comparisons throughout this report focus on two overall comparisons: comparing those without any mental illness who used mental health services with (1) those without mental illness who did not use mental health services and (2) those with mental illness who used mental health services. The observed differences between prevalence estimates were evaluated in terms of statistical significance. Statistical significance is based on the *p* value of the test statistic and refers to the probability that a difference as large as that observed would occur because of random variability in the estimates if there were no difference in the prevalence estimates for the population groups being compared. The significance of observed differences is reported at the .05 level.

When comparing population subgroups across three or more levels of a categorical variable, log-linear chi-square tests of independence were conducted using SUDAAN in order to first control for Type I error inflation due to multiple comparisons. If Shah's Wald *F* test

(transformed from the standard Wald chi-square) indicated overall significant differences, then the significance of each particular pairwise comparison of interest was tested.

Analyses also were conducted to examine mental health service use by SCID mental illness status. Comparisons were conducted similar to those using NSDUH AMI, wherein the characteristics of mental health service users' SCID mental illness status were compared. Then, data from NSDUH AMI and SCID mental illness were combined to evaluate the characteristics of service users with and without NSDUH AMI or SCID mental illness. For these analyses, NSDUH AMI and SCID mental illness were examined simultaneously with the other potential mental health service use need indicators.

In addition, an analysis was conducted to look at the relationship between misclassification of the NSDUH AMI status given the SCID mental illness status and its relationship to mental health service receipt. Misclassification may explain why some respondents were classified as not having NSDUH AMI but reported mental health service use (i.e., they had a mental illness but were misclassified as not having one). These results are provided in Appendix A.

Statistical tests have been conducted for all statements appearing in the text of the report that compare estimates between years or subgroups of the population. Unless explicitly stated that a difference is not statistically significant, all statements that describe differences are significant at the .05 level. Statistically significant differences are described using terms such as "higher," "lower," "increased," and "decreased." Statements that use terms such as "similar," "no difference," "same," or "remained steady" to describe the relationship between estimates denote that a difference is not statistically significant. When a set of estimates for survey years or population subgroups is presented without a statement of comparison, statistically significant differences among these estimates are not implied and testing may not have been conducted. Detailed data tables for all analyses are provided in Appendices B, C, and D.

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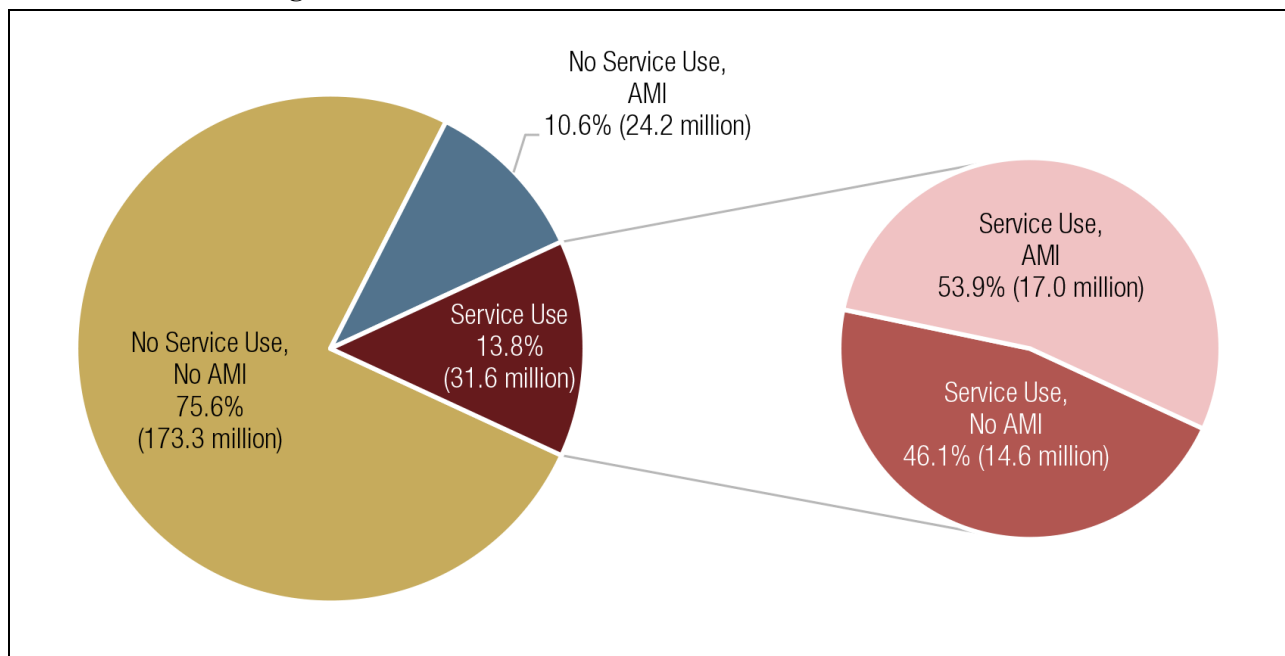
3. Results

3.1 Characteristics of Adult Service Users in NSDUH

3.1.1 Estimates of Mental Health Service Use by AMI

Based on 2008-2012 National Survey on Drug Use and Health (NSDUH) data, an annual average of 18.1 percent of adults in the United States (41.5 million) were classified as having any mental illness (AMI) in the past year, and about 13.8 percent of adults (31.6 million), regardless of their AMI status, used mental health services in the past year (Figure 1). An estimated 6.4 percent of adults used mental health services but did not have AMI (14.6 million), which equates to 46.1 percent of adults who used mental health services in the past year.

Figure 1. Past Year Any Mental Illness (AMI) and Past Year Mental Health Service Use among Adults Aged 18 or Older: 2008-2012 NSDUH



Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health (NSDUH), 2008-2012.

3.1.2 Demographic and Socioeconomic Characteristics

This section evaluates demographic differences comparing adults with no past year NSDUH AMI who used mental health services with (1) adults with no AMI and no service use and (2) adults with AMI and service use. These analyses examine whether the characteristics of people with no AMI who use mental health services are more similar to adults with no AMI and no service use or to adults with AMI and service use. Differences in these characteristics may indicate better access to mental health services or differences in cultural acceptability to using mental health services. It also may indicate nondiagnostic reasons for service use (e.g., bereavement or dealing with the stress of health issues).

Adults with no past year AMI who used mental health services were more likely to be aged 50 or older than adults with no AMI and no service use and those with AMI and service use (47.4 percent vs. 43.6 percent and 37.3 percent, respectively; [Table 1](#)). Adults with no AMI who used mental health services also were more likely to be female than those with no AMI and no service use (63.6 percent vs. 48.4 percent) and more likely to be male than those with AMI and service use (36.4 percent vs. 31.6 percent).

Adults with no AMI who used mental health services in the past year were more likely to be not Hispanic or Latino white than those with no AMI and no service use and those with AMI and service use (82.9 percent vs. 65.6 percent and 80.1 percent, respectively).

Adults with no AMI who used mental health services were less likely to have never been married than those with no AMI and no service use and those with AMI and service use (23.2 percent vs. 25.9 percent and 27.7 percent, respectively) and were more likely to be married than those with AMI and service use (54.6 percent vs. 44.3 percent).

Adults with mental health service use in the past year were less likely to be veterans, regardless of their AMI status (11.4 percent vs. 9.6 percent and 8.7 percent).

There was no significant difference in the number of moves (i.e., residential relocation) in the past year between adults with no AMI who used mental health services in the past year compared with adults with no AMI and no service use. However, adults with no AMI who used services were more likely to have no moves than adults with AMI and service use (79.9 percent vs. 72.5 percent).

Adults with no AMI who used mental health services were more likely to be in fair/poor health (14.0 percent) than those with no AMI and no service use (10.4 percent) but were less likely to be in fair/poor health than those with AMI and service use (29.4 percent).

Table 1. Demographic Characteristics of Adults Aged 18 or Older, by Any Mental Illness (AMI) and Mental Health Service Use Status: Percentages and Standard Errors: 2008-2012
NSDUH

Demographic Characteristics	Total	No AMI and No Mental Health Service Use ^{1,2}	No AMI but Mental Health Service Use ^{1,2}	AMI and Mental Health Service Use ^{1,2}
TOTAL	100.0 (0.00)	100.0 (0.00)	100.0 (0.00)	100.0 (0.00)
AGE				
18-25	14.7 (0.12)	14.8 ^b (0.13)	12.2 (0.26)	12.0 (0.23)
26-49	43.0 (0.22)	41.5 (0.24)	40.4 (0.68)	50.7 ^b (0.65)
50 or Older	42.3 (0.25)	43.6 ^b (0.28)	47.4 (0.76)	37.3 ^b (0.70)
GENDER				
Male	48.2 (0.16)	51.6 ^b (0.20)	36.4 (0.68)	31.6 ^b (0.57)
Female	51.8 (0.16)	48.4 ^b (0.20)	63.6 (0.68)	68.4 ^b (0.57)

Table 1. Demographic Characteristics of Adults Aged 18 or Older, by Any Mental Illness (AMI) and Mental Health Service Use Status: Percentages and Standard Errors: 2008-2012 NSDUH (continued)

Demographic Characteristics	Total	No AMI and No Mental Health Service Use ^{1,2}	No AMI but Mental Health Service Use ^{1,2}	AMI and Mental Health Service Use ^{1,2}
HISPANIC OR LATINO ORIGIN/RACE				
Not Hispanic/Latino	85.9 (0.19)	84.8 ^b (0.21)	93.1 (0.39)	92.1 ^a (0.35)
White	67.6 (0.26)	65.6 ^b (0.29)	82.9 (0.60)	80.1 ^b (0.51)
Black/African American	11.6 (0.17)	12.1 ^b (0.20)	6.6 (0.39)	7.8 ^a (0.35)
Other	6.7 (0.13)	7.1 ^b (0.15)	3.6 (0.33)	4.1 (0.24)
Hispanic/Latino	14.1 (0.19)	15.2 ^b (0.21)	6.9 (0.39)	7.9 ^a (0.35)
MARITAL STATUS				
Married	53.5 (0.23)	55.9 (0.25)	54.6 (0.72)	44.3 ^b (0.62)
Widowed	6.0 (0.11)	6.1 (0.12)	5.9 (0.41)	5.0 (0.36)
Divorced or Separated	13.8 (0.14)	12.2 ^b (0.15)	16.3 (0.56)	23.0 ^b (0.54)
Never Married	26.6 (0.18)	25.9 ^b (0.19)	23.2 (0.54)	27.7 ^b (0.50)
VETERAN STATUS				
Yes	10.7 (0.13)	11.4 ^b (0.16)	9.6 (0.46)	8.7 (0.40)
No	89.3 (0.13)	88.6 ^b (0.16)	90.4 (0.46)	91.3 (0.40)
NUMBER OF MOVES IN THE PAST YEAR³				
0	78.5 (0.18)	80.1 (0.19)	79.9 (0.54)	72.5 ^b (0.55)
1 or 2	18.9 (0.16)	17.8 (0.18)	17.7 (0.52)	22.2 ^b (0.50)
3 or More	2.6 (0.05)	2.1 (0.05)	2.4 (0.16)	5.3 ^b (0.25)
OVERALL HEALTH³				
Excellent or Very Good	59.2 (0.21)	62.9 ^b (0.24)	57.1 (0.75)	40.1 ^b (0.60)
Good	27.5 (0.17)	26.7 ^b (0.20)	28.9 (0.68)	30.5 (0.57)
Fair or Poor	13.3 (0.15)	10.4 ^b (0.15)	14.0 (0.53)	29.4 ^b (0.64)

*Low precision; no estimate reported.

NOTE: Significance testing was conducted between the No AMI but Mental Health Service Use estimates and the No AMI and No Mental Health Service Use and AMI and Mental Health Service Use estimates if an overall chi-square test indicated differences for a particular measure.

^a Difference between estimate and No AMI but Mental Health Service Use estimate is statistically significant at the 0.01 level.

^b Difference between estimate and No AMI but Mental Health Service Use estimate is statistically significant at the 0.05 level.

¹ NSDUH AMI is defined as having a diagnosable mental, behavioral, or emotional disorder, other than a developmental or substance use disorder, assessed by the Mental Health Surveillance Study (MHSS) *Structured Clinical Interview for the Diagnostic and Statistical Manual of Mental Disorders—Fourth Edition—Research Version—Axis I Disorders* (MHSS-SCID), which is based on the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR) (American Psychiatric Association, 2000). Three categories of mental illness severity are defined based on the level of functional impairment: mild mental illness, moderate mental illness, and serious mental illness. Any mental illness includes people in any of the three categories. These mental illness estimates are based on a predictive model and are not direct measures of diagnostic status. See the following reference: American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.). Washington, DC: American Psychiatric Association.

² Mental Health Service Use is defined as having received inpatient treatment/counseling or outpatient treatment/counseling or having used prescription medication for problems with emotions, nerves, or mental health. Respondents were not to include treatment for drug or alcohol use. Respondents with unknown treatment/counseling information were excluded.

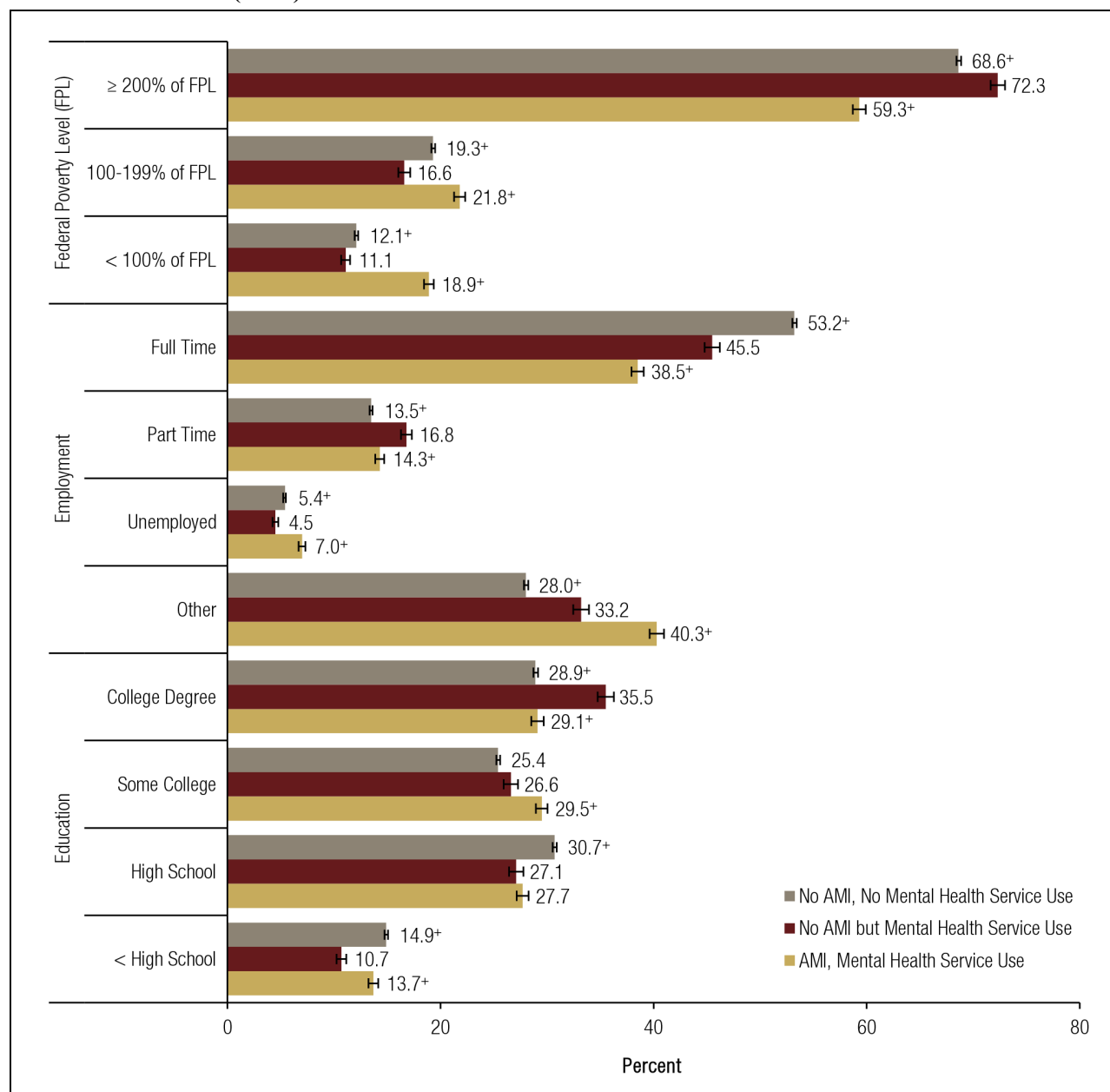
³ Respondents with unknown data were excluded.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health (NSDUH), 2008-2012.

In general, adults with no AMI who had past year mental health service use had a higher socioeconomic status than adults with no AMI and no service use and those with AMI and service use (Figure 2). For example, adults with no AMI who used mental health services were more likely

to have earned a college degree than adults with no AMI and no service use and adults with AMI and service use (35.5 percent vs. 28.9 percent and 29.1 percent, respectively). Adults with no AMI who used mental health services also were less likely to be unemployed (4.5 percent vs. 5.4 percent and 7.0 percent) and less likely to live below the federal poverty level (11.1 percent vs. 12.1 percent and 18.9 percent) than adults with no AMI and no service use and adults with AMI and service use.

Figure 2. Socioeconomic Characteristics of Adults Aged 18 or Older, by Past Year Any Mental Illness (AMI) and Past Year Mental Health Service Use: 2008-2012 NSDUH



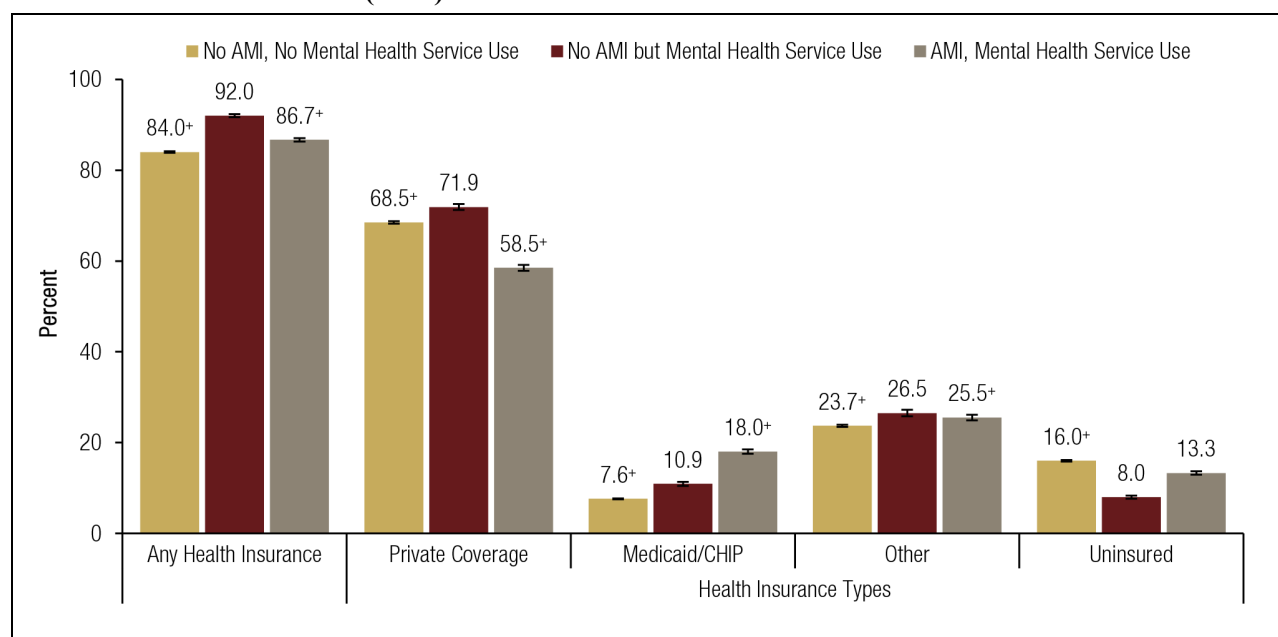
⁺ Difference between estimate and No AMI but Mental Health Service Use estimate is statistically significant at the 0.05 level.

NOTE: The Other Employment category includes students, people keeping house or caring for children full time, retired or disabled people, or other people not in the labor force.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health (NSDUH), 2008-2012.

Adults with no past year AMI who had past year mental health service use were more likely to have health insurance than those with no AMI and no service use and those with AMI and service use (92.0 percent vs. 84.0 percent and 86.7 percent, respectively; Figure 3). Adults with no AMI who used mental health services were more likely to have private health insurance coverage than those with no AMI and no service use and those with AMI and service use (71.9 percent vs. 68.5 percent and 58.5 percent, respectively). Adults with no AMI who used mental health services also were more likely to have Medicaid/Children's Health Insurance Program (CHIP) than those with no AMI and no service use (10.9 percent vs. 7.6 percent) but were less likely to have Medicaid/CHIP than those with AMI and service use (10.9 percent vs. 18.0 percent).

Figure 3. Health Insurance Characteristics of Adults Aged 18 or Older, by Past Year Any Mental Illness (AMI) and Past Year Mental Health Service Use: 2008-2012 NSDUH



+ Difference between estimate and No AMI but Mental Health Service Use estimate is statistically significant at the 0.05 level.
Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health (NSDUH), 2008-2012.

3.1.3 Mental Health Characteristics

This section examines the mental health characteristics of adults with no NSDUH AMI who used mental health services compared with those with no AMI and no service use and those with AMI and service use to evaluate whether there are other mental health indicators that suggest why adults with no AMI might seek mental health services.

Adults with no past year AMI who used mental health services in the past year were more likely to have had other mental health problems (measured by occurrence of a lifetime major depressive episode (MDE), reports of having been diagnosed by a doctor with depression or anxiety in their lifetime, past year psychological distress, or past year functional impairment)

than those with no AMI and no service use (Table 2).² The prevalence of *lifetime* MDE was 4 times greater among adults with no *past year* AMI who used mental health services compared with those with no *past year* AMI and no service use (15.5 percent vs. 3.9 percent; prevalence ratio test: 4.0, 95 percent CI = 3.7-4.3). Over 12 times more adults with no AMI who used mental health services had been told by a doctor that they had depression in their lifetime compared with those with no AMI and no service use (44.0 percent vs. 3.7 percent; prevalence ratio test: 12.0, 95 percent CI = 11.4-12.7). Similarly, the rate of lifetime doctor-diagnosed anxiety disorders was 14 times greater among those with no AMI who used mental health services compared with those with no AMI and no service use (32.8 percent vs. 2.3 percent; prevalence ratio test: 14.2, 95 percent CI = 13.3-15.2).

Table 2. Mental Health Characteristics of Adults Aged 18 or Older, by Past Year Any Mental Illness (AMI) and Mental Health Service Use Status: Percentages and Standard Errors, 2008-2012 NSDUH

Mental Health Characteristics	Total	No AMI and No Mental Health Service Use^{1,2}	No AMI but Mental Health Service Use^{1,2}	AMI and Mental Health Service Use^{1,2}
MENTAL HEALTH HISTORY				
Lifetime Major Depressive Episode ³	12.9 (0.12)	3.9 ^b (0.07)	15.5 (0.54)	N/A
Ever Told by Doctor Had Depression ⁴	12.7 (0.12)	3.7 ^b (0.07)	44.0 (0.68)	69.4 ^b (0.60)
Ever Told by Doctor Had Anxiety Disorder ⁴	8.6 (0.10)	2.3 ^b (0.06)	32.8 (0.67)	49.1 ^b (0.62)
PSYCHOLOGICAL DISTRESS AND IMPAIRMENT				
Average Past Year Distress Score (Most Distressed Month in Past Year) ⁵	4.9 (0.02)	2.9 ^b (0.01)	5.2 (0.05)	N/A
Average Past Year Functional Impairment Score ⁶	3.5 (0.02)	1.6 ^b (0.01)	3.4 (0.04)	N/A
INDICATORS OF POSSIBLE ANTISOCIAL BEHAVIOR⁴				
Attacked Someone with the Intent to Seriously Harm them in the Past Year	1.4 (0.03)	0.9 ^a (0.03)	1.1 (0.11)	3.6 ^b (0.19)
Past Year Arrest	2.6 (0.05)	2.1 ^b (0.05)	2.7 (0.20)	5.5 ^b (0.26)
Past Year Probation or Parole	2.4 (0.05)	1.9 ^b (0.05)	2.4 (0.17)	5.3 ^b (0.26)

N/A = not applicable. It is recommended that the mental illness variables derived from the 2012 model (including AMI) should not be used when analyzing Lifetime Major Depressive Episode, K6, or World Health Organization Disability Assessment Schedule (WHODAS) variables. See the following reference: Center for Behavioral Health Statistics and Quality. (2014). *2012 National Survey on Drug Use and Health: Methodological resource book (Section 16a, 2012 Mental Health Surveillance Study: Design and estimation report)*.

*Low precision; no estimate reported.

NOTE: Significance testing was conducted between the No AMI but Mental Health Service Use estimates and the No AMI and No Mental Health Service Use and AMI and Mental Health Service Use estimates if an overall chi-square test indicated differences for a particular measure.

^a Difference between estimate and No AMI but Mental Health Service Use estimate is statistically significant at the 0.05 level.

^b Difference between estimate and No AMI but Mental Health Service Use estimate is statistically significant at the 0.01 level.

² Most sections of this report focus on two comparisons, comparing those with no past year AMI who used mental health services with (1) those with no AMI and no service use and (2) those with AMI and service use. However, because certain mental health indicators are used in the AMI predictive model, some comparisons in this section are restricted to the former comparison.

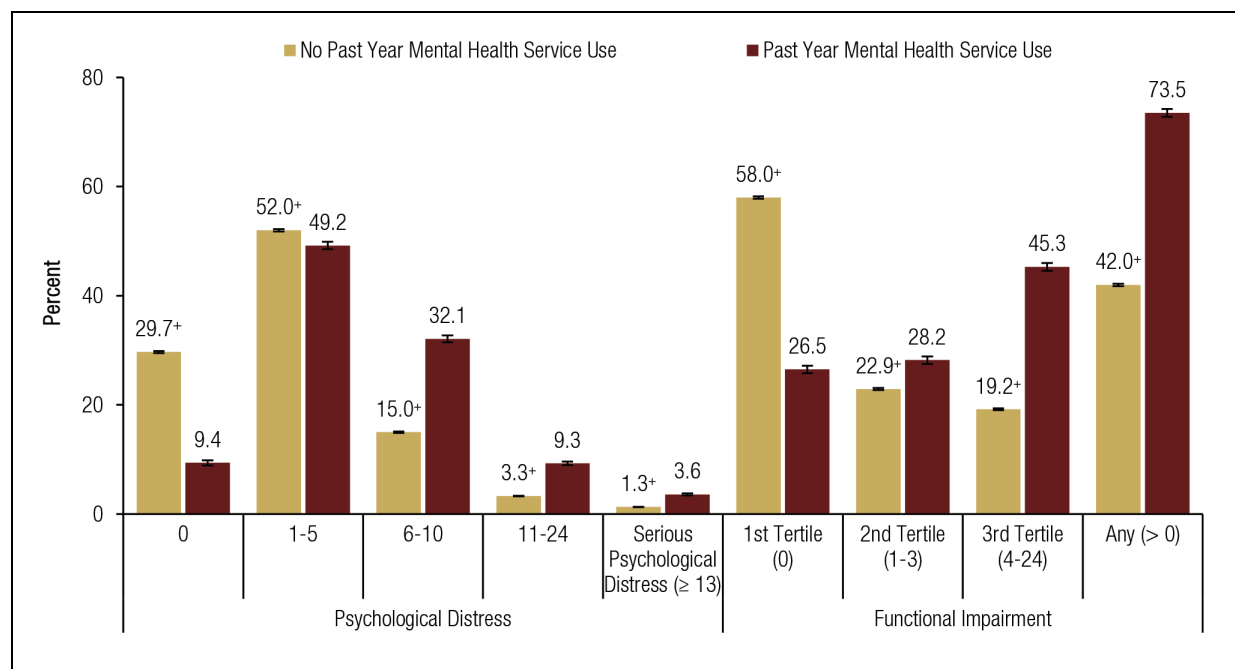
Table 2. Mental Health Characteristics of Adults Aged 18 or Older, by Past Year Any Mental Illness (AMI) and Mental Health Service Use Status: Percentages and Standard Errors, 2008-2012 NSDUH (continued)

- ¹ NSDUH AMI is defined as having a diagnosable mental, behavioral, or emotional disorder, other than a developmental or substance use disorder, assessed by the Mental Health Surveillance Study (MHSS) *Structured Clinical Interview for the Diagnostic and Statistical Manual of Mental Disorders—Fourth Edition—Research Version—Axis I Disorders* (MHSS-SCID), which is based on the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR) (American Psychiatric Association, 2000). Three categories of mental illness severity are defined based on the level of functional impairment: mild mental illness, moderate mental illness, and serious mental illness. Any mental illness includes people in any of the three categories. These mental illness estimates are based on a predictive model and are not direct measures of diagnostic status. See the following reference: American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.). Washington, DC: American Psychiatric Association.
- ² Mental Health Service Use is defined as having received inpatient treatment/counseling or outpatient treatment/counseling or having used prescription medication for problems with emotions, nerves, or mental health. Respondents were not to include treatment for drug or alcohol use. Respondents with unknown treatment/counseling information were excluded.
- ³ Major Depressive Episode (MDE) is defined as in DSM-IV-TR (American Psychiatric Association, 2000), which specifies 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 a majority of specified depression symptoms. Respondents with unknown past year MDE data were excluded. See table note 1 for the reference.
- ⁴ Respondents with unknown data were excluded.
- ⁵ Distress Score is a score with values ranging from 0 to 24 indicating the level of psychological distress. Past month score is based on data collected from a series of six questions known as the K6, asking adult respondents how frequently they experienced symptoms of psychological distress during the past 30 days. Past year score incorporates past month score plus a series of six questions asking about the worst month in the past year if not the past month.
- ⁶ Functional Impairment refers to interference in a person's daily functioning or limitations in carrying out one or more major life activities, based on WHODAS. A score ranging from 0 to 24 is created based on responses to eight measures.
- Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health (NSDUH), 2008-2012.

Past year psychological distress and functional impairment scores were significantly higher among adults with no AMI who used mental health services compared with those with no AMI and no service use. The average past year psychological distress score was almost twice as high among adults with no AMI who used mental health services in the past year compared with those with no AMI and no service use (5.2 vs. 2.9). The average past year functional impairment score also was higher among adults with no AMI who used mental health services in the past year compared with those with no AMI and no service use (3.4 vs. 1.6).

Figure 4 presents the levels of past year psychological distress and functional impairment among adults with no AMI by past year mental health service use. About 3.6 percent of adults with no AMI who used mental health services in the past year had SPD compared with 1.3 percent of adults with no AMI and no service use, and about 73.5 percent had any functional impairment compared with 42.0 percent of those with no AMI and no service use. Overall, adults with no AMI who used mental health services had higher levels of distress and impairment than adults with no AMI and no service use.

Figure 4. Past Year K6 Psychological Distress and WHODAS Functional Impairment Levels among Adults Aged 18 or Older without Any Mental Illness, by Past Year Mental Health Service Use: 2008-2012 NSDUH



K6 = Kessler-6, a mental disorder scale; WHODAS = World Health Organization Disability Assessment Schedule.

+ Difference between estimate and No Past Year Mental Health Service Use estimate is statistically significant at the 0.05 level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health (NSDUH), 2008-2012.

Proxy indicators of possible antisocial behavior, such as attacking someone with intent to harm, having been arrested in the past year, or being on probation or parole in the past year, which may indicate a need for mental health services, although infrequent, were more common among those with no AMI who used mental health services than those with no AMI and no service use. However, these indicators were less common among those with no AMI who used mental health services compared with those with AMI and service use (Table 2). For example, 1.1 percent of service users with no AMI reported having attacked someone with the intent to seriously harm them compared with 0.9 percent of adults with no AMI and no service use and 3.6 percent of adults with AMI and service use.

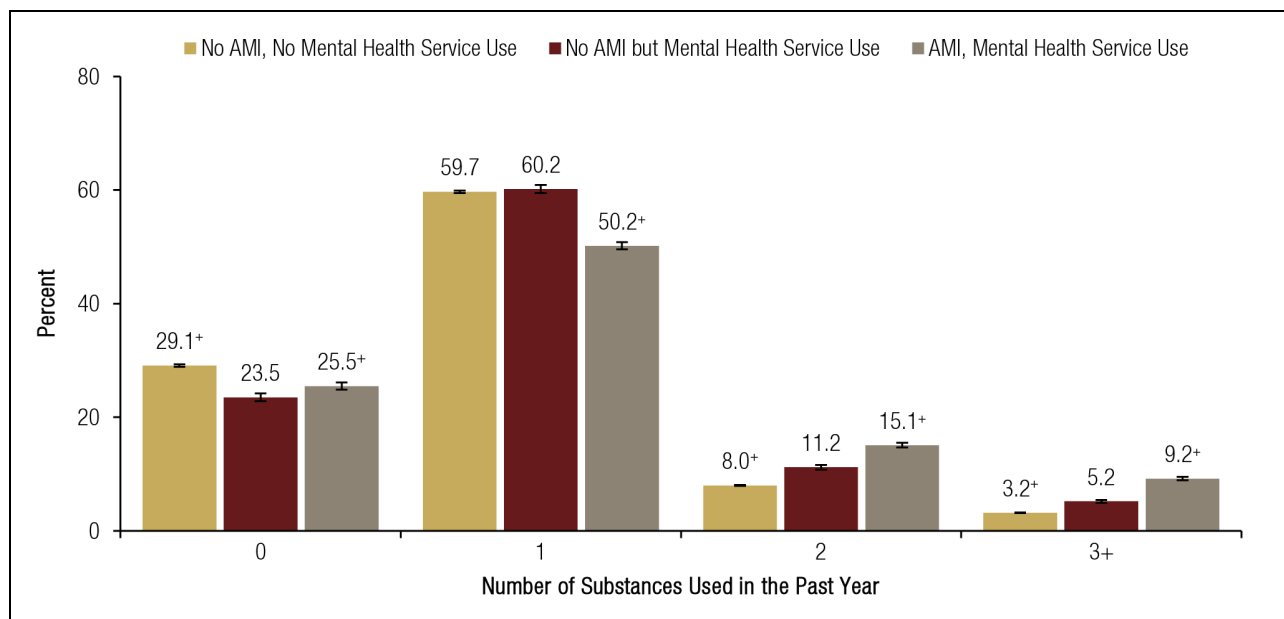
3.1.4 Substance Use Characteristics

Substance use disorders are not included in the measure of NSDUH AMI. This section examines substance use characteristics to evaluate whether people without AMI who used services have substance use problems that may be prompting them to seek mental health services even though they do not meet criteria for AMI. Past year alcohol use and other substance use were more likely among adults with past year mental health service use.³ About 23.5 percent of adults with no AMI who used mental health services in the past year had not used alcohol or

³ Past year AMI excludes substance use disorders, and past year mental health service use excludes services for substance use.

illicit drugs in the past year⁴ compared with 29.1 percent of adults with no AMI and no service use (Figure 5). Polysubstance use (use of more than one substance in the past year) also was more likely among those with past year service use compared with those with no service use. For example, an estimated 5.2 percent of adults with no AMI who used mental health services reported using three or more substances in the past year compared with 3.2 percent of adults with no AMI and no service use, whereas 9.2 percent of adults with AMI and service use had polysubstance use.

Figure 5. Number of Substances Used in the Past Year among Adults Aged 18 or Older, by Past Year Any Mental Illness (AMI) and Past Year Mental Health Service Use: 2008-2012 NSDUH



+ Difference between estimate and No AMI but Mental Health Service Use estimate is statistically significant at the 0.05 level.
 NOTE: Substances being counted include alcohol, marijuana, cocaine, heroin, hallucinogens, inhalants, and nonmedical use of psychotherapeutics.
 Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health (NSDUH), 2008-2012.

Past year alcohol use was more common among adults with no AMI who used mental health services in the past year (75.1 percent) compared with adults with no AMI and no service use and those with AMI and service use (70.0 percent and 71.5 percent, respectively; Table 3). However, the average number of days that alcohol was used in the past year, among adults with past year alcohol use, was similar between adults with no AMI who used mental health services and those who did not use services (93.8 days vs. 91.0 days). Adults with no AMI who used mental health services were less likely than those with no AMI and no service use and those with AMI and service use to report binge drinking in the past month (23.1 percent vs. 24.4 percent and 25.2 percent, respectively). Adults with no AMI who used mental health services were more likely to have driven under the influence of alcohol compared with those with no AMI and no service use (15.4 percent vs. 11.1 percent).

⁴ Substances being counted include alcohol, marijuana, cocaine, heroin, hallucinogens, inhalants, and nonmedical use of psychotherapeutics.

Table 3. Alcohol Use Characteristics of Adults Aged 18 or Older, by Any Mental Illness (AMI) and Mental Health Service Use Status: Percentages and Standard Errors, 2008-2012 NSDUH

Alcohol Use Characteristics	Total	No AMI and No Mental Health Service Use^{1,2}	No AMI but Mental Health Service Use^{1,2}	AMI and Mental Health Service Use^{1,2}
ALCOHOL USE				
Past Year Alcohol Use	70.5 (0.19)	70.0 ^b (0.21)	75.1 (0.69)	71.5 ^b (0.62)
Average Number of Days Used Alcohol in the Past Year among Users	90.3(0.47)	91.0(0.53)	93.8(1.69)	85.0 ^b (1.41)
Median Number of Days Used Alcohol in the Past Year among Users ³	51.3(0.17)	51.4(0.17)	50.8(0.42)	47.8(1.24)
ALCOHOL MISUSE				
Past Month Binge Drinking ⁴	24.8 (0.15)	24.4 ^a (0.17)	23.1 (0.54)	25.2 ^b (0.51)
Past Month Heavy Alcohol Use ⁴	7.2 (0.09)	6.8 (0.10)	7.0 (0.32)	8.1 ^a (0.30)
Drove under the Influence of Alcohol in Past Year	12.6 (0.11)	11.1 ^b (0.12)	15.4 (0.48)	18.4 ^b (0.43)
Past Year Arrest for Drunkenness or Liquor Law Violation ⁵	0.4 (0.02)	0.4 (0.02)	0.4 (0.06)	0.9 ^b (0.11)

*Low precision; no estimate reported.

NOTE: Significance testing was conducted between the No AMI but Mental Health Service Use estimates and the No AMI and No Mental Health Service Use and AMI and Mental Health Service Use estimates if an overall chi-square test indicated differences for a particular measure.

^a Difference between estimate and No AMI but Mental Health Service Use estimate is statistically significant at the 0.05 level.

^b Difference between estimate and No AMI but Mental Health Service Use estimate is statistically significant at the 0.01 level.

¹ NSDUH AMI is defined as having a diagnosable mental, behavioral, or emotional disorder, other than a developmental or substance use disorder, assessed by the Mental Health Surveillance Study (MHSS) *Structured Clinical Interview for the Diagnostic and Statistical Manual of Mental Disorders—Fourth Edition—Research Version—Axis I Disorders* (MHSS-SCID), which is based on the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR) (American Psychiatric Association, 2000). Three categories of mental illness severity are defined based on the level of functional impairment: mild mental illness, moderate mental illness, and serious mental illness. Any mental illness includes people in any of the three categories. These mental illness estimates are based on a predictive model and are not direct measures of diagnostic status. See the following reference: American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.). Washington, DC: American Psychiatric Association.

² Mental Health Service Use is defined as having received inpatient treatment/counseling or outpatient treatment/counseling or having used prescription medication for problems with emotions, nerves, or mental health. Respondents were not to include treatment for drug or alcohol use. Respondents with unknown treatment/counseling information were excluded.

³ Significance testing was not conducted between the medians due to use of a complex sampling design.

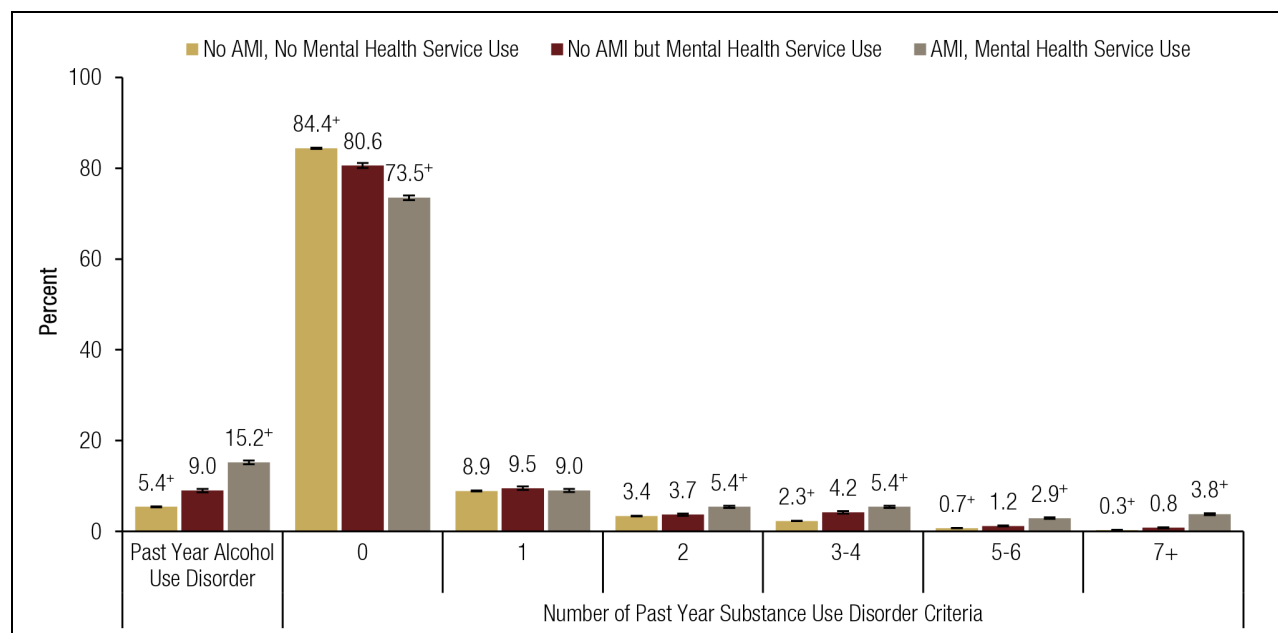
⁴ Binge Alcohol Use is defined as drinking five or more drinks on the same occasion (i.e., at the same time or within a couple of hours of each other) on at least 1 day in the past 30 days. Heavy Alcohol Use is defined as drinking five or more drinks on the same occasion on each of 5 or more days in the past 30 days. All heavy alcohol users are also binge alcohol users.

⁵ Respondents with unknown data were excluded.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health (NSDUH), 2008-2012.

Adults with no AMI who used mental health services in the past year were more likely to have an alcohol use disorder than those with no AMI and no service use (9.0 percent vs. 5.4 percent) but were less likely to have an alcohol use disorder than those with AMI and service use (15.2 percent; [Figure 6](#)). Moreover, the number of substance use disorder criteria was higher among adults with no AMI who used mental health services compared with those with no AMI and no service use.

Figure 6. Past Year Substance Use Disorder Criteria among Adults Aged 18 or Older, by Past Year Any Mental Illness (AMI) and Past Year Mental Health Service Use: 2008-2012 NSDUH



⁺ Difference between estimate and No AMI but Mental Health Service Use estimate is statistically significant at the 0.05 level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health (NSDUH), 2008-2012.

Past year illicit drug use was more common among adults with no AMI who used mental health services in the past year compared with those with no AMI and no service use (17.5 percent vs. 12.1 percent; [Table 4](#)). However, adults with no AMI who used mental health services reported fewer days of illicit drug use than those with no AMI and no service use. For example, illicit drug use by adults with no AMI who used mental health services averaged 99.2 days in the past year compared with 109.1 days for those with no AMI and no service use. Adults with no AMI who used mental health services were almost twice as likely to have a drug use disorder than those with no AMI and no service use (2.7 percent vs. 1.5 percent) and to meet more drug use disorder criteria.

Adults with no AMI who used mental health services were slightly more likely to have been arrested for possession, manufacture, or sale of drugs (0.4 percent) and to have driven under the influence (4.5 percent) than those with no AMI and no service use (0.3 and 3.2 percent, respectively).

Table 4. Drug Use Characteristics of Adults Aged 18 or Older, by Any Mental Illness (AMI) and Mental Health Service Use Status: Percentages and Standard Errors, 2008-2012 NSDUH

Drug Use Characteristics ¹	Total	No AMI and No Mental Health Service Use ^{2,3}	No AMI but Mental Health Service Use ^{2,3}	AMI and Mental Health Service Use ^{2,3}
FREQUENCY OF DRUG USE				
Past Year Drug Use	14.7 (0.12)	12.1 ^b (0.12)	17.5 (0.47)	26.5 ^b (0.52)
Average Number of Days Used Illicit Drugs in the Past Year among Users	111.7 (1.02)	109.1 ^b (1.32)	99.2 (3.35)	118.5 ^b (2.82)
1 st Tertile (1-11)	31.7 (0.35)	32.0 ^a (0.44)	35.2 (1.45)	31.1 ^a (1.02)
2 nd Tertile (12-119)	33.5 (0.35)	34.0 (0.45)	34.0 (1.37)	32.2 (1.00)
3 rd Tertile (120-365)	34.7 (0.36)	33.9 ^a (0.47)	30.8 (1.31)	36.7 ^b (1.02)
Median Number of Days Used Illicit Drugs in the Past Year among Users ⁴	47.5 (0.24)	47.2 (2.01)	29.8 (3.86)	51.3 (1.89)
DRUG USE DISORDER⁵	2.6 (0.05)	1.5 ^b (0.04)	2.7 (0.18)	7.9 ^b (0.28)
NUMBER OF CRITERIA MET FOR DRUG USE DISORDER⁶				
0	94.1 (0.07)	95.7 ^b (0.07)	93.8 (0.28)	86.4 ^b (0.35)
1	2.3 (0.04)	2.0 ^a (0.05)	2.3 (0.17)	3.9 ^b (0.20)
2	1.4 (0.03)	1.1 ^b (0.03)	1.4 (0.12)	2.5 ^b (0.17)
3-4	1.1 (0.03)	0.8 ^b (0.03)	1.4 (0.14)	2.8 ^b (0.15)
5-6	0.5 (0.02)	0.3 ^b (0.01)	0.5 (0.07)	1.7 ^b (0.14)
7+	0.5 (0.02)	0.2 ^b (0.01)	0.5 (0.08)	2.7 ^b (0.17)
DRUG-RELATED ILLEGAL ACTIVITY				
Past Year Arrest for Possession, Manufacture, or Sale of Drugs ⁷	0.4 (0.02)	0.3 ^a (0.01)	0.4 (0.05)	0.7 ^b (0.09)
Sold Illegal Drugs in the Past Year ⁷	1.7 (0.04)	1.4 (0.04)	1.3 (0.10)	3.1 ^b (0.17)
Drove under the Influence of Drugs in the Past Year	4.1 (0.06)	3.2 ^b (0.05)	4.5 (0.24)	8.2 ^b (0.29)

*Low precision; no estimate reported.

NOTE: Significance testing was conducted between the No AMI but Mental Health Service Use estimates and the No AMI and No Mental Health Service Use and AMI and Mental Health Service Use estimates if an overall chi-square test indicated differences for a particular measure.

^a Difference between estimate and No AMI but Mental Health Service Use estimate is statistically significant at the 0.05 level.

^b Difference between estimate and No AMI but Mental Health Service Use estimate is statistically significant at the 0.01 level.

¹ Illicit Drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription psychotherapeutics used nonmedically.

² NSDUH AMI is defined as having a diagnosable mental, behavioral, or emotional disorder, other than a developmental or substance use disorder, assessed by the Mental Health Surveillance Study (MHSS) *Structured Clinical Interview for the Diagnostic and Statistical Manual of Mental Disorders—Fourth Edition—Research Version—Axis I Disorders* (MHSS-SCID), which is based on the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR) (American Psychiatric Association, 2000). Three categories of mental illness severity are defined based on the level of functional impairment: mild mental illness, moderate mental illness, and serious mental illness. Any mental illness includes people in any of the three categories. These mental illness estimates are based on a predictive model and are not direct measures of diagnostic status. See the following reference: American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.). Washington, DC: American Psychiatric Association.

³ Mental Health Service Use is defined as having received inpatient treatment/counseling or outpatient treatment/counseling or having used prescription medication for problems with emotions, nerves, or mental health. Respondents were not to include treatment for drug or alcohol use. Respondents with unknown treatment/counseling information were excluded.

⁴ Significance testing was not conducted between the medians due to use of a complex sampling design.

⁵ Drug Use Disorder is based on definitions found in DSM-IV-TR (American Psychiatric Association, 2000). See table note 2 for the reference.

⁶ Number of Criteria Met for Drug Use Disorder is the number of criteria met out of the seven dependence criteria plus the number of criteria met out of the four abuse criteria. The number of criteria met for illicit drugs is determined as the maximum number of criteria met for marijuana, cocaine, heroin, hallucinogens, inhalants, pain relievers, tranquilizers, stimulants, and sedatives.

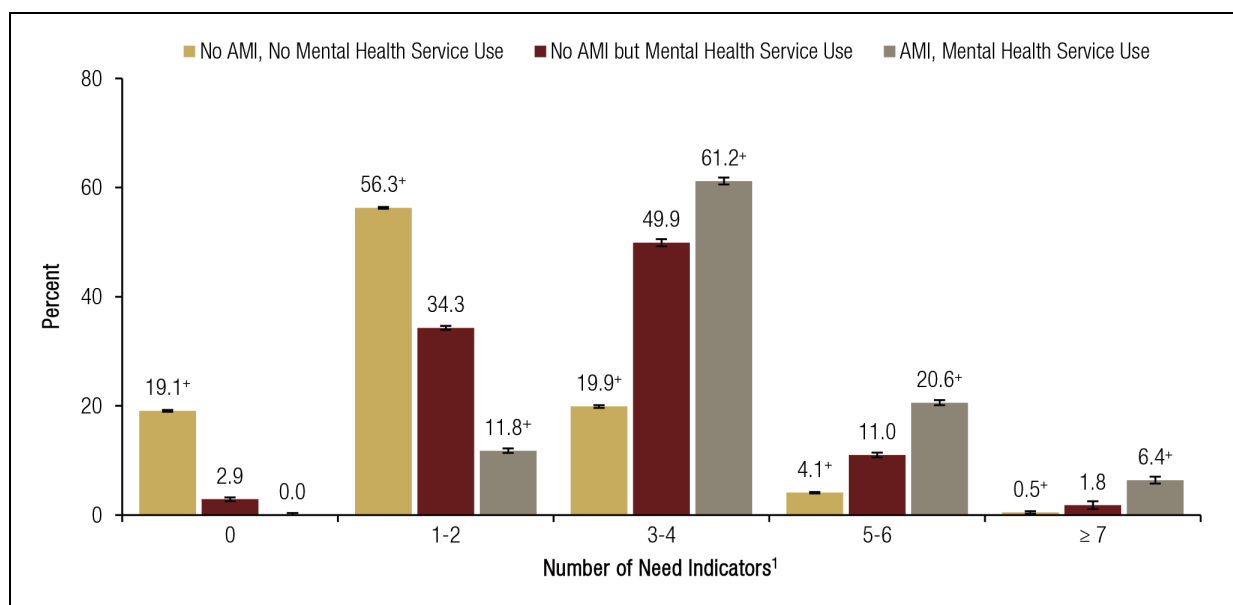
⁷ Respondents with unknown data were excluded.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health (NSDUH), 2008-2012.

3.1.5 Cumulative Indicators of Possible Service Need in NSDUH

People may use mental health services for a variety of reasons and may have more than one reason for using mental health services. Therefore, several indicators of possible mental health service need were examined in combination. These included past year substance use disorder; history of depression or anxiety; having any past year psychological distress; having some functional impairment in the past year; past month binge drinking; past month heavy drinking; being in fair or poor overall health; having attacked someone with the intent to seriously harm them in the past year; having a past year arrest; being on probation or parole during the past year; and past year illicit drug use. Overall, adults with no past year NSDUH AMI who used mental health services in the past year had more indicators of possible need than those with no AMI and no service use but had fewer indicators than those with AMI and service use (Figure 7). For example, 1.8 percent of adults with no AMI who used mental health services had seven or more indicators of possible need compared with 0.5 percent of those with no AMI and no service use and 6.4 percent of those with AMI and service use. Only 2.9 percent of adults with no AMI who used mental health services had none of the measured indicators of possible service need; that is, 87.1 percent of adults with no AMI who used mental health services had at least one of the indicators of service need.

Figure 7. Estimates of Number of Indicators of Possible Service Need among Adults Aged 18 or Older, by Past Year Any Mental Illness (AMI) and Past Year Mental Health Service Use: 2008-2012 NSDUH



⁺ Difference between estimate and No AMI but Mental Health Service Use estimate is statistically significant at the 0.05 level.

¹ Need Indicators include (1) Substance Use Disorder; (2) Ever Told by Doctor Had Depression or Anxiety Disorder; (3) Past Year K6 Score > 0; (4) World Health Organization Disability Assessment Schedule (WHODAS) Score > 0; (5) Past Month Binge Drinking; (6) Past Month Heavy Drinking; (7) Fair or Poor Overall Health; (8) Attacked Someone with the Intent to Seriously Harm Them; (9) Past Year Arrest; (10) Past Year Probation or Parole; and (11) Past Year Illicit Drug Use.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health (NSDUH), 2008-2012.

3.2 Characteristics of Mental Health Service Use in NSDUH

The next set of analyses examines the characteristics of the services used by adults and examines whether the type or frequency of service use was different among service users with no NSDUH AMI compared with those with AMI.

Among adults who used mental health services in the past year, adults with no AMI were significantly less likely to report each type of mental health service use than those with AMI, with the exception of a few low-frequency service types such as work/employee assistance program services, the emergency room, or hospice (Table 5). For example, 38.2 percent of adults with no AMI used outpatient services compared with 56.9 percent of service users with AMI. The rate of inpatient service use among service users with no AMI was about half that of those with AMI (3.7 percent vs. 7.7 percent). An estimated 82.4 percent of mental health service users with no AMI reported prescription medication use compared with 86.9 percent of their counterparts with AMI.

Table 5. Characteristics of Past Year Mental Health Service Use, by Past Year Any Mental Illness (AMI) among Adults Aged 18 or Older Who Used Mental Health Services: Percentages and Standard Errors, 2008-2012 NSDUH

Mental Health Service	Total	No AMI¹	AMI¹
TYPES OF MENTAL HEALTH SERVICES²			
Outpatient	48.2 (0.49)	38.2 (0.73)	56.9 ^b (0.62)
Outpatient Mental Health Clinic or Center	10.9 (0.29)	6.4 (0.34)	14.7 ^b (0.43)
Office of Private Therapist, Psychologist, Psychiatrist, Social Worker, or Counselor - Not Part of a Clinic	26.8 (0.43)	22.0 (0.59)	31.0 ^b (0.58)
Doctor's Office - Not Part of a Clinic	10.0 (0.28)	7.0 (0.36)	12.5 ^b (0.44)
Outpatient Medical Clinic	3.7 (0.19)	2.5 (0.25)	4.7 ^b (0.27)
Partial Day Hospital or Day Treatment Program	1.0 (0.08)	0.4 (0.07)	1.5 ^b (0.14)
School or University Setting/Clinic/Center	0.3 (0.03)	0.2 (0.03)	0.4 ^b (0.04)
Some Other Place ³	0.9 (0.08)	0.6 (0.09)	1.2 ^b (0.12)
Therapist/Psychologist/Counselor, Location Unspecified	0.1 (0.02)	0.1 (0.04)	0.0 (0.01)
Doctor's Office, Location Unspecified	0.1 (0.03)	0.1 (0.03)	0.2 ^a (0.06)
Work/Parent's Work/Employee Assistance Program/Job Training/Career Counseling	0.1 (0.02)	0.0 (0.02)	0.1 (0.04)
Victims Assistance (domestic violence shelter/rape crisis)	0.0 (0.01)	* (*)	0.0 (0.02)
Military Facility/VA	0.3 (0.05)	0.2 (0.05)	0.4 ^a (0.07)
Emergency Room	0.0 (0.01)	0.0 (0.01)	0.0 (0.02)
Hospital/Skilled Nursing Facility, Mental Health Unspecified	0.1 (0.03)	0.1 (0.04)	0.1 (0.04)
Clinic/Center/Agency/Program/Class, Type/Government/ Mental Health Unspecified	0.1 (0.02)	0.0 (0.02)	0.1 (0.02)
Social Services/Human Services	0.0 (0.01)	0.0 (0.01)	0.0 (0.02)
Halfway House/Transition Housing	0.0 (0.00)	* (*)	0.0 (0.01)
Hospice/Grief Counseling	0.0 (0.02)	0.0 (0.01)	0.1 (0.04)
Prison or Jail	0.0 (0.01)	* (*)	0.0 (0.02)
Shelter, Abuse/Violence Unspecified	0.0 (0.00)	* (*)	0.0 (0.01)
Office/Doctor/Therapist, Office Unspecified	0.0 (0.00)	0.0 (0.01)	* (*)

Table 5. Characteristics of Past Year Mental Health Service Use, by Past Year Any Mental Illness (AMI) among Adults Aged 18 or Older Who Used Mental Health Services: Percentages and Standard Errors, 2008-2012 NSDUH (continued)

Mental Health Service	Total	No AMI¹	AMI¹
No Location Specified ⁴	1.4 (0.19)	1.7 (0.42)	1.2 (0.18)
Inpatient	5.9 (0.23)	3.7 (0.27)	7.7 ^b (0.36)
Prescription Medication	84.9 (0.33)	82.4 (0.51)	86.9 ^b (0.43)

*Low precision; no estimate reported.

NOTE: Significance testing was conducted between the No AMI estimates and the AMI estimates.

^a Difference between estimate and No AMI estimate is statistically significant at the 0.05 level.

^b Difference between estimate and No AMI estimate is statistically significant at the 0.01 level.

¹ NSDUH AMI is defined as having a diagnosable mental, behavioral, or emotional disorder, other than a developmental or substance use disorder, assessed by the Mental Health Surveillance Study (MHSS) *Structured Clinical Interview for the Diagnostic and Statistical Manual of Mental Disorders—Fourth Edition—Research Version—Axis I Disorders* (MHSS-SCID), which is based on the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR) (American Psychiatric Association, 2000). Three categories of mental illness severity are defined based on the level of functional impairment: mild mental illness, moderate mental illness, and serious mental illness. Any mental illness includes people in any of the three categories. These mental illness estimates are based on a predictive model and are not direct measures of diagnostic status. See the following reference: American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.). Washington, DC: American Psychiatric Association.

² Mental Health Treatment/Counseling is defined as having received inpatient treatment/counseling or outpatient treatment/counseling or having used prescription medication for problems with emotions, nerves, or mental health. Respondents were not to include treatment for drug or alcohol use. Respondents with unknown treatment/counseling information were excluded.

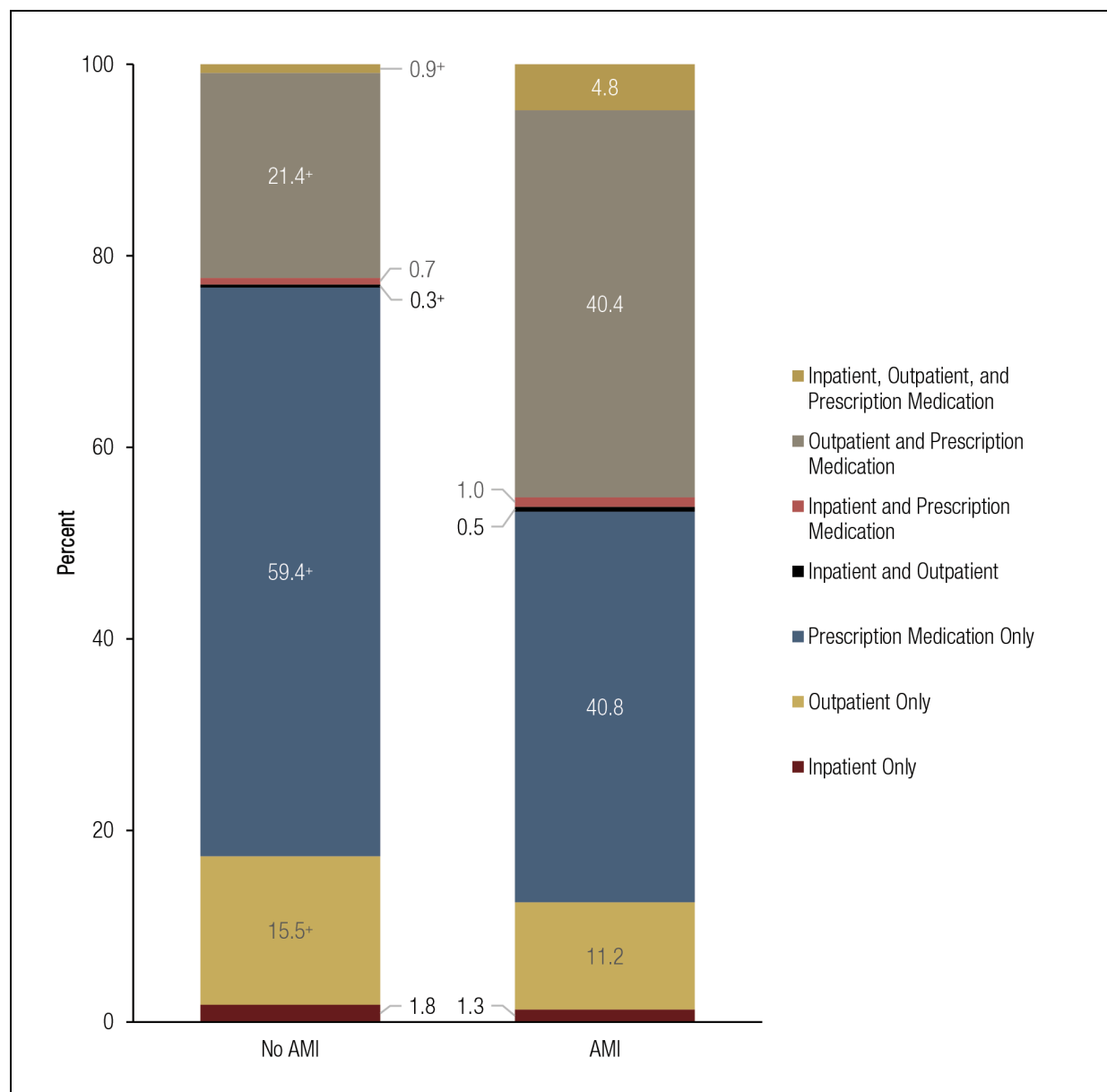
³ Respondents with unknown or invalid responses to the other-specify question on Some Other Place Received Outpatient Mental Health Treatment/Counseling were excluded.

⁴ No Location Specified is defined as people who received outpatient mental health treatment/counseling but did not specify a treatment location.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health (NSDUH), 2008-2012.

Patterns of service use differed for past year service users with no AMI compared with those with AMI. Adults with no AMI were more likely to report outpatient service use only (15.5 percent) and prescription medication use only (59.4 percent) than those with AMI (outpatient only: 11.2 percent; prescription medication only: 40.8 percent; [Figure 8](#)). Adults with no AMI were less likely to have used outpatient services and prescription medication (21.4 percent) and were less likely to use all three service types (inpatient, outpatient, and prescription medication: 0.9 percent) than those with AMI (40.4 and 4.8 percent, respectively).

Figure 8. Types of Mental Health Services Used by Adults Aged 18 or Older Who Had Past Year Mental Health Service Use, by Past Year Any Mental Illness (AMI) Status: 2008-2012 NSDUH



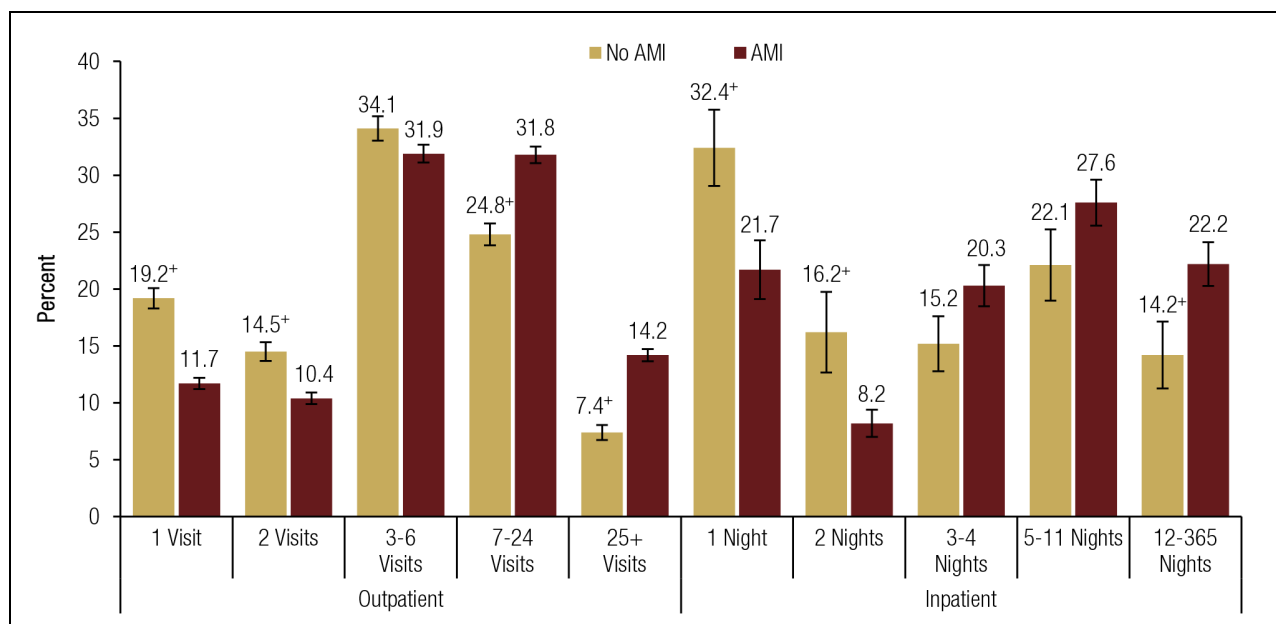
⁺ Difference between No AMI and AMI estimate is statistically significant at the 0.05 level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health (NSDUH), 2008-2012.

Overall, adults with no AMI who used outpatient mental health services had fewer outpatient visits than those with AMI (mean: 8.6 visits vs. 13.6 visits; [Table D.2](#)). Adults with no AMI were more likely to have only 1 or 2 visits (19.2 percent and 14.5 percent; [Figure 9](#)) than those with AMI (11.7 percent and 10.4 percent) and were less likely to have 25 or more visits (7.4 percent) than those with AMI (14.2 percent). Adults with no AMI who used inpatient services were more likely to have stayed only 1 night (32.4 percent) and were less likely to have stayed 12 to 365 nights (14.2 percent) than those with AMI (1 night: 21.7 percent; 12 to 365 nights: 22.2

percent). Despite the fewer number of visits, respondents with no AMI who used mental health services were significantly less likely to report an unmet need for additional mental health services than adults with AMI who used services (5.7 percent vs. 29.5 percent; [Figure 10](#); [Table D.1](#)).

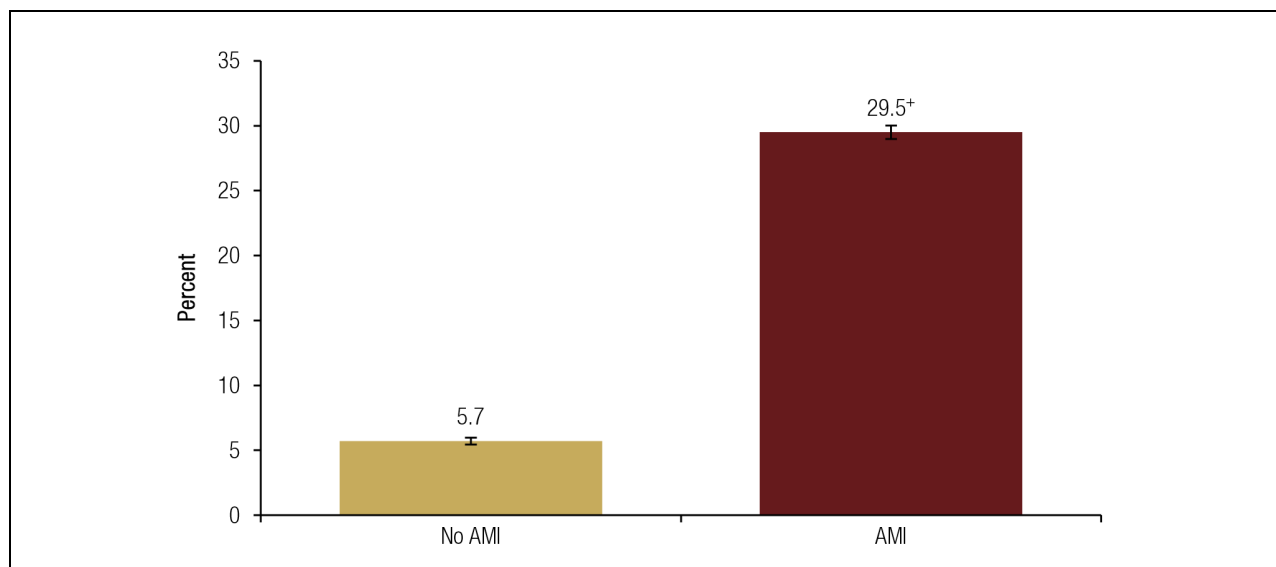
Figure 9. Frequency of Mental Health Service Use among Adults Aged 18 or Older Who Had Past Year Mental Health Service Use, by Past Year Any Mental Illness (AMI) Status: 2008-2012 NSDUH



⁺ Difference between No AMI and AMI estimate is statistically significant at the 0.05 level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health (NSDUH), 2008-2012.

Figure 10. Frequency of Perceived Unmet Need for Mental Health Services among Adults Aged 18 or Older Who Used Services, by Past Year Any Mental Illness (AMI) Status and Past Year Service Use: 2008-2012 NSDUH



⁺ Difference between No AMI and AMI estimate is statistically significant at the 0.05 level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health (NSDUH), 2008-2012.

3.3 Characteristics of Adult Service Users in MHSS by SCID Mental Illness

This section presents data from a subsample of about 5,500 adults from NSDUH who completed a clinical diagnostic interview as part of the Mental Health Surveillance Study (MHSS). As noted in the methods section (section 2), the MHSS was conducted to build a statistical model for NSDUH to allow for annual model-based estimates of mental illness among adults. Because NSDUH contained a model-based estimate of AMI (NSDUH AMI) but the MHSS contains direct estimates of mental illness (measured using the Structured Clinical Interview for DSM-IV-TR Axis I Disorders [SCID-I; First, Spitzer, Gibbon, & Williams, 2002]) and because data collection was from a subsample of adult respondents to NSDUH, comparisons of NSDUH AMI and MHSS mental illness may be made on the same sample of 5,500 individuals. This overlap allows for the estimation of the consistency of results when examining service use among those with and without SCID-measured mental illness compared with NSDUH AMI, despite the misclassification error associated with the AMI measure (see Appendix A for more detail on misclassification).

Similar to the process for AMI in section 3.1.2, the next section examines the demographic, mental health, and substance use characteristics of mental health service users and nonusers by SCID mental illness using the subset of data from the MHSS.

3.3.1 Demographic Characteristics

Data from the MHSS indicate that an annual average of 17.9 percent of adults in the United States had SCID-measured mental illness in the past year (Table B.2). Of the 13.5 percent of adults who used mental health services, an estimated 46.8 percent reported mental health service use but did not meet criteria for SCID mental illness.

Demographic differences among adults with and without past year mental health service use by past year SCID mental illness were largely similar to those found when examining NSDUH AMI. However, the smaller sample for these analyses led to larger standard errors, making statistical comparisons less precise. For example, 12.2 percent of adults with no AMI who used mental health services were between the ages of 18 to 25, which was significantly less than the 14.8 percent of those with no AMI and no service use (a 2.6 percent difference; Table 1). However, the 2.5 percent difference between the 11.9 percent of adults with no SCID mental illness who used services who were between the ages of 18 to 25 and the 14.4 percent of those with no SCID mental illness and no service use in that age group was not statistically significant (Table 6). Statistically significant differences indicated that adults with no SCID mental illness who used mental health services were more likely to be female, not Hispanic or Latino white, and have health insurance than those with no SCID mental illness and no service use. Additionally, adults with no SCID mental illness who used mental health services were more likely to have a family income at or above 200 percent of the federal poverty threshold and were less likely to be divorced or separated, have an employment status of "other," to be in fair or poor health, and to be uninsured compared with their counterparts with SCID mental illness and service use.

Table 6. Demographic Characteristics of Adults Aged 18 or Older, by SCID Mental Illness (MI) and Mental Health Service Use Status: Percentages and Standard Errors, 2008-2012 MHSS

Demographic Characteristics	Total	No SCID MI and No Mental Health Service Use^{1,2}	No SCID MI but Mental Health Service Use^{1,2}	SCID MI and Mental Health Service Use^{1,2}
AGE				
18-25	14.7 (< 0.01) ³	14.4 (0.39)	11.9 (2.76)	11.2 (1.44)
26-49	42.4 (< 0.01) ³	41.3 (0.47)	41.9 (3.53)	50.4 (2.61)
50 or Older	42.8 (< 0.01) ³	44.3 (0.52)	46.2 (3.63)	38.4 (2.90)
GENDER				
Male	48.2 (< 0.01) ³	51.3 ^b (0.56)	37.9 (3.59)	32.2 (2.59)
Female	51.8 (< 0.01) ³	48.7 ^b (0.56)	62.1 (3.59)	67.8 (2.59)
HISPANIC OR LATINO ORIGIN/RACE				
Not Hispanic/Latino	85.6 (< 0.01) ³	85.3 ^a (0.64)	92.0 (2.61)	90.9 (2.03)
White	67.1 (< 0.01) ³	65.6 ^b (0.61)	82.6 (3.16)	79.7 (2.10)
Black/African American	11.5 (< 0.01) ³	12.1 ^a (0.38)	7.5 (2.10)	6.3 (1.21)
Other	7.0 (< 0.01) ³	7.6 ^b (0.25)	1.9 (0.97)	4.9 (1.52)
Hispanic/Latino	14.4 (< 0.01) ³	14.7 ^a (0.64)	8.0 (2.61)	9.1 (2.03)
EDUCATION				
Less than high school	13.1 (0.93)	11.9 (1.08)	11.2 (2.53)	12.3 (1.93)
High School Graduate	29.4 (1.29)	29.6 (1.59)	29.4 (3.58)	23.8 (2.52)
Some College	27.4 (1.18)	28.3 (1.44)	23.4 (3.47)	28.3 (2.52)
College Degree	30.2 (1.20)	30.2 (1.49)	36.1 (3.70)	35.7 (3.01)
MARITAL STATUS				
Married	53.8 (1.43)	54.6 (1.76)	58.5 (3.91)	47.4 ^a (3.03)
Widowed	4.5 (0.57)	4.9 (0.72)	5.1 (1.74)	2.4 (0.80)
Divorced or Separated	16.1 (1.25)	15.6 (1.46)	13.6 (2.34)	25.5 ^b (3.34)
Never Married	25.6 (0.74)	24.9 (0.96)	22.8 (3.49)	24.7 (2.35)
EMPLOYMENT STATUS				
Full Time	51.1 (1.06)	53.1 (1.29)	50.4 (3.78)	34.2 ^b (2.55)
Part Time	13.2 (0.76)	12.8 (1.00)	14.1 (2.48)	16.6 (1.72)
Unemployed	6.5 (0.72)	6.1 (0.79)	9.3 (2.57)	7.4 (1.77)
Other (including not in the labor force) ⁴	29.2 (1.04)	28.0 (1.28)	26.2 (3.53)	41.8 ^b (2.97)
POVERTY STATUS⁵				
< 100% of the Federal Poverty Threshold	12.4 (0.92)	11.2 (1.13)	12.7 (2.92)	18.9 (2.53)
100-199% of the Federal Poverty Threshold	19.0 (0.93)	17.6 (1.16)	15.7 (2.97)	21.5 (2.51)
≥ 200% of the Federal Poverty Threshold	68.6 (1.23)	71.2 (1.60)	71.6 (3.81)	59.6 ^a (3.28)
OVERALL HEALTH⁶				
Excellent or Very Good	61.5 (1.10)	65.0 (1.34)	62.7 (4.10)	41.0 ^b (2.97)
Good	25.9 (1.06)	24.6 (1.17)	23.5 (3.60)	32.1 (3.24)
Fair or Poor	12.5 (0.76)	10.4 (0.84)	13.7 (2.24)	27.0 ^b (2.66)

Table 6. Demographic Characteristics of Adults Aged 18 or Older, by SCID Mental Illness (MI) and Mental Health Service Use Status: Percentages and Standard Errors, 2008-2012 MHSS (continued)

Demographic Characteristics	Total	No SCID MI and No Mental Health Service Use^{1,2}	No SCID MI but Mental Health Service Use^{1,2}	SCID MI and Mental Health Service Use^{1,2}
HEALTH INSURANCE⁷				
Insured	83.9 (0.83)	84.4 ^b (0.94)	91.7 (2.07)	85.1 ^a (2.05)
Private Coverage	67.5 (1.18)	68.8 (1.37)	73.2 (4.02)	59.3 ^b (3.06)
Medicaid/CHIP ⁸	7.8 (0.66)	6.7 (0.75)	9.5 (2.29)	15.2 (2.04)
Other ⁹	23.6 (1.10)	24.3 (1.42)	21.4 (3.70)	26.1 (3.03)
Uninsured	16.1 (0.83)	15.6 ^b (0.94)	8.3 (2.07)	14.9 ^a (2.05)
VETERAN STATUS				
Yes	12.0 (0.90)	13.5 (1.16)	9.4 (2.54)	6.6 (1.18)
No	88.0 (0.90)	86.5 (1.16)	90.6 (2.54)	93.4 (1.18)
NUMBER OF MOVES IN THE PAST YEAR⁶				
0	78.3 (0.95)	80.0 (1.13)	76.6 (3.43)	73.6 (2.76)
1 or 2	19.0 (0.92)	17.4 (1.06)	19.9 (3.29)	23.7 (2.72)
3 or More	2.8 (0.45)	2.6 (0.56)	3.4 (1.28)	2.7 (0.80)

SCID = Structured Clinical Interview for DSM Disorders.

*Low precision; no estimate reported.

NOTE: Standard errors of weighted percentages have been computed with the WTADJX procedure of SUDAAN® 11.0.1 (RTI International, 2013), recognizing that the clinical sample weights were calibrated annually to estimated totals computed from a larger NSDUH sample of adults.

^a Difference between estimate and No SCID MI but Mental Health Service Use estimate is statistically significant at the 0.05 level.

^b Difference between estimate and No SCID MI but Mental Health Service Use estimate is statistically significant at the 0.01 level.

¹ SCID MI includes respondents with any of the following past year disorders: major depressive episode, manic episode, dysthymic disorder, posttraumatic stress disorder, panic disorder with or without agoraphobia, agoraphobia without panic disorder, social phobia, specific phobia, obsessive compulsive disorder, generalized anxiety disorder, anorexia nervosa, bulimia nervosa, intermittent explosive disorder, psychotic symptoms, and adjustment disorder irrespective of their Global Assessment of Functioning (GAF) score.

² Mental Health Service Use is defined as having received inpatient treatment/counseling or outpatient treatment/counseling or having used prescription medication for problems with emotions, nerves, or mental health. Respondents were not to include treatment for drug or alcohol use. Respondents with unknown treatment/counseling information were excluded.

³ National estimates computed from the clinical sample were calibrated so that the contributions from key variables such as this one matched their census-provided values.

⁴ The Other Employment category includes students, people keeping house or caring for children full time, retired or disabled people, or other people not in the labor force.

⁵ Estimates are based on a definition of Poverty Level that incorporates information on family income, size, and composition and is calculated as a percentage of the U.S. Census Bureau's poverty thresholds. Respondents aged 18 to 22 who were living in a college dormitory were excluded.

⁶ Respondents with unknown data were excluded.

⁷ Respondents could indicate multiple types of health insurance; thus, these response categories are not mutually exclusive.

⁸ CHIP is the Children's Health Insurance Program. Individuals aged 19 or younger are eligible for this plan.

⁹ Other Health Insurance is defined as having Medicare, CHAMPUS, TRICARE, CHAMPVA, the VA, military health care, or any other type of health insurance.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health (NSDUH) and Mental Health Surveillance Study (MHSS) Clinical Sample, 2008-2012.

3.3.2 Mental Health Characteristics

Despite the smaller sample sizes and therefore the decrease in statistical precision of the estimates, most of the differences in mental health characteristics by past year SCID mental illness and past year mental health service use were of sufficient magnitude to detect. These differences mirrored those observed by NSDUH AMI status and demonstrated an increasing trend of mental health problems—from people with no SCID mental illness or treatment, to those with no SCID mental illness but who *had* used mental health services, to those with SCID mental illness and service use. For example, almost half (48.7 percent) of adults with no SCID mental illness who used mental health services had been told by a doctor that they had depression compared with only 4.1 percent of adults with no SCID mental illness and no service use in the past year and more than two thirds (70.0 percent) of those with SCID mental illness and service use (Table 7). The average past year (K6) distress score among adults with no SCID mental illness who had mental health service use was double that of those with no SCID mental illness and no service use (7.0 vs. 3.5) but lower than the average score among adults with SCID mental illness and service use (12.6). Mean functional impairment followed a similar pattern. Only 7.2 percent of adults with no SCID mental illness who used mental health services reported no past year psychological distress compared with 26.6 percent of those with no SCID mental illness and no service use (Figure 11). Similarly, 22.1 percent of those with no SCID mental illness who used mental health services had no functional impairment, which is less than half the rate of those with no SCID mental illness and no service use (54.6 percent).

Table 7. Mental Health Characteristics of Adults Aged 18 or Older, by SCID Mental Illness (MI) and Mental Health Service Use Status: Percentages (or Average) and Standard Errors, 2008-2012 MHSS

Mental Health Characteristics	Total	No SCID MI and No Mental Health Service Use^{1,2}	No SCID MI but Mental Health Service Use^{1,2}	SCID MI and Mental Health Service Use^{1,2}
MENTAL HEALTH HISTORY³				
Ever Told by Doctor Had Depression	13.0 (0.60)	4.1 ^b (0.47)	48.7 (3.42)	70.0 ^b (2.72)
Ever Told by Doctor Had Anxiety Disorder	8.6 (0.54)	2.7 ^b (0.46)	31.3 (3.54)	52.0 ^b (3.23)
PSYCHOLOGICAL DISTRESS				
Average Past Year Distress Score (Most Distressed Month in Past Year) ⁴	5.0 (0.05)	3.5 ^b (0.08)	7.0 (0.38)	12.6 ^b (0.37)
Past Year Serious Psychological Distress ⁵	10.7 (0.20)	4.2 ^b (0.24)	13.6 (1.77)	49.7 ^b (2.65)
FUNCTIONAL IMPAIRMENT				
Average Past Year Functional Impairment Score ⁶	3.5 (0.05)	2.1 ^b (0.07)	5.8 (0.36)	11.4 ^b (0.41)
Any Impairment (WHODAS Score > 0)	54.7 (1.25)	45.4 ^b (1.57)	77.9 (3.53)	95.9 ^b (1.80)

SCID = Structured Clinical Interview for DSM Disorders.

*Low precision; no estimate reported.

NOTE: Standard errors of weighted percentages have been computed with the WTADJX procedure of SUDAAN® 11.0.1 (RTI International, 2013), recognizing that the clinical sample weights were calibrated annually to estimated totals computed from a larger NSDUH sample of adults.

^a Difference between estimate and No SCID MI but Mental Health Service Use estimate is statistically significant at the 0.05 level.

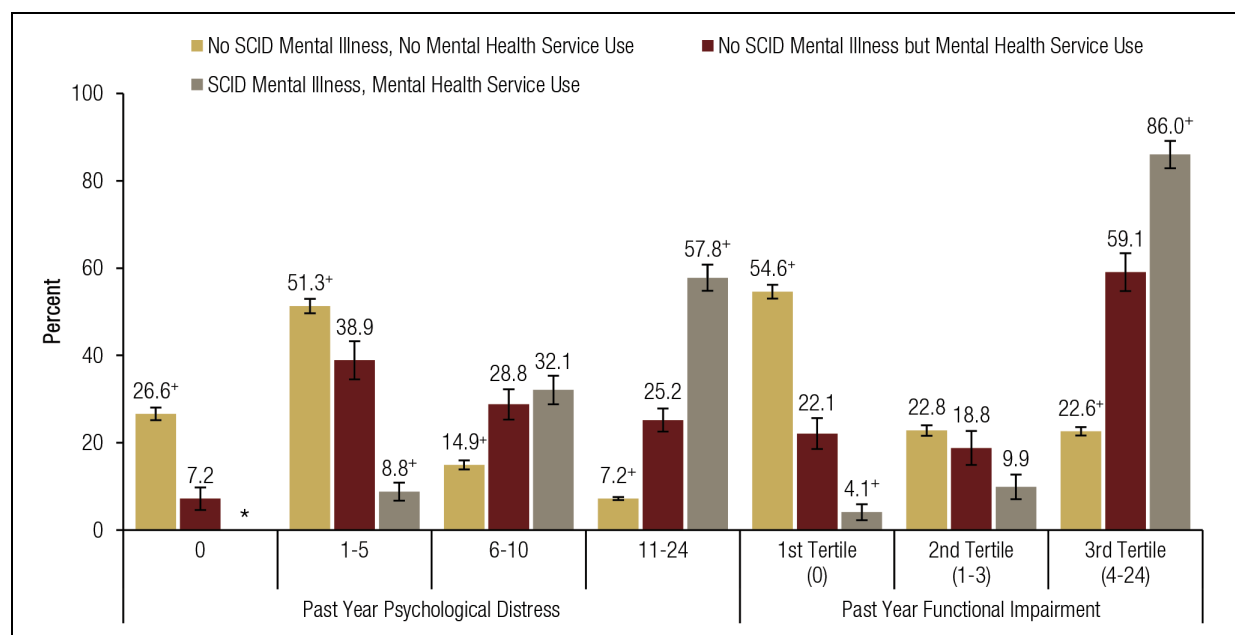
^b Difference between estimate and No SCID MI but Mental Health Service Use estimate is statistically significant at the 0.01 level.

Table 7. Mental Health Characteristics of Adults Aged 18 or Older, by SCID Mental Illness (MI) and Mental Health Service Use Status: Percentages (or Average) and Standard Errors, 2008-2012 MHSS (continued)

- ¹ SCID MI includes respondents with any of the following past year disorders: major depressive episode, manic episode, dysthymic disorder, posttraumatic stress disorder, panic disorder with or without agoraphobia, agoraphobia without panic disorder, social phobia, specific phobia, obsessive compulsive disorder, generalized anxiety disorder, anorexia nervosa, bulimia nervosa, intermittent explosive disorder, psychotic symptoms, and adjustment disorder irrespective of their Global Assessment of Functioning (GAF) score.
- ² Mental Health Service Use is defined as having received inpatient treatment/counseling or outpatient treatment/counseling or having used prescription medication for problems with emotions, nerves, or mental health. Respondents were not to include treatment for drug or alcohol use. Respondents with unknown treatment/counseling information were excluded.
- ³ Respondents with unknown data were excluded.
- ⁴ Distress Score is a score with values ranging from 0 to 24 indicating the level of psychological distress. Past month score is based on data collected from a series of six questions known as the K6, asking adult respondents how frequently they experienced symptoms of psychological distress during the past 30 days. Past year score incorporates past month score plus a series of six questions asking about the worst month in the past year if not the past month.
- ⁵ Serious Psychological Distress (SPD) is defined for this table as having a score of 13 or higher on the K6 scale.
- ⁶ Functional Impairment refers to interference in a person's daily functioning or limitations in carrying out one or more major life activities, based on the World Health Organization Disability Assessment Schedule (WHODAS). A score ranging from 0 to 24 is created based on responses to eight measures.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health (NSDUH) and Mental Health Surveillance Study (MHSS) Clinical Sample, 2008-2012.

Figure 11. Past Year Psychological Distress and Functional Impairment among Adults Aged 18 or Older, by Past Year SCID Mental Illness and Mental Health Service Use: 2008-2012 MHSS



SCID = Structured Clinical Interview for DSM Disorders.

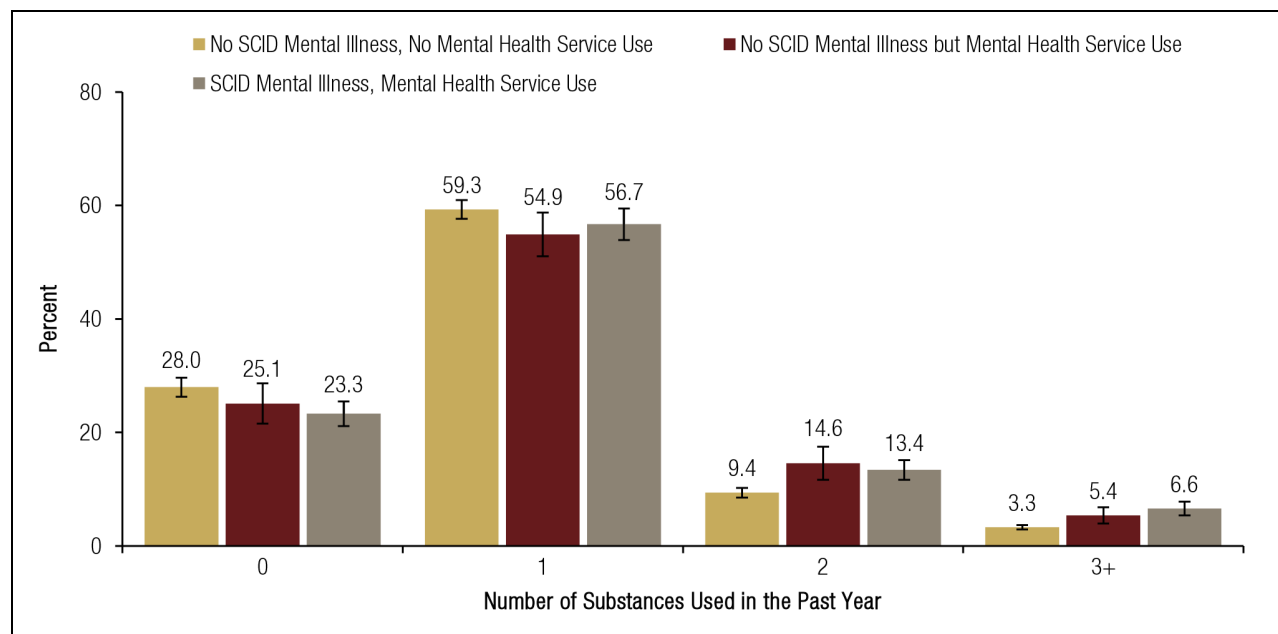
⁺ Difference between estimate and No SCID Mental Illness but Mental Health Service Use estimate is statistically significant at the 0.05 level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health (NSDUH) and Mental Health Surveillance Study (MHSS) Clinical Sample, 2008-2012.

3.3.3 Substance Use Characteristics

The number of substances used in the past year did not differ significantly among those with no past year SCID mental illness who used mental health services compared with those who did not use services (Figure 12). There also was no significant difference in the number of substances used among service users with no SCID mental illness compared with those with SCID mental illness.

Figure 12. Number of Substances Used in the Past Year among Adults Aged 18 or Older, by Past Year SCID Mental Illness and Mental Health Service Use: 2008-2012 MHSS



SCID = Structured Clinical Interview for DSM Disorders.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health (NSDUH) and Mental Health Surveillance Study (MHSS) Clinical Sample, 2008-2012.

There were few significant differences in substance use characteristics (Table 8). Adults with no SCID mental illness who used mental health services were more likely to have driven under the influence of alcohol (18.3 percent) and have a past year alcohol use disorder (10.6 percent) than those with no SCID mental illness and no service use (11.5 percent and 5.5 percent, respectively). The rate of past year illicit drug use was higher among adults with no SCID mental illness who used mental health services (21.4 percent) compared with those with no SCID mental illness and no service use (13.2 percent) but similar to those with SCID mental illness and service use (22.0 percent).

Table 8. Substance Use Characteristics of Adults Aged 18 or Older, by Past Year SCID Mental Illness (MI) and Mental Health Service Use Status: Percentages and Standard Errors, 2008-2012 MHSS

Substance Use Characteristics	Total	No SCID MI and No Mental Health Service Use^{1,2}	No SCID MI but Mental Health Service Use^{1,2}	SCID MI and Mental Health Service Use^{1,2}
ALCOHOL USE				
Past Year Alcohol Use	72.0 (1.27)	71.4 (1.66)	73.1 (3.65)	74.2 (2.20)
Average Number of Days Used Alcohol in the Past Year among Users	95.3 (3.15)	95.2 (3.76)	101.1 (9.43)	90.9 (9.60)
Median Number of Days Used Alcohol in the Past Year among Users ³				
Past Month Binge Drinking ⁴	25.9 (1.08)	25.4 (1.32)	26.4 (3.26)	23.2 (2.56)
Past Month Heavy Alcohol Use ⁴	7.7 (0.80)	7.2 (0.90)	7.2 (1.75)	8.2 (1.75)
Drove under the Influence of Alcohol in Past Year	13.3 (0.79)	11.5 ^a (0.91)	18.3 (2.94)	19.3 (2.37)
Past Year Arrest for Drunkenness or Liquor Law Violation ⁵	0.3 (0.09)	0.2 (0.09)	0.1 (0.06)	1.3 (0.79)
Past Year Alcohol Use Disorder ⁶	7.4 (0.63)	5.5 ^a (0.72)	10.6 (2.06)	14.5 (1.65)
DRUG USE⁷				
Past Year Drug Use	15.5 (0.71)	13.2 ^a (0.87)	21.4 (3.41)	22.0 (2.31)
Average Number of Days Used Illicit Drugs in the Past Year among Users	112.1 (7.88)	103.5 (10.30)	73.7 (16.02)	104.8 (9.11)
Median Number of Days Used Illicit Drugs in the Past Year among Users ³				
Past Year Arrest for Possession, Manufacture, or Sale of Drugs ⁵	0.4 (0.11)	0.3 (0.13)	0.1 (0.06)	1.4 ^a (0.56)
Sold Illegal Drugs in the Past Year ⁵	1.8 (0.36)	1.6 (0.47)	1.2 (0.50)	2.7 (0.70)
Drove under the Influence of Drugs in the Past Year	5.1 (0.42)	3.9 (0.48)	7.4 (1.68)	7.0 (1.29)
Subthreshold Drug Dependence ^{6,8}	3.5 (0.39)	2.6 (0.38)	5.1 (1.53)	3.3 (0.90)
Drug Use Disorder ⁶	2.6 (0.37)	1.9 (0.46)	2.7 (0.82)	6.4 ^a (1.22)

SCID = Structured Clinical Interview for DSM Disorders.

*Low precision; no estimate reported.

NOTE: Standard errors of weighted percentages have been computed with the WTADJX procedure of SUDAAN® 11.0.1 (RTI International, 2013), recognizing that the clinical sample weights were calibrated annually to estimated totals computed from a larger NSDUH sample of adults.

^a Difference between estimate and No SCID MI but Mental Health Service Use estimate is statistically significant at the 0.05 level.

^b Difference between estimate and No SCID MI but Mental Health Service Use estimate is statistically significant at the 0.01 level.

¹ SCID MI includes respondents with any of the following past year disorders: major depressive episode, manic episode, dysthymic disorder, posttraumatic stress disorder, panic disorder with or without agoraphobia, agoraphobia without panic disorder, social phobia, specific phobia, obsessive compulsive disorder, generalized anxiety disorder, anorexia nervosa, bulimia nervosa, intermittent explosive disorder, psychotic symptoms, and adjustment disorder irrespective of their Global Assessment of Functioning (GAF) score.

² Mental Health Service Use is defined as having received inpatient treatment/counseling or outpatient treatment/counseling or having used prescription medication for problems with emotions, nerves, or mental health. Respondents were not to include treatment for drug or alcohol use. Respondents with unknown treatment/counseling information were excluded.

³ Significance testing was not conducted between the medians due to use of a complex sampling design.

⁴ Binge Alcohol Use is defined 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.

⁵ Respondents with unknown data were excluded.

Table 8. Substance Use Characteristics of Adults Aged 18 or Older, by Past Year SCID Mental Illness (MI) and Mental Health Service Use Status: Percentages and Standard Errors, 2008-2012 MHSS (continued)

⁶ Alcohol Use Disorder and Drug Use Disorder are based on definitions found in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR) (American Psychiatric Association, 2000). See the following reference: American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.). Washington, DC: American Psychiatric Association.

⁷ Illicit Drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription psychotherapeutics used nonmedically.

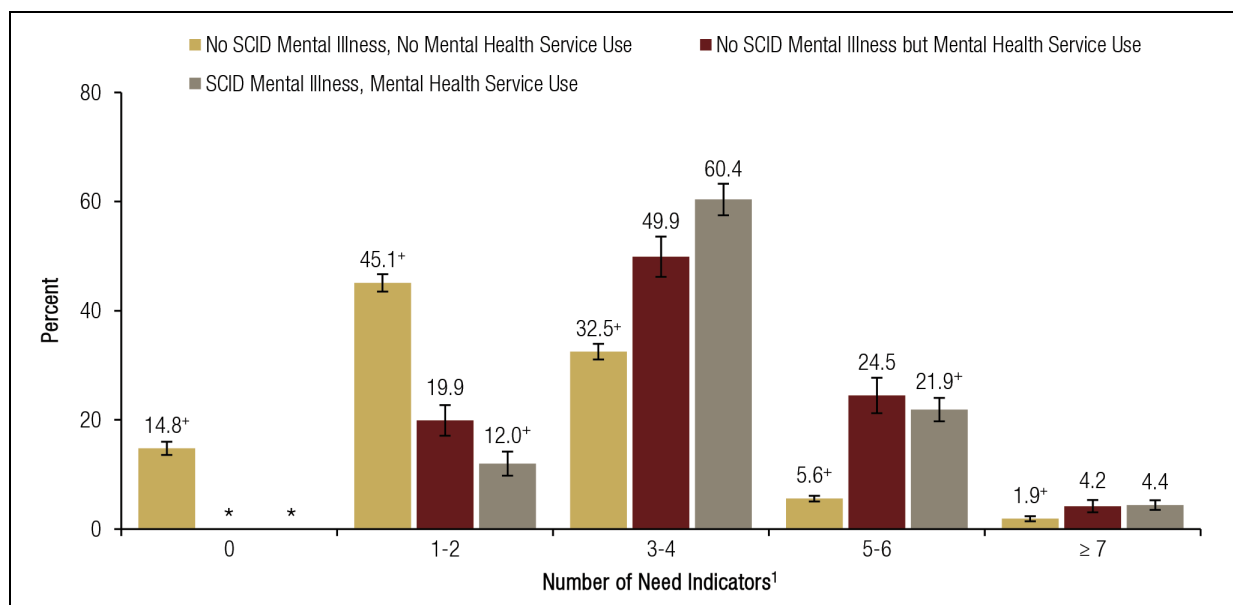
⁸ Subthreshold Drug Dependence occurs when a respondent who is not classified as having Drug Use Disorder endorses one or two of the dependence criteria.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health (NSDUH) and Mental Health Surveillance Study (MHSS) Clinical Sample, 2008-2012.

3.3.4 Cumulative Indicators of Possible Service Need

Almost all adults with no SCID mental illness who used mental health services in the past year had at least one indicator of possible need (Figure 13). For the analyses using MHSS and SCID data, subthreshold indicators of potential disorders are included as indicators of possible need. Overall, adults with no SCID mental illness who used mental health services had more indicators of possible service need than those with no SCID mental illness and no service use. For example, 24.5 percent of adults with no SCID mental illness who used mental health services had five to six indicators of possible service need compared with 5.6 percent of those with no SCID mental illness and no service use.

Figure 13. Estimates of Number of Indicators of Possible Service Need among Adults Aged 18 or Older, by Past Year SCID Mental Illness and Mental Health Service Use: 2008-2012 MHSS



SCID = Structured Clinical Interview for DSM Disorders.

*Low precision; no estimate reported.

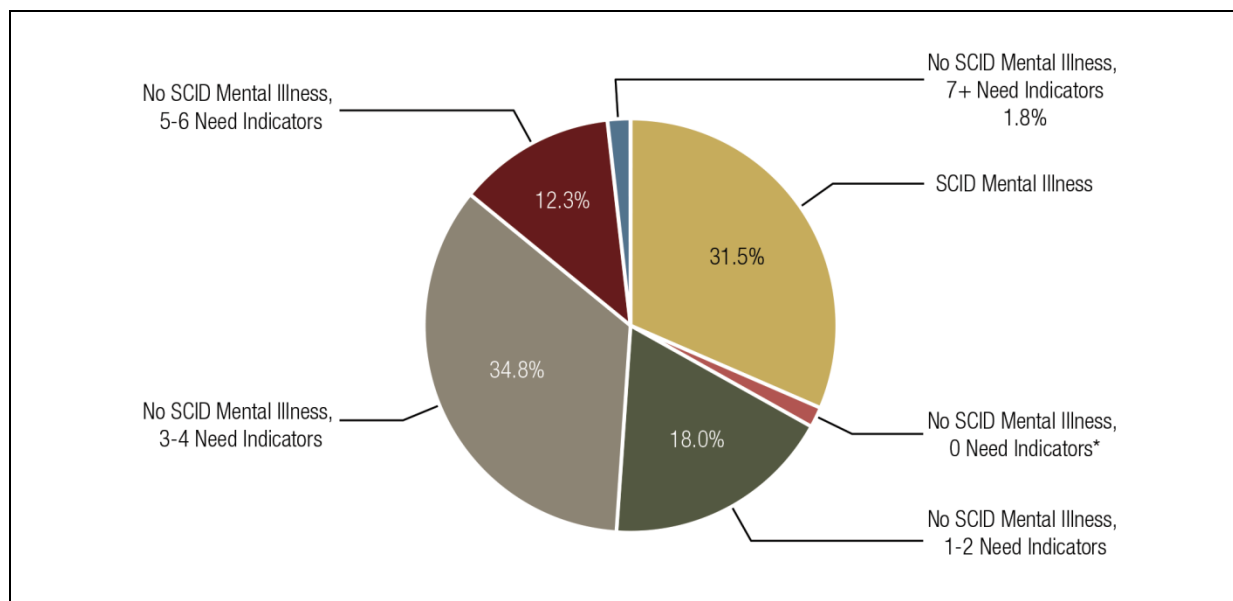
⁺ Difference between estimate and No SCID Mental Illness but Mental Health Service Use estimate is statistically significant at the 0.05 level.

¹ Need Indicators include (1) Substance Use Disorder; (2) Ever Told by Doctor Had Depression or Anxiety Disorder; (3) Past Year K6 Score > 0; (4) World Health Organization Disability Assessment Schedule (WHODAS) Score > 0; (5) Past Month Binge Drinking; (6) Past Month Heavy Drinking; (7) Fair or Poor Overall Health; (8) Attacked Someone with the Intent to Seriously Harm Them; (9) Past Year Arrest; (10) Past Year Probation or Parole; (11) Past Year Illicit Drug Use; and (12) Subthreshold SCID Mental Illness.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health (NSDUH) and Mental Health Surveillance Study (MHSS) Clinical Sample, 2008-2012.

Combining NSDUH AMI and SCID mental illness data indicates that nearly one third (31.5 percent) of adults with no past year NSDUH AMI who used mental health services in the past year had SCID mental illness (Figure 14). The remainder of adults in this population consisted mostly of those who had one to two need indicators (18.0 percent) or three to four need indicators (34.8 percent); the percentage who had no indicators of possible service need was so small as to not be reportable due to low statistical precision.

Figure 14. Estimates of SCID Mental Illness and Indicators of Possible Service Need among Adults Aged 18 or Older with No Past Year Any Mental Illness Who Used Mental Health Services in the Past Year: 2008-2012 MHSS



SCID = Structured Clinical Interview for DSM Disorders.

*Low precision; no estimate reported.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health (NSDUH) and Mental Health Surveillance Study (MHSS) Clinical Sample, 2008-2012.

4. Discussion

Between 2008 and 2012, an annual average of 6.4 percent of adults did not meet criteria for past year National Survey on Drug Use and Health (NSDUH) any mental illness (AMI) but had used mental health services in the past year. This corresponded to just under half (46.1 percent) of the adult service-using population. Similar results were observed when the Structured Clinical Interview for DSM-IV-TR Axis I Disorders (SCID-I; First, Spitzer, Gibbon, & Williams, 2002) diagnostic criteria were used to define mental illness, where almost half of adults who used services in the past year did not meet criteria for SCID mental illness (46.8 percent). Moreover, the estimate of mental health service use by adults with no AMI was similar to that reported in the National Institute of Mental Health (NIMH) Epidemiologic Catchment Area (ECA) study (6.6 percent; Regier et al., 1993) and accounted for a similar proportion of service users (NSDUH: 46.1 percent; ECA: 44.9 percent). The World Health Organization World Mental Health (WMH) surveys also had similar findings, where 48 percent of respondents who used mental health services in the year prior to the survey did not meet criteria for a mental illness that year (Bruffaerts et al., 2015).

Examination of the characteristics of adults with no past year AMI who used mental health services in the past year indicated that these adults had elevated levels of psychological distress and impairment compared with those with no AMI and no service use. They also had more substance use problems (e.g., binge drinking, alcohol or drug use disorder) than those with no AMI and no service use. Overall, just under 3 percent of adults with no NSDUH AMI who used mental health services in the past year did not have any other indicator of possible service need (e.g., mental distress, substance use disorder, past year arrest) measured by NSDUH (97.1 percent had at least one indicator), and almost none of those in the Mental Health Surveillance Study (MHSS) who used mental health services had any indicator of possible service need. These findings exceeded Regier and colleagues' exploration of service need using data from the ECA, which found that of those who did not meet criteria for mental illness but used services in the past year, 80.9 percent of outpatient service recipients had indications of service need (e.g., subthreshold symptoms or lifetime diagnoses; Regier et al., 1993). The findings also exceeded those identified in the WMH surveys, which accounted for 83 percent of service users (Bruffaerts et al., 2015). However, NSDUH data use a different measure of mental illness and provided a different set of service need indicators than the ECA and WMH surveys had available, which may explain the differences. For example, the WMH surveys assessed reasons for treatment reported by those who did not meet criteria for a disorder or have another indicator of need, with the most common reasons being emotional or behavioral problems (41.8 percent) and needing help managing ongoing stress (27.5 percent). Both of these need indicators would likely be captured in NSDUH's psychological distress or the World Health Organization Disability Assessment Schedule (WHODAS) impairment measures and counted as a need indicator in these analyses.

Adults with no past year AMI who used mental health services differed in the types and frequencies of service use compared with those with AMI, with results reflecting a lower level of service use corresponding to lower estimates of service need indicators in this group. Overall, adults with no AMI who used mental health services were less likely to use each type of service

(i.e., inpatient, outpatient, and prescription medication) than those with AMI. There also was a different pattern of service use observed. Adults with no AMI were more likely to use only outpatient services or only prescription medication, whereas those with AMI were more likely to use inpatient services, outpatient services, and prescription medication in combination. Moreover, service-using adults with no AMI had a lower mean number of outpatient visits than those with AMI and were less likely to be in the highest quintile of nights of inpatient care. These results are similar to those reported by Harris et al. (2014) who found a similar gradient defined by level of possible need, where service users with a past year mental illness received on average 1.6 to 3.9 times more consultations than their counterparts without a mental illness with lower levels of possible need. These results suggest that services are not being used by individuals without a need for services.

There are a number of potential reasons why individuals may seek mental health services without meeting criteria for mental illness. One of the primary goals of mental health service use is to reduce symptoms in those seeking treatment, which may lead to respondents not meeting criteria in the past year, although they once did. About 44.0 percent of service-using respondents who did not meet criteria for AMI had a history of doctor-diagnosed depression, suggesting that maintenance treatment may explain some of the treatment in this group. Furthermore, almost 60 percent of adults with no AMI who used mental health services used prescription medication only, which also may indicate maintenance therapy. For example, continuing antidepressant use past symptom resolution is recommended for patients at risk of recurrent depression to reduce the chance of relapse (Geddes et al., 2003). Another indirect indication that service use itself may be contributing to respondents not meeting criteria for AMI is that despite the fewer number of mental health visits reported by respondents with no AMI, these adults were significantly less likely to report an unmet need for additional mental health services than adults with AMI.

One notable finding is that adults with no AMI who used mental health services were more likely to have a higher socioeconomic status (e.g., higher family income, higher levels of education, health insurance) than those with AMI and service use. Individuals with greater access to resources may be more likely to use mental health services earlier (i.e., before symptoms reach clinical levels), longer (i.e., maintenance therapy), and for more reasons (e.g., managing stressful life events like divorce or bereavement) than those who have a low socioeconomic status and cannot afford the costs of services (e.g., copays, cost of travelling to appointments, childcare, or time off from work) and who may have lower tiers of insurance that require referrals or do not cover mental health care at all. The analyses indicated that those with no AMI who used mental health services were more likely to have private insurance compared with those with no AMI and no service use and those with AMI and service use.

Another factor that should be considered when interpreting these results is potential data quality issues. Recall bias, missing data, and other measurement error in the AMI algorithm can lead to misclassification of AMI. For example, adults with no AMI who used mental health services were more likely than those with no AMI and no service use to be missing data involved in the AMI prediction, which may have led to them being incorrectly classified as not having AMI. However, only 3.1 percent of those with no AMI who used mental health services had missing AMI data, so this could only account for a small proportion of that group.

Notably, results examining the characteristics of those with no SCID mental illness who used mental health services were similar to results found using NSDUH AMI, which further replicated prior findings of Regier et al. (1993) and Bruffaerts et al. (2015). These results indicated that the majority of adults using mental health services had some indicator of possible need for services, even in the absence of NSDUH AMI or SCID mental illness. Furthermore, the measures of indicators of possible need included in NSDUH are limited and do not include many other relevant indicators (e.g., treatment for adults with developmental disorders, bereavement counselling, couples counselling, or family therapy for families of children with behavioral health problems), so the existing estimates may underestimate indicators of service need in these groups.

This research confirms past studies showing that almost half of adults who used mental health services in the past year did not meet criteria for past year mental illness. People use mental health services for a variety of reasons outside of a specific diagnosis (e.g., life stressors) (Bruffaerts et al., 2015) and can continue service use as part of maintenance therapy after they no longer meet clinical criteria. Moreover, no survey assesses every disorder (those based on criteria found in the *Diagnostic and Statistical Manual of Mental Disorders*, fourth edition (DSM-IV-TR; American Psychiatric Association, 2000); that is, adults classified as not having a mental illness may have had a mental illness that was not assessed in a particular study. For example, the MHSS SCID, upon which the NSDUH AMI was based, included the most common disorders but not all disorders. Rare disorders and disorders that usually co-occur with disorders already being assessed were not included (e.g., dissociative disorders almost always occur with other mental illnesses like depression or anxiety disorders and were therefore excluded). Despite this, it is possible that some people with mental illness were not identified by the MHSS SCID or were not classified as having AMI in the NSDUH AMI measure. Moreover, most of the measures included in the NSDUH AMI model tend to be more representative of internalizing symptoms (e.g., major depressive episode, suicidal thoughts, and psychological distress) and may not represent externalizing symptoms (e.g., impulsiveness, hyperactivity, or callous-unemotional traits) as effectively. The analyses found that adults with no NSDUH AMI who used mental health services had higher estimates of indicators of possible antisocial behavior (e.g., past year arrest and violence) than those with no AMI and no service use, which are correlates of externalizing disorders and antisocial personality disorder.

One important finding of this report is that adults with no AMI who used mental health services had low rates (about 6 percent) of unmet need for mental health services. However, adults with AMI and service use were almost 5 times more likely to report an unmet need for additional mental health services than those with no AMI and no service use (Table D.1; prevalence ratio test = 5.13, 95 percent confidence interval = 4.66-5.65). This suggests that existing mental health services are adequate for the majority of people not currently meeting AMI criteria who use them, and efforts to improve access and quality of services should focus on those with a current mental illness.

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References

- Alcohol, Drug Abuse, and Mental Health Administration (ADAMHA) Reorganization Act. (1992). Pub. L. No. 102-321, 42 USC 201, 106 Stat. 323.
- Aldworth, J., Colpe, L. J., Gfroerer, J. C., Novak, S. P., Chromy, J. R., Barker, P. R., ... Spagnola, K. (2010). The National Survey on Drug Use and Health Mental Health Surveillance Study: Calibration analysis. *International Journal of Methods in Psychiatric Research*, 19(S1), 61-87. <https://doi.org/10.1002/mpr.312>
- American Psychiatric Association. (1980). *Diagnostic and statistical manual of mental disorders* (3rd ed.). Washington, DC: Author.
- American Psychiatric Association. (1987). *Diagnostic and statistical manual of mental disorders* (3rd ed., revised). Washington, DC: Author.
- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.). Washington, DC: Author.
- Bijl, R. V., de Graaf, R., Hiripi, E., Kessler, R. C., Kohn, R., Offord, D. R., Ustun, T. B., Vicente, B., Vollebergh, W. A., Walters, E. E., & Wittchen, H. U. (2003). The prevalence of treated and untreated mental disorders in five countries. *Health Affairs (Millwood)*, 22(3), 122-133. <https://doi.org/10.1377/hlthaff.22.3.122>
- Bruffaerts, R., Posada-Villa, J., Al-Hamzawi, A. O., Gureje, O., Huang, Y., Hu, C., ... Kessler, R. C. (2015). Proportion of patients without mental disorders being treated in mental health services worldwide. *British Journal of Psychiatry*, 206, 101-109. <https://doi.org/10.1192/bjp.bp.113.141424>
- Center for Behavioral Health Statistics and Quality. (2013a). *Results from the 2012 National Survey on Drug Use and Health: Summary of national findings* (HHS Publication No. SMA 13-4795, NSDUH Series H-46). Retrieved from <https://www.samhsa.gov/data/>
- Center for Behavioral Health Statistics and Quality. (2013b). *The NSDUH Report: Revised estimates of mental illness from the National Survey on Drug Use and Health*. Retrieved from <https://www.samhsa.gov/data/>
- Center for Behavioral Health Statistics and Quality. (2014a). *Past year mental disorders among adults in the United States: Results from the 2008-2012 Mental Health Surveillance Study*. CBHSQ Data Review. Retrieved from <https://www.samhsa.gov/data/>
- Center for Behavioral Health Statistics and Quality. (2014b). *2012 National Survey on Drug Use and Health: Methodological resource book (Section 16a, 2012 Mental Health Surveillance Study: Design and estimation report)*. Retrieved from <https://www.samhsa.gov/data/>
- Center for Behavioral Health Statistics and Quality. (2014c). *2012 National Survey on Drug Use and Health: Methodological resource book (Section 16a, Mental Health Surveillance Study operations report [2008-2012])*. Retrieved from <https://www.samhsa.gov/data/>

Center for Behavioral Health Statistics and Quality. (2015a). *2013 National Survey on Drug Use and Health: Methodological resource book (Section 13, Statistical inference report)*. Retrieved from <https://www.samhsa.gov/data/>

Center for Behavioral Health Statistics and Quality. (2015b). *2014 National Survey on Drug Use and Health: Methodological summary and definitions*. Retrieved from <https://www.samhsa.gov/data/>

Center for Behavioral Health Statistics and Quality. (2016). *Estimating mental illness among adults in the United States: Revisions to the 2008 estimation procedures*. Retrieved from <https://www.samhsa.gov/data/>

Druss, B. G., Wang, P. S., Sampson, N. A., Olfson, M., Pincus, H. A., Wells, K. B., & Kessler, R. C. (2007). Understanding mental health treatment in persons without mental diagnoses: Results from the National Comorbidity Survey Replication. *Archives of General Psychiatry*, 64, 1196-1203. <https://doi.org/10.1001/archpsyc.64.10.1196>

Edlund, M. J., Unutzer, J., & Curran, G. M. (2006). Perceived need for alcohol, drug, and mental health treatment. *Social Psychiatry and Psychiatric Epidemiology*, 41, 480-487. <https://doi.org/10.1007/s00127-006-0047-1>

First, M. B., Spitzer, R. L., Gibbon, M., & Williams, J. B. W. (2002). *Structured Clinical Interview for DSM-IV-TR Axis I Disorders, research version, non-patient edition (SCID-I/NP)*. New York, NY: New York State Psychiatric Institute, Biometrics Research.

Geddes, J. R., Carney, S. M., Davies, C., Furukawa, T. A., Kupfer, D. J., Frank, E., & Goodwin, G. M. (2003). Relapse prevention with antidepressant drug treatment in depressive disorders: A systematic review. *Lancet*, 361(9358), 653-661. [https://doi.org/10.1016/s0140-6736\(03\)12599-8](https://doi.org/10.1016/s0140-6736(03)12599-8)

Harris, M. G., Diminic, S., Burgess, P. M., Carstensen, G., Stewart, G., Pirkis, J., & Whiteford, H. A. (2014). Understanding service demand for mental health among Australians aged 16 to 64 years according to their possible need for treatment. *Australian and New Zealand Journal of Psychiatry*, 48, 838-851. <https://doi.org/10.1177/0004867414531459>

Katz, S. J., Kessler, R. C., Frank, R. G., Leaf, P., Lin, E., & Edlund, M. (1997). The use of outpatient mental health services in the United States and Ontario: The impact of mental morbidity and perceived need for care. *American Journal of Public Health*, 87, 1136-1143. <https://doi.org/10.2105/ajph.87.7.1136>

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. <https://doi.org/10.1001/archpsyc.60.2.184>

Kessler, R. C., Chiu, W. T., Demler, O., & Walters, E. E. (2005). Prevalence, severity, and comorbidity of 12-month DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry*, 62, 617-627. <https://doi.org/10.1001/archpsyc.62.6.617>

- Kessler, R. C., McGonagle, K. A., Zhao, S., Nelson, C. B., Hughes, M., Eshleman, S., Wittchen, H.-U., & Kendler, K. S. (1994). Lifetime and 12-month prevalence of DSM-III-R psychiatric disorders in the United States: Results from the National Comorbidity Survey. *Archives of General Psychiatry*, 51, 8-9. <https://doi.org/10.1001/archpsyc.1994.03950010008002>
- Novak, S. (2007). *An item response analysis of the World Health Organization Disability Assessment Schedule (WHODAS) items in the 2002-2004 NSDUH* (prepared for the Substance Abuse and Mental Health Services Administration under Contract No. 283-03-9028). Research Triangle Park, NC: RTI International.
- Novak, S. P., Colpe, L. J., Barker, P. R., & Gfroerer, J. C. (2010). Development of a brief mental health impairment scale using a nationally representative sample in the USA. *International Journal of Methods in Psychiatric Research*, 19(S1), 49-60. <https://doi.org/10.1002/mpr.313>
- Regier, D. A., Myers, J. K., Kramer, M., Robins, L. N., Blazer, D. G., Hough, R. L., Eaton, W. W., & Locke, B. Z. (1984). The NIMH Epidemiologic Catchment Area program: Historical context, major objectives, and study population characteristics. *Archives of General Psychiatry*, 41, 934-941. <https://doi.org/10.1001/archpsyc.1984.01790210016003>
- Regier, D. A., Narrow, W. E., Rae, D. S., Manderscheid, R. W., Locke, B. Z., & Goodwin, F. K. (1993). The de facto US mental and addictive disorders service system. Epidemiologic catchment area prospective 1-year prevalence rates of disorders and services. *Archives of General Psychiatry*, 50, 85-94. <https://doi.org/10.1001/archpsyc.1993.01820140007001>
- RTI International. (2013). *SUDAAN®*, Release 11.0.1 [computer software]. Research Triangle Park, NC: RTI International.
- ten Have, M., Nuyen, J., Beekman, A., & de Graaf, R. (2013). Common mental disorder severity and its association with treatment contact and treatment intensity for mental health problems. *Psychological Medicine*, 43, 2203-2213. <https://doi.org/10.1017/s0033291713000135>
- Wang, P. S., Lane, M., Olfson, M., Pincus, H. A., Wells, K. B., & Kessler, R. C. (2005). Twelve-month use of mental health services in the United States: Results from the National Comorbidity Survey Replication. *Archives of General Psychiatry*, 62, 629-640. <https://doi.org/10.1001/archpsyc.62.6.629>

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Appendix A: Comparison of Estimates of Mental Health Service Use by NSDUH AMI and SCID Mental Illness

Because the National Survey on Drug Use and Health (NSDUH) any mental illness (AMI) variable is based on a statistical model and is not directly measured for each adult, errors may occur in which the predicted likelihood score indicates that an individual does not have AMI when the individual actually does have a mental disorder, or vice versa. Such misclassification might explain why some people report mental health service use but are not classified as having AMI. This set of analyses briefly examines the extent of misclassification between NSDUH AMI and mental illness measured by the Structured Clinical Interview for DSM-IV-TR Axis I Disorders (SCID-I) (First, Spitzer, Gibbon, & Williams, 2002) and the relationship with mental health service use.

The estimate of past year NSDUH AMI among all adults was 18.0 percent, which is similar to the SCID mental illness estimate of 17.9 percent (Table B.2). However, only 10.2 percent of adults met criteria for both SCID-measured mental illness and NSDUH-measured AMI. Approximately 7.7 percent of adults have a SCID-measured mental illness but did not meet NSDUH criteria for AMI. Conversely, approximately 7.8 percent of adults met NSDUH criteria for AMI but did not meet criteria for a SCID-measured mental illness. Treating SCID as the gold standard for evaluation of a mental disorder, NSDUH AMI has a sensitivity of 57.0 percent and a specificity of 90.5 percent among all adults.

Among adults with past year service use, 39.3 percent met criteria for both SCID- and NSDUH-measured mental illness, 13.9 percent had a SCID-measured mental illness but did not meet NSDUH AMI criteria, and 16.5 percent had NSDUH-measured AMI but did not have SCID-measured mental illness (Figure A.1). Again, treating SCID as the gold standard indicates that NSDUH AMI has a sensitivity of 73.8 percent and a specificity of 64.7 percent among adults with mental health service use.

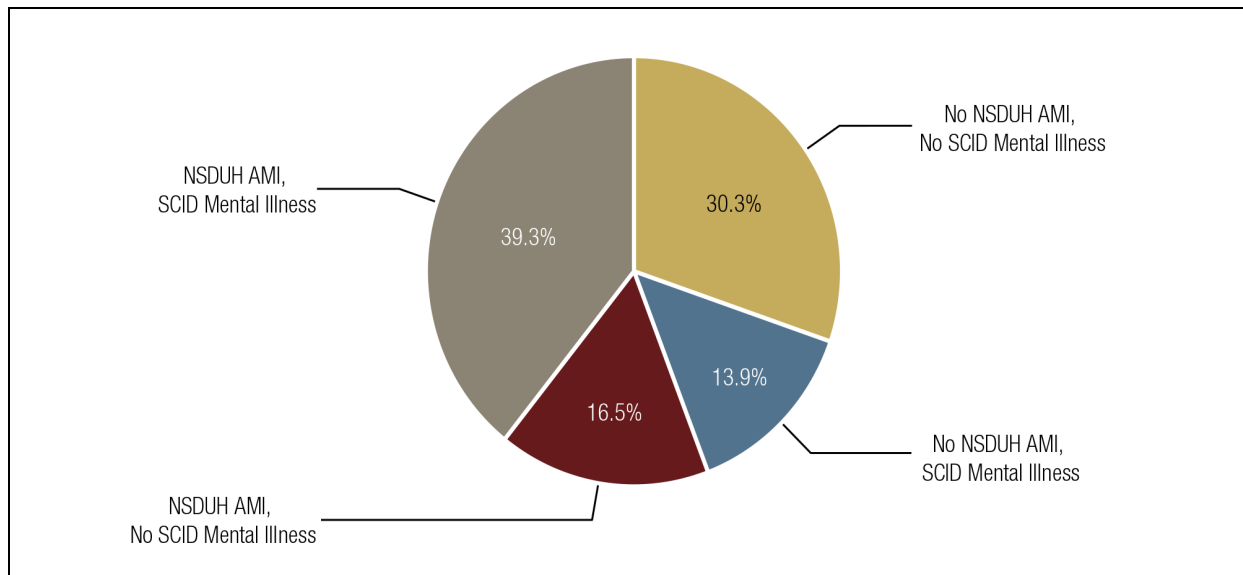
Misclassification of NSDUH AMI (i.e., individuals being classified as not having mental illness when they do, or vice versa) may arise from data used in the NSDUH AMI predictive model being missing (e.g., respondent may have refused to answer the question about suicidal thoughts, which is a variable used in the model). Evaluation of missing data patterns indicates that adults with no NSDUH AMI who used mental health services were more likely to be missing a component variable of the NSDUH AMI algorithm than adults with no NSDUH AMI and no service use (3.1 percent vs. 2.1 percent; Table C.1), but they were less likely to be missing a NSDUH AMI component than those with NSDUH AMI and service use (3.5 percent).⁵ These findings suggest that misclassification due to missing data is more likely among those with no AMI who used mental health services compared with those with no AMI and no service use. Although not conclusive, this supports the hypothesis that some respondents reporting service

⁵ Respondents with NSDUH AMI could be missing an AMI component (i.e., missing a value for a variable used as a predictor in the model) if the nonmissing data were sufficient to classify them as having AMI. Thus, individuals missing major depressive episode or suicide data could be categorized as having AMI if their distress or impairment scores were high enough.

use who are classified as not having AMI are being misclassified due to missing data when they actually do have AMI.

Figure A.1 presents estimates of mental health service use by NSDUH AMI and SCID mental illness status. Moreover, regardless of whether the NSDUH AMI or SCID mental illness measure is used, only about half of all service users meet the measure's criteria for mental illness.

Figure A.1 Estimates of Past Year NSDUH Any Mental Illness (AMI) and SCID Mental Illness among Adults Aged 18 or Older with Past Year Mental Health Service Use: 2008-2012 MHSS



SCID = Structured Clinical Interview for DSM Disorders.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, Mental Health Surveillance Study (MHSS) Section of the National Survey on Drug Use and Health (NSDUH), 2008-2012.

Appendix B: Estimates of Service Use and Mental Illness

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Table B.1 Past Year Mental Health Service Use among Adults Aged 18 or Older, by Any Mental Illness (AMI) Status: Percentages, Standard Errors of Percentages, Numbers, and Weighted Estimates (in Thousands), 2008-2012 NSDUH

	Weighted % (SE)	Weighted Total (in thousands)
ALL ADULTS		
Mental Health Service Use ¹	13.8 (0.13)	31,559
NSDUH AMI ²	18.1 (0.13)	41,507
No Mental Health Service Use, No NSDUH AMI ^{1,2}	75.6 (0.15)	173,256
Mental Health Service Use, No NSDUH AMI ^{1,2}	6.4 (0.09)	14,564
Mental Health Service Use, NSDUH AMI ^{1,2}	7.4 (0.09)	16,996
ADULTS WITH PAST YEAR MENTAL HEALTH SERVICE USE¹		
No NSDUH AMI ²	46.1 (0.47)	14,564
NSDUH AMI ²	53.9 (0.47)	16,996

SE = standard error.

*Low precision; no estimate reported.

¹ Mental Health Service Use is defined as having received inpatient treatment/counseling or outpatient treatment/counseling or having used prescription medication for problems with emotions, nerves, or mental health. Respondents were not to include treatment for drug or alcohol use. Respondents with unknown treatment/counseling information were excluded.

² NSDUH AMI is defined as having a diagnosable mental, behavioral, or emotional disorder, other than a developmental or substance use disorder, assessed by the Mental Health Surveillance Study (MHSS) *Structured Clinical Interview for the Diagnostic and Statistical Manual of Mental Disorders—Fourth Edition—Research Version—Axis I Disorders* (MHSS-SCID), which is based on the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR) (American Psychiatric Association, 2000). Three categories of mental illness severity are defined based on the level of functional impairment: mild mental illness, moderate mental illness, and serious mental illness. Any mental illness includes people in any of the three categories. These mental illness estimates are based on a predictive model and are not direct measures of diagnostic status. See the following reference: American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.). Washington, DC: American Psychiatric Association.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health (NSDUH), 2008-2012.

Table B.2 Past Year Mental Health Service Use among Adults Aged 18 or Older, by Past Year SCID/Any Mental Illness (AMI) Status: Percentages, Standard Errors of Percentages, and Numbers, 2008-2012 MHSS

	Weighted % (SE)
ALL ADULTS	
Mental Health Service Use ¹	13.5 (0.6)
NSDUH AMI ²	18.0 (0.3)
SCID Mental Illness ³	17.9 (0.7)
SCID Mental Illness, No NSDUH AMI ^{2,3}	7.7 (0.7)
No SCID Mental Illness, NSDUH AMI ^{2,3}	7.8 (0.4)
SCID Mental Illness NSDUH AMI ^{2,3}	10.2 (0.4)
No Mental Health Service Use, No NSDUH AMI and No SCID Mental Illness ^{1,2,3}	70.2 (0.7)
Mental Health Service Use, No NSDUH AMI and No SCID Mental Illness ^{1,2,3}	4.1 (0.4)
Mental Health Service Use, NSDUH AMI, No SCID Mental Illness ^{1,2,3}	2.2 (0.2)
Mental Health Service Use, No NSDUH AMI, SCID Mental Illness ^{1,2,3}	1.9 (0.3)
Mental Health Service Use, NSDUH AMI and SCID Mental Illness ^{1,2,3}	5.3 (0.3)
ADULTS WITH PAST YEAR MENTAL HEALTH SERVICE USE¹	
No NSDUH AMI and No SCID Mental Illness ^{2,3}	30.3 (2.5)
NSDUH AMI, No SCID Mental Illness ^{2,3}	16.5 (1.6)
No NSDUH AMI, SCID Mental Illness ^{2,3}	13.9 (1.9)
NSDUH AMI and SCID Mental Illness ^{2,3}	39.3 (1.8)

SCID = Structured Clinical Interview for DSM Disorders; SE = standard error.

*Low precision; no estimate reported.

NOTE: Standard errors of weighted percentages have been computed with the WTADJX procedure of SUDAAN[®] 11.0.1 (RTI International, 2013), recognizing that the clinical sample weights were calibrated annually to estimated totals computed from a larger NSDUH sample of adults.

¹ Mental Health Service Use is defined as having received inpatient treatment/counseling or outpatient treatment/counseling or having used prescription medication for problems with emotions, nerves, or mental health. Respondents were not to include treatment for drug or alcohol use. Respondents with unknown treatment/counseling information were excluded.

² NSDUH AMI is defined as having a diagnosable mental, behavioral, or emotional disorder, other than a developmental or substance use disorder, assessed by the Mental Health Surveillance Study (MHSS) *Structured Clinical Interview for the Diagnostic and Statistical Manual of Mental Disorders—Fourth Edition—Research Version—Axis I Disorders* (MHSS-SCID), which is based on the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR) (American Psychiatric Association, 2000). Three categories of mental illness severity are defined based on the level of functional impairment: mild mental illness, moderate mental illness, and serious mental illness. Any mental illness includes people in any of the three categories. These mental illness estimates are based on a predictive model and are not direct measures of diagnostic status. See the following reference: American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.). Washington, DC: American Psychiatric Association.

³ SCID Mental Illness includes respondents with any of the following past year disorders: clinically significant distress, manic episode, dysthymic disorder, posttraumatic stress disorder, panic disorder, agoraphobia without panic disorder, social phobia, specific phobia, obsessive compulsive disorder, generalized anxiety disorder, anorexia nervosa, bulimia nervosa, intermittent explosive disorder, psychotic symptoms, and adjustment disorder irrespective of their Global Assessment of Functioning (GAF) score.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health (NSDUH) and Mental Health Surveillance Study (MHSS) Clinical Sample, 2008-2012.

Appendix C: Characteristics of Adults Using Mental Health Services

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Table C.1 Demographic, Mental Health, and Substance Use Characteristics of Adults Aged 18 or Older, by Any Mental Illness (AMI) and Mental Health Service Use Status: Percentages and Standard Errors, 2008-2012 NSDUH

Characteristics	Total	No AMI and No Mental Health Service Use^{1,2}	No AMI but Mental Health Service Use^{1,2}	AMI and Mental Health Service Use^{1,2}
TOTAL	100.0 (0.00)	100.0 (0.00)	100.0 (0.00)	100.0 (0.00)
AGE				
18-25	14.7 (0.12)	14.8 ^b (0.13)	12.2 (0.26)	12.0 (0.23)
26-49	43.0 (0.22)	41.5 (0.24)	40.4 (0.68)	50.7 ^b (0.65)
50 or Older	42.3 (0.25)	43.6 ^b (0.28)	47.4 (0.76)	37.3 ^b (0.70)
GENDER				
Male	48.2 (0.16)	51.6 ^b (0.20)	36.4 (0.68)	31.6 ^b (0.57)
Female	51.8 (0.16)	48.4 ^b (0.20)	63.6 (0.68)	68.4 ^b (0.57)
HISPANIC OR LATINO ORIGIN/RACE				
Not Hispanic/Latino	85.9 (0.19)	84.8 ^b (0.21)	93.1 (0.39)	92.1 ^a (0.35)
White	67.6 (0.26)	65.6 ^b (0.29)	82.9 (0.60)	80.1 ^b (0.51)
Black/African American	11.6 (0.17)	12.1 ^b (0.20)	6.6 (0.39)	7.8 ^a (0.35)
Other	6.7 (0.13)	7.1 ^b (0.15)	3.6 (0.33)	4.1 (0.24)
Hispanic/Latino	14.1 (0.19)	15.2 ^b (0.21)	6.9 (0.39)	7.9 ^a (0.35)
EDUCATION				
Less than High School	15.0 (0.15)	14.9 ^b (0.17)	10.7 (0.46)	13.7 ^b (0.45)
High School Graduate	30.3 (0.18)	30.7 ^b (0.21)	27.1 (0.68)	27.7 (0.56)
Some College	26.0 (0.17)	25.4 (0.19)	26.6 (0.67)	29.5 ^b (0.55)
College Degree	28.7 (0.23)	28.9 ^b (0.26)	35.5 (0.76)	29.1 ^b (0.59)
MARITAL STATUS				
Married	53.5 (0.23)	55.9 (0.25)	54.6 (0.72)	44.3 ^b (0.62)
Widowed	6.0 (0.11)	6.1 (0.12)	5.9 (0.41)	5.0 (0.36)
Divorced or Separated	13.8 (0.14)	12.2 ^b (0.15)	16.3 (0.56)	23.0 ^b (0.54)
Never Married	26.6 (0.18)	25.9 ^b (0.19)	23.2 (0.54)	27.7 ^b (0.50)
EMPLOYMENT STATUS				
Full Time	50.9 (0.20)	53.2 ^b (0.23)	45.5 (0.71)	38.5 ^b (0.58)
Part Time	13.9 (0.12)	13.5 ^b (0.13)	16.8 (0.51)	14.3 ^b (0.42)
Unemployed	5.7 (0.08)	5.4 ^b (0.09)	4.5 (0.26)	7.0 ^b (0.31)
Other (including not in the labor force) ³	29.5 (0.21)	28.0 ^b (0.23)	33.2 (0.73)	40.3 ^b (0.67)
POVERTY STATUS⁴				
< 100 Percent of the Federal Poverty Threshold	13.3 (0.16)	12.1 ^a (0.17)	11.1 (0.42)	18.9 ^b (0.46)
100-199 Percent of the Federal Poverty Threshold	19.8 (0.16)	19.3 ^b (0.19)	16.6 (0.56)	21.8 ^b (0.52)
≥ 200 Percent of the Federal Poverty Threshold	66.9 (0.24)	68.6 ^b (0.26)	72.3 (0.67)	59.3 ^b (0.61)

Table C.1 Demographic, Mental Health, and Substance Use Characteristics of Adults Aged 18 or Older, by Any Mental Illness (AMI) and Mental Health Service Use Status: Percentages and Standard Errors, 2008-2012 NSDUH (continued)

Characteristics	Total	No AMI and No Mental Health Service Use^{1,2}	No AMI but Mental Health Service Use^{1,2}	AMI and Mental Health Service Use^{1,2}
OVERALL HEALTH⁵				
Excellent or Very Good	59.2 (0.21)	62.9 ^b (0.24)	57.1 (0.75)	40.1 ^b (0.60)
Good	27.5 (0.17)	26.7 ^b (0.20)	28.9 (0.68)	30.5 (0.57)
Fair or Poor	13.3 (0.15)	10.4 ^b (0.15)	14.0 (0.53)	29.4 ^b (0.64)
HEALTH INSURANCE⁶				
Insured	83.9 (0.14)	84.0 ^b (0.16)	92.0 (0.35)	86.7 ^b (0.39)
Private Coverage	66.6 (0.22)	68.5 ^b (0.25)	71.9 (0.68)	58.5 ^b (0.63)
Medicaid/CHIP ⁷	9.2 (0.12)	7.6 ^b (0.12)	10.9 (0.44)	18.0 ^b (0.49)
Other ⁸	23.8 (0.21)	23.7 ^b (0.24)	26.5 (0.71)	25.5 (0.63)
Uninsured	16.1 (0.14)	16.0 ^b (0.16)	8.0 (0.35)	13.3 ^b (0.39)
VETERAN STATUS				
Yes	10.7 (0.13)	11.4 ^b (0.16)	9.6 (0.46)	8.7 (0.40)
No	89.3 (0.13)	88.6 ^b (0.16)	90.4 (0.46)	91.3 (0.40)
NUMBER OF MOVES IN THE PAST YEAR⁵				
0	78.5 (0.18)	80.1 (0.19)	79.9 (0.54)	72.5 ^b (0.55)
1 or 2	18.9 (0.16)	17.8 (0.18)	17.7 (0.52)	22.2 ^b (0.50)
3 or More	2.6 (0.05)	2.1 (0.05)	2.4 (0.16)	5.3 ^b (0.25)
SAMPLED FROM A SHELTER				
Yes	< 0.1 (0.01)	< 0.1 (0.01)	< 0.1 (0.01)	0.1 (0.05)
No	100.0 (0.01)	100.0 (0.01)	100.0 (0.01)	99.9 (0.05)
MENTAL HEALTH HISTORY				
Lifetime Major Depressive Episode ⁹	12.9 (0.12)	3.9 ^b (0.07)	15.5 (0.54)	N/A
Ever Told by Doctor Had Depression ⁵	12.7 (0.12)	3.7 ^b (0.07)	44.0 (0.68)	69.4 ^b (0.60)
Ever Told by Doctor Had Anxiety Disorder ⁵	8.6 (0.10)	2.3 ^b (0.06)	32.8 (0.67)	49.1 ^b (0.62)

Table C.1 Demographic, Mental Health, and Substance Use Characteristics of Adults Aged 18 or Older, by Any Mental Illness (AMI) and Mental Health Service Use Status: Percentages and Standard Errors, 2008-2012 NSDUH (continued)

Characteristics	Total	No AMI and No Mental Health Service Use^{1,2}	No AMI but Mental Health Service Use^{1,2}	AMI and Mental Health Service Use^{1,2}
PSYCHOLOGICAL DISTRESS AND IMPAIRMENT				
Average Past Month Distress Score ¹⁰	3.8 (0.02)	2.5 ^b (0.01)	4.1 (0.04)	N/A
0	25.1 (0.17)	31.7 ^b (0.21)	12.2 (0.52)	N/A
1-5	49.8 (0.19)	55.0 ^b (0.21)	59.3 (0.70)	N/A
6-10	16.9 (0.14)	11.7 ^b (0.13)	24.3 (0.58)	N/A
11-24	8.2 (0.09)	1.6 ^b (0.04)	4.2 (0.24)	N/A
Past Month Serious Psychological Distress ¹¹	4.8 (0.07)	0.5 ^b (0.02)	1.3 (0.13)	N/A
Average Past Year Distress Score (Most Distressed Month in Past Year) ¹⁰	4.9(0.02)	2.9 ^b (0.01)	5.2(0.05)	N/A
0	23.1 (0.17)	29.7 ^b (0.20)	9.4 (0.47)	N/A
1-5	44.0 (0.19)	52.0 ^b (0.22)	49.2 (0.69)	N/A
6-10	17.7 (0.14)	15.0 ^b (0.15)	32.1 (0.64)	N/A
11-24	15.2 (0.12)	3.3 ^b (0.06)	9.3 (0.34)	N/A
Past Year Serious Psychological Distress ¹¹	10.4 (0.10)	1.3 ^b (0.03)	3.6 (0.20)	N/A
Average Past Year Functional Impairment Score ¹²	3.5 (0.02)	1.6 ^b (0.01)	3.4 (0.04)	N/A
1 st Tertile (0)	46.1 (0.20)	58.0 ^b (0.22)	26.5 (0.70)	N/A
2 nd Tertile (1-3)	19.8 (0.15)	22.9 ^b (0.18)	28.2 (0.67)	N/A
3 rd Tertile (4-24)	34.0 (0.18)	19.2 ^b (0.17)	45.3 (0.72)	N/A
WHODAS Score > 0	53.9 (0.20)	42.0 ^b (0.22)	73.5 (0.70)	N/A
INDICATORS OF POSSIBLE ANTISOCIAL BEHAVIOR				
Attacked Someone with the Intent to Seriously Harm Them in the Past Year ⁵	1.4 (0.03)	0.9 ^a (0.03)	1.1 (0.11)	3.6 ^b (0.19)
Past Year Arrest ⁵	2.6 (0.05)	2.1 ^b (0.05)	2.7 (0.20)	5.5 ^b (0.26)
Past Year Probation or Parole ⁵	2.4 (0.05)	1.9 ^b (0.05)	2.4 (0.17)	5.3 ^b (0.26)
Missing ≥ 1 AMI Calculation Criteria ^{1,13}	2.5 (0.06)	2.1 ^b (0.06)	3.1 (0.29)	3.5 (0.25)

Table C.1 Demographic, Mental Health, and Substance Use Characteristics of Adults Aged 18 or Older, by Any Mental Illness (AMI) and Mental Health Service Use Status: Percentages and Standard Errors, 2008-2012 NSDUH (continued)

Characteristics	Total	No AMI and No Mental Health Service Use^{1,2}	No AMI but Mental Health Service Use^{1,2}	AMI and Mental Health Service Use^{1,2}
ALCOHOL USE				
Past Year Alcohol Use	70.5 (0.19)	70.0 ^b (0.21)	75.1 (0.69)	71.5 ^b (0.62)
Early Alcohol Initiation (< age 14)	12.5 (0.12)	10.8 ^b (0.13)	13.6 (0.47)	19.9 ^b (0.53)
Average Number of Days Used Alcohol in the Past Year among Users	90.3 (0.47)	91.0 (0.53)	93.8 (1.69)	85.0 ^b (1.41)
Median Number of Days Used Alcohol in the Past Year among Users ¹⁴	51.3 (0.17)	51.4 (0.17)	50.8 (0.42)	47.8 (1.24)
Used Alcohol 260-312 Days (5-6 days/week) in the Past Year	7.1 (0.12)	7.2 ^a (0.14)	8.2 (0.46)	6.7 ^a (0.39)
Used Alcohol > 312 Days (> 6 days/week) in the Past Year	3.9 (0.09)	4.0 (0.11)	4.0 (0.33)	3.3 (0.28)
Past Month Binge Drinking ¹⁵	24.8 (0.15)	24.4 ^a (0.17)	23.1 (0.54)	25.2 ^b (0.51)
Past Month Heavy Alcohol Use ¹⁵	7.2 (0.09)	6.8 (0.10)	7.0 (0.32)	8.1 ^a (0.30)
Drove under the Influence of Alcohol in the Past Year	12.6 (0.11)	11.1 ^b (0.12)	15.4 (0.48)	18.4 ^b (0.43)
Past Year Arrest for Drunkenness or Liquor Law Violation ⁵	0.4 (0.02)	0.4 (0.02)	0.4 (0.06)	0.9 ^b (0.11)
Past Year Subthreshold Alcohol Dependence ^{16,17}	10.6 (0.10)	10.2 (0.12)	10.4 (0.40)	11.3 (0.37)
1 Dependence Symptom	8.0 (0.09)	7.9 (0.11)	8.0 (0.35)	7.7 (0.30)
2 Dependence Symptoms	2.6 (0.05)	2.3 (0.06)	2.4 (0.20)	3.6 ^b (0.22)
Past Year Alcohol Use Disorder ¹⁵	7.3 (0.08)	5.4 ^b (0.08)	9.0 (0.37)	15.2 ^b (0.39)
Missing ≥ 1 Alcohol Use Disorder Criteria ^{16,18}	1.6 (0.06)	1.6 (0.07)	1.7 (0.24)	1.1 ^a (0.16)
Lifetime but Not Past Year Alcohol Use	17.0 (0.16)	16.4 (0.17)	16.9 (0.60)	21.7 ^b (0.56)
Number of Criteria Met for Alcohol Use Disorder ¹⁹				
0	82.1 (0.13)	84.4 ^b (0.14)	80.6 (0.53)	73.5 ^b (0.51)
1	9.2 (0.10)	8.9 (0.11)	9.5 (0.38)	9.0 (0.32)
2	3.8 (0.06)	3.4 (0.07)	3.7 (0.24)	5.4 ^b (0.26)
3-4	3.0 (0.05)	2.3 ^b (0.05)	4.2 (0.28)	5.4 ^b (0.24)
5-6	1.1 (0.03)	0.7 ^b (0.03)	1.2 (0.12)	2.9 ^b (0.17)
7+	0.8 (0.03)	0.3 ^b (0.02)	0.8 (0.11)	3.8 ^b (0.22)

Table C.1 Demographic, Mental Health, and Substance Use Characteristics of Adults Aged 18 or Older, by Any Mental Illness (AMI) and Mental Health Service Use Status: Percentages and Standard Errors, 2008-2012 NSDUH (continued)

Characteristics	Total	No AMI and No Mental Health Service Use^{1,2}	No AMI but Mental Health Service Use^{1,2}	AMI and Mental Health Service Use^{1,2}
DRUG USE²⁰				
Past Year Drug Use	14.7 (0.12)	12.1 ^b (0.12)	17.5 (0.47)	26.5 ^b (0.52)
Average Number of Days Used Illicit Drugs in the Past Year among Users	111.7 (1.02)	109.1 ^b (1.32)	99.2 (3.35)	118.5 ^b (2.82)
1 st Tertile (1-11)	31.7 (0.35)	32.0 ^a (0.44)	35.2 (1.45)	31.1 ^a (1.02)
2 nd Tertile (12-119)	33.5 (0.35)	34.0 (0.45)	34.0 (1.37)	32.2 (1.00)
3 rd Tertile (120-365)	34.7 (0.36)	33.9 ^a (0.47)	30.8 (1.31)	36.7 ^b (1.02)
Median Number of Days Used Illicit Drugs in the Past Year among Users ¹⁴	47.5 (0.24)	47.2 (2.01)	29.8 (3.86)	51.3 (1.89)
Past Year Arrest for Possession, Manufacture, or Sale of Drugs ⁵	0.4 (0.02)	0.3 ^a (0.01)	0.4 (0.05)	0.7 ^b (0.09)
Sold Illegal Drugs in the Past Year ⁵	1.7 (0.04)	1.4 (0.04)	1.3 (0.10)	3.1 ^b (0.17)
Drove under the Influence of Drugs in the Past Year	4.1 (0.06)	3.2 ^b (0.05)	4.5 (0.24)	8.2 ^b (0.29)
Polysubstance Drug Dependence ^{16,21}	0.1 (0.01)	0.1 ^a (0.01)	0.1 (0.03)	0.3 ^b (0.06)
Subthreshold Drug Dependence ^{16,17}	3.3 (0.05)	2.7 ^b (0.06)	3.4 (0.20)	5.6 ^b (0.24)
1 Dependence Symptom	2.1 (0.04)	1.8 ^a (0.04)	2.2 (0.17)	3.5 ^b (0.20)
2 Dependence Symptoms	1.2 (0.03)	0.9 ^b (0.03)	1.3 (0.11)	2.1 ^b (0.15)
Drug Use Disorder ¹⁶	2.6 (0.05)	1.5 ^b (0.04)	2.7 (0.18)	7.9 ^b (0.28)
Missing $\geq$ 1 Drug Use Disorder Criteria ^{16,18}	1.6 (0.04)	1.3 ^b (0.05)	1.9 (0.20)	2.3 (0.18)
Lifetime but Not Past Year Drug Use	35.0 (0.18)	32.9 ^b (0.20)	44.1 (0.74)	44.8 (0.65)
Number of Criteria Met for Drug Use Disorder ¹⁹				
0	94.1 (0.07)	95.7 ^b (0.07)	93.8 (0.28)	86.4 ^b (0.35)
1	2.3 (0.04)	2.0 ^a (0.05)	2.3 (0.17)	3.9 ^b (0.20)
2	1.4 (0.03)	1.1 ^b (0.03)	1.4 (0.12)	2.5 ^b (0.17)
3-4	1.1 (0.03)	0.8 ^b (0.03)	1.4 (0.14)	2.8 ^b (0.15)
5-6	0.5 (0.02)	0.3 ^b (0.01)	0.5 (0.07)	1.7 ^b (0.14)
7+	0.5 (0.02)	0.2 ^b (0.01)	0.5 (0.08)	2.7 ^b (0.17)
Number of Substances Used in the Past Year ²²				
0	28.3 (0.19)	29.1 ^b (0.21)	23.5 (0.68)	25.5 ^a (0.61)
1	58.1 (0.21)	59.7 (0.23)	60.2 (0.72)	50.2 ^b (0.62)
2	9.3 (0.09)	8.0 ^b (0.10)	11.2 (0.39)	15.1 ^b (0.41)
3+	4.3 (0.06)	3.2 ^b (0.06)	5.2 (0.25)	9.2 ^b (0.30)

Table C.1 Demographic, Mental Health, and Substance Use Characteristics of Adults Aged 18 or Older, by Any Mental Illness (AMI) and Mental Health Service Use Status: Percentages and Standard Errors, 2008-2012 NSDUH (continued)

Characteristics	Total	No AMI and No Mental Health Service Use ^{1,2}	No AMI but Mental Health Service Use ^{1,2}	AMI and Mental Health Service Use ^{1,2}
NUMBER OF NEED INDICATORS²³				
0	14.7 (0.14)	19.1 ^b (0.18)	2.9 (0.27)	0.0 ^b (0.01)
1-2	49.7 (0.18)	56.3 ^b (0.20)	34.3 (0.71)	11.8 ^b (0.41)
3-4	27.4 (0.16)	19.9 ^b (0.16)	49.9 (0.71)	61.2 ^b (0.57)
5-6	6.8 (0.08)	4.1 ^b (0.07)	11.0 (0.38)	20.6 ^b (0.46)
7+	1.4 (0.03)	0.5 ^b (0.02)	1.8 (0.13)	6.4 ^b (0.26)

N/A = not applicable. It is recommended that the mental illness variables derived from the 2012 model (including AMI) should not be used when analyzing Lifetime Major Depressive Episode, K6, or World Health Organization Disability Assessment Schedule (WHODAS) variables. See the following reference: Center for Behavioral Health Statistics and Quality. (2014). *2012 National Survey on Drug Use and Health: Methodological resource book (Section 16a, 2012 Mental Health Surveillance Study: Design and estimation report)*.

*Low precision; no estimate reported.

NOTE: Significance testing was conducted between the No AMI but Mental Health Service Use estimates and the No AMI and No Mental Health Service Use and AMI and Mental Health Service Use estimates if an overall chi-square test indicated differences for a particular measure.

^a Difference between estimate and No AMI but Mental Health Service Use estimate is statistically significant at the 0.05 level.

^b Difference between estimate and No AMI but Mental Health Service Use estimate is statistically significant at the 0.01 level.

¹ NSDUH AMI is defined as having a diagnosable mental, behavioral, or emotional disorder, other than a developmental or substance use disorder, assessed by the Mental Health Surveillance Study (MHSS) *Structured Clinical Interview for the Diagnostic and Statistical Manual of Mental Disorders—Fourth Edition—Research Version—Axis I Disorders* (MHSS-SCID), which is based on the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR) (American Psychiatric Association, 2000). Three categories of mental illness severity are defined based on the level of functional impairment: mild mental illness, moderate mental illness, and serious mental illness. Any mental illness includes people in any of the three categories. These mental illness estimates are based on a predictive model and are not direct measures of diagnostic status. See the following reference: American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.). Washington, DC: American Psychiatric Association.

² Mental Health Service Use is defined as having received inpatient treatment/counseling or outpatient treatment/counseling or having used prescription medication for problems with emotions, nerves, or mental health. Respondents were not to include treatment for drug or alcohol use. Respondents with unknown treatment/counseling information were excluded.

³ The Other Employment category includes students, people keeping house or caring for children full time, retired or disabled people, or other people not in the labor force.

⁴ Estimates are based on a definition of Poverty Level that incorporates information on family income, size, and composition and is calculated as a percentage of the U.S. Census Bureau's poverty thresholds. Respondents aged 18 to 22 who were living in a college dormitory were excluded.

⁵ Respondents with unknown data were excluded.

⁶ Respondents could indicate multiple types of health insurance; thus, these response categories are not mutually exclusive.

⁷ CHIP is the Children's Health Insurance Program. Individuals aged 19 or younger are eligible for this plan.

⁸ Other Health Insurance is defined as having Medicare, CHAMPUS, TRICARE, CHAMPVA, the VA, military health care, or any other type of health insurance.

⁹ Major Depressive Episode (MDE) is defined as in DSM-IV-TR (American Psychiatric Association, 2000), which specifies 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 a majority of specified depression symptoms. Respondents with unknown past year MDE data were excluded. See table note 1 for the reference.

¹⁰ Distress Score is a score with values ranging from 0 to 24 indicating the level of psychological distress. Past month score is based on data collected from a series of six questions known as the K6, asking adult respondents how frequently they experienced symptoms of psychological distress during the past 30 days. Past year score incorporates past month score plus a series of six questions asking about the worst month in the past year if not the past month.

¹¹ Serious Psychological Distress (SPD) is defined for this table as having a score of 13 or higher on the K6 scale.

¹² Functional Impairment refers to interference in a person's daily functioning or limitations in carrying out one or more major life activities, based on WHODAS. A score ranging from 0 to 24 is created based on responses to eight measures.

Table C.1 Demographic, Mental Health, and Substance Use Characteristics of Adults Aged 18 or Older, by Any Mental Illness (AMI) and Mental Health Service Use Status: Percentages and Standard Errors, 2008-2012 NSDUH (continued)

¹³ Respondents with ≥ 1 missing AMI criteria may still be classified as having AMI based on other nonmissing criteria.

¹⁴ Significance testing was not conducted between the medians due to use of a complex sampling design.

¹⁵ Binge Alcohol Use is defined 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.

¹⁶ Substance use disorder is based on definitions found in DSM-IV-TR (American Psychiatric Association, 2000). See table note 1 for the reference.

¹⁷ Subthreshold substance dependence occurs when a respondent who is not classified as having substance use disorder endorses one or two of the dependence criteria.

¹⁸ Respondents with ≥ 1 missing substance use disorder criteria may still be classified as having substance use disorder based on other nonmissing criteria.

¹⁹ Number of Criteria Met for substance use disorder is the number of criteria met out of the seven dependence criteria plus the number of criteria met out of the four abuse criteria. The number of criteria met for illicit drugs is determined as the maximum number of criteria met for marijuana, cocaine, heroin, hallucinogens, inhalants, pain relievers, tranquilizers, stimulants, and sedatives.

²⁰ Illicit Drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription psychotherapeutics used nonmedically.

²¹ Polysubstance Drug Dependence occurs when a respondent meets dependence criteria across multiple substances but not within a single substance.

²² Substances being counted include alcohol, marijuana, cocaine, heroin, hallucinogens, inhalants, and nonmedical use of psychotherapeutics.

²³ Need Indicators include (1) Substance Use Disorder; (2) Ever Told by Doctor Had Depression or Anxiety Disorder; (3) Past Year K6 Score > 0 ; (4) WHODAS Score > 0 ; (5) Past Month Binge Drinking; (6) Past Month Heavy Drinking; (7) Fair or Poor Overall Health; (8) Attacked Someone with the Intent to Seriously Harm Them; (9) Past Year Arrest; (10) Past Year Probation or Parole; and (11) Past Year Illicit Drug Use.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health (NSDUH), 2008-2012.

Table C.2 Demographic, Mental Health, and Substance Use Characteristics of Adults Aged 18 or Older, by SCID Mental Illness (MI) and Mental Health Service Use Status: Percentages and Standard Errors, 2008-2012 MHSS

Characteristics	Total	No SCID MI and No Mental Health Service Use^{1,2}	No SCID MI but Mental Health Service Use^{1,2}	SCID MI and Mental Health Service Use^{1,2}
AGE				
18-25	14.7 (< 0.01) ³	14.4 (0.39)	11.9 (2.76)	11.2 (1.44)
26-49	42.4 (< 0.01) ³	41.3 (0.47)	41.9 (3.53)	50.4 (2.61)
50 or Older	42.8 (< 0.01) ³	44.3 (0.52)	46.2 (3.63)	38.4 (2.90)
GENDER				
Male	48.2 (< 0.01) ³	51.3 ^b (0.56)	37.9 (3.59)	32.2 (2.59)
Female	51.8 (< 0.01) ³	48.7 ^b (0.56)	62.1 (3.59)	67.8 (2.59)
HISPANIC OR LATINO ORIGIN/RACE				
Not Hispanic/Latino	85.6 (< 0.01) ³	85.3 ^a (0.64)	92.0 (2.61)	90.9 (2.03)
White	67.1 (< 0.01) ³	65.6 ^b (0.61)	82.6 (3.16)	79.7 (2.10)
Black/African American	11.5 (< 0.01) ³	12.1 ^a (0.38)	7.5 (2.10)	6.3 (1.21)
Other	7.0 (< 0.01) ³	7.6 ^b (0.25)	1.9 (0.97)	4.9 (1.52)
Hispanic/Latino	14.4 (< 0.01) ³	14.7 ^a (0.64)	8.0 (2.61)	9.1 (2.03)
EDUCATION				
Less than High School	13.1 (0.93)	11.9 (1.08)	11.2 (2.53)	12.3 (1.93)
High School Graduate	29.4 (1.29)	29.6 (1.59)	29.4 (3.58)	23.8 (2.52)
Some College	27.4 (1.18)	28.3 (1.44)	23.4 (3.47)	28.3 (2.52)
College Degree	30.2 (1.20)	30.2 (1.49)	36.1 (3.70)	35.7 (3.01)
MARITAL STATUS				
Married				
Widowed	4.5 (0.57)	4.9 (0.72)	5.1 (1.74)	2.4 (0.80)
Divorced or Separated	16.1 (1.25)	15.6 (1.46)	13.6 (2.34)	25.5 ^b (3.34)
Never Married	25.6 (0.74)	24.9 (0.96)	22.8 (3.49)	24.7 (2.35)
EMPLOYMENT STATUS				
Full Time	51.1 (1.06)	53.1 (1.29)	50.4 (3.78)	34.2 ^b (2.55)
Part Time	13.2 (0.76)	12.8 (1.00)	14.1 (2.48)	16.6 (1.72)
Unemployed	6.5 (0.72)	6.1 (0.79)	9.3 (2.57)	7.4 (1.77)
Other (including not in the labor force) ⁴	29.2 (1.04)	28.0 (1.28)	26.2 (3.53)	41.8 ^b (2.97)

Table C.2 Demographic, Mental Health, and Substance Use Characteristics of Adults Aged 18 or Older, by SCID Mental Illness (MI) and Mental Health Service Use Status: Percentages and Standard Errors, 2008-2012 MHSS (continued)

Characteristics	Total	No SCID MI and No Mental Health Service Use^{1,2}	No SCID MI but Mental Health Service Use^{1,2}	SCID MI and Mental Health Service Use^{1,2}
POVERTY STATUS⁵				
< 100% of the Federal Poverty Threshold	12.4 (0.92)	11.2 (1.13)	12.7 (2.92)	18.9 (2.53)
100-199% of the Federal Poverty Threshold	19.0 (0.93)	17.6 (1.16)	15.7 (2.97)	21.5 (2.51)
≥ 200% of the Federal Poverty Threshold	68.6 (1.23)	71.2 (1.60)	71.6 (3.81)	59.6 ^a (3.28)
OVERALL HEALTH⁶				
Excellent or Very Good	61.5 (1.10)	65.0 (1.34)	62.7 (4.10)	41.0 ^b (2.97)
Good	25.9 (1.06)	24.6 (1.17)	23.5 (3.60)	32.1 (3.24)
Fair or Poor	12.5 (0.76)	10.4 (0.84)	13.7 (2.24)	27.0 ^b (2.66)
HEALTH INSURANCE⁷				
Insured	83.9 (0.83)	84.4 ^b (0.94)	91.7 (2.07)	85.1 ^a (2.05)
Private Coverage	67.5 (1.18)	68.8 (1.37)	73.2 (4.02)	59.3 ^b (3.06)
Medicaid/CHIP ⁸	7.8 (0.66)	6.7 (0.75)	9.5 (2.29)	15.2 (2.04)
Other ⁹	23.6 (1.10)	24.3 (1.42)	21.4 (3.70)	26.1 (3.03)
Uninsured	16.1 (0.83)	15.6 ^b (0.94)	8.3 (2.07)	14.9 ^a (2.05)
VETERAN STATUS				
Yes	12.0 (0.90)	13.5 (1.16)	9.4 (2.54)	6.6 (1.18)
No	88.0 (0.90)	86.5 (1.16)	90.6 (2.54)	93.4 (1.18)
NUMBER OF MOVES IN THE PAST YEAR⁶				
0	78.3 (0.95)	80.0 (1.13)	76.6 (3.43)	73.6 (2.76)
1 or 2	19.0 (0.92)	17.4 (1.06)	19.9 (3.29)	23.7 (2.72)
3 or More	2.8 (0.45)	2.6 (0.56)	3.4 (1.28)	2.7 (0.80)

Table C.2 Demographic, Mental Health, and Substance Use Characteristics of Adults Aged 18 or Older, by SCID Mental Illness (MI) and Mental Health Service Use Status: Percentages and Standard Errors, 2008-2012 MHSS (continued)

Characteristics	Total	No SCID MI and No Mental Health Service Use^{1,2}	No SCID MI but Mental Health Service Use^{1,2}	SCID MI and Mental Health Service Use^{1,2}
MENTAL HEALTH HISTORY				
Ever Told by Doctor Had Depression ⁶	13.0 (0.60)	4.1 ^b (0.47)	48.7 (3.42)	70.0 ^b (2.72)
Ever Told by Doctor Had Anxiety Disorder ⁶	8.6 (0.54)	2.7 ^b (0.46)	31.3 (3.54)	52.0 ^b (3.23)
PSYCHOLOGICAL DISTRESS AND IMPAIRMENT				
Average Past Month Distress Score ¹⁰	3.8 (0.06)	2.8 ^b (0.08)	5.0 (0.28)	9.0 ^b (0.31)
0	23.3 (1.19)	28.6 ^b (1.50)	13.4 (3.10)	* (*)
1-5	51.3 (1.41)	55.0 (1.68)	48.2 (3.72)	23.5 ^b (3.37)
6-10	17.6 (0.80)	13.3 ^b (1.03)	27.0 (2.95)	41.8 ^b (2.95)
11-24	7.8 (0.27)	3.1 ^b (0.29)	11.4 (1.83)	33.1 ^b (2.19)
Past Month Serious Psychological Distress ¹¹	4.5 (0.20)	1.6 ^b (0.21)	5.6 (1.27)	23.3 ^b (1.84)
Average Past Year Distress Score (Most Distressed Month in Past Year) ¹⁰	5.0 (0.05)	3.5 ^b (0.08)	7.0 (0.38)	12.6 ^b (0.37)
0	21.2 (1.13)	26.6 ^b (1.45)	7.2 (2.59)	* (*)
1-5	45.5 (1.30)	51.3 ^b (1.63)	38.9 (4.35)	8.8 ^b (2.08)
6-10	17.7 (0.78)	14.9 ^b (1.03)	28.8 (3.47)	32.1 (3.28)
11-24	15.5 (0.25)	7.2 ^b (0.35)	25.2 (2.62)	57.8 ^b (2.97)
Past Year Serious Psychological Distress ¹¹	10.7 (0.20)	4.2 ^b (0.24)	13.6 (1.77)	49.7 ^b (2.65)
Average Past Year Functional Impairment Score ¹²	3.5 (0.05)	2.1 ^b (0.07)	5.8 (0.36)	11.4 ^b (0.41)
1 st Tertile (0)	45.3 (1.25)	54.6 ^b (1.57)	22.1 (3.53)	4.1 ^b (1.80)
2 nd Tertile (1-3)	21.4 (1.09)	22.8 (1.23)	18.8 (3.90)	9.9 (2.82)
3 rd Tertile (4-24)	33.3 (0.73)	22.6 ^b (0.97)	59.1 (4.33)	86.0 ^b (3.13)
WHODAS Score > 0	54.7 (1.25)	45.4 ^b (1.57)	77.9 (3.53)	95.9 ^b (1.80)
INDICATORS OF POSSIBLE ANTISOCIAL BEHAVIOR				
Attacked Someone with the Intent to Seriously Harm Them in the Past Year ⁶	1.3 (0.18)	1.0 (0.24)	1.2 (0.47)	1.9 (0.46)
Past Year Arrest ⁶	2.5 (0.44)	2.0 (0.54)	1.9 (1.11)	4.4 (1.13)
Past Year Probation or Parole ⁶	2.2 (0.43)	2.1 (0.55)	2.9 (1.23)	4.6 (1.03)

Table C.2 Demographic, Mental Health, and Substance Use Characteristics of Adults Aged 18 or Older, by SCID Mental Illness (MI) and Mental Health Service Use Status: Percentages and Standard Errors, 2008-2012 MHSS (continued)

Characteristics	Total	No SCID MI and No Mental Health Service Use^{1,2}	No SCID MI but Mental Health Service Use^{1,2}	SCID MI and Mental Health Service Use^{1,2}
ALCOHOL USE				
Past Year Alcohol Use	72.0 (1.27)	71.4 (1.66)	73.1 (3.65)	74.2 (2.20)
Early Alcohol Initiation (< age 14)	13.0 (0.93)	11.7 (1.12)	13.4 (2.77)	22.1 ^a (3.03)
Average Number of Days Used Alcohol in the Past Year among Users	95.3 (3.15)	95.2 (3.76)	101.1 (9.43)	90.9 (9.60)
Used Alcohol 260-312 Days (5-6 days/week) in the Past Year	6.9 (0.81)	6.7 (0.82)	7.7 (1.84)	8.8 (2.78)
Used Alcohol > 312 Days (> 6 days/week) in the Past Year	5.4 (0.88)	5.4 (1.05)	* (*)	5.0 (1.81)
Past Month Binge Drinking ¹³	25.9 (1.08)	25.4 (1.32)	26.4 (3.26)	23.2 (2.56)
Past Month Heavy Alcohol Use ¹³	7.7 (0.80)	7.2 (0.90)	7.2 (1.75)	8.2 (1.75)
Drove under the Influence of Alcohol in the Past Year	13.3 (0.79)	11.5 ^a (0.91)	18.3 (2.94)	19.3 (2.37)
Past Year Arrest for Drunkenness or Liquor Law Violation ⁶	0.3 (0.09)	0.2 (0.09)	0.1 (0.06)	1.3 (0.79)
Past Year Subthreshold Alcohol Dependence ^{14,15}	11.6 (0.74)	10.8 (0.80)	15.4 (3.27)	10.9 (1.79)
1 Dependence Symptom	8.1 (0.61)	7.7 (0.69)	9.2 (2.10)	7.3 (1.66)
2 Dependence Symptoms	3.5 (0.41)	3.0 (0.46)	6.2 (2.58)	3.6 (1.06)
Past Year Alcohol Use Disorder ¹³	7.4 (0.63)	5.5 ^a (0.72)	10.6 (2.06)	14.5 (1.65)
Missing $\geq$ 1 Alcohol Use Disorder Criteria ^{14,16}	1.8 (0.55)	1.4 (0.52)	1.6 (1.07)	0.9 (0.60)
Lifetime but Not Past Year Alcohol Use	17.1 (1.08)	16.6 (1.32)	17.3 (3.12)	18.5 (1.80)
Number of Criteria Met for Alcohol Use Disorder ¹⁷				
0	80.9 (0.95)	83.7 ^a (1.02)	74.0 (3.68)	74.7 (2.54)
1	9.1 (0.64)	8.7 (0.70)	10.0 (2.14)	8.1 (1.81)
2	4.9 (0.46)	4.4 (0.56)	7.9 (2.61)	5.5 (1.34)
3-4	3.0 (0.45)	2.3 (0.53)	3.4 (0.93)	3.9 (0.78)
5-6	1.2 (0.18)	0.7 (0.17)	2.0 (0.78)	3.0 (0.81)
7+	0.9 (0.14)	0.2 ^a (0.10)	2.8 (1.14)	4.8 (1.14)

Table C.2 Demographic, Mental Health, and Substance Use Characteristics of Adults Aged 18 or Older, by SCID Mental Illness (MI) and Mental Health Service Use Status: Percentages and Standard Errors, 2008-2012 MHSS (continued)

Characteristics	Total	No SCID MI and No Mental Health Service Use^{1,2}	No SCID MI but Mental Health Service Use^{1,2}	SCID MI and Mental Health Service Use^{1,2}
DRUG USE¹⁸				
Past Year Drug Use	15.5 (0.71)	13.2 ^a (0.87)	21.4 (3.41)	22.0 (2.31)
Average Number of Days Used Illicit Drugs in the Past Year among Users	112.1 (7.88)	103.5 (10.30)	73.7 (16.02)	104.8 (9.11)
1 st Tertile (1-11)	32.9 (2.78)	33.7 (3.75)	* (*)	30.6 (4.46)
2 nd Tertile (12-119)	31.8 (2.59)	34.3 (3.79)	* (*)	31.4 (4.18)
3 rd Tertile (120-365)	35.3 (3.00)	32.0 (4.19)	* (*)	38.0 (3.57)
Past Year Arrest for Possession, Manufacture, or Sale of Drugs ⁶	0.4 (0.11)	0.3 (0.13)	0.1 (0.06)	1.4 ^a (0.56)
Sold Illegal Drugs in the Past Year ⁶	1.8 (0.36)	1.6 (0.47)	1.2 (0.50)	2.7 (0.70)
Drove under the Influence of Drugs in the Past Year	5.1 (0.42)	3.9 (0.48)	7.4 (1.68)	7.0 (1.29)
Polysubstance Drug Dependence ^{14,19}	< 0.1 (0.02)	* (*)	* (*)	0.3 (0.25)
Subthreshold Drug Dependence ^{14,15}	3.5 (0.39)	2.6 (0.38)	5.1 (1.53)	3.3 (0.90)
1 Dependence Symptom	2.3 (0.30)	1.9 (0.34)	4.5 (1.48)	2.4 (0.84)
2 Dependence Symptoms	1.2 (0.24)	0.7 (0.16)	0.5 (0.30)	0.9 (0.25)
Drug Use Disorder ¹⁴	2.6 (0.37)	1.9 (0.46)	2.7 (0.82)	6.4 ^a (1.22)
Missing ≥ 1 Drug Use Disorder Criteria ^{14,16}	1.2 (0.26)	0.9 (0.27)	3.4 (1.95)	0.7 (0.20)
Lifetime but Not Past Year Drug Use	36.2 (1.26)	34.4 ^a (1.49)	43.4 (3.91)	51.8 (2.93)
Number of Criteria Met for Drug Use Disorder ¹⁷				
0	93.8 (0.53)	95.5 (0.57)	92.2 (1.71)	90.3 (1.44)
1	2.4 (0.31)	2.0 (0.35)	4.6 (1.48)	2.6 (0.85)
2	1.5 (0.25)	0.9 (0.19)	0.7 (0.32)	1.3 (0.41)
3-4	1.1 (0.16)	0.7 (0.18)	1.5 (0.74)	2.7 (0.71)
5-6	0.8 (0.31)	0.7 (0.41)	0.5 (0.29)	0.9 (0.36)
7+	0.4 (0.08)	0.2 (0.08)	0.6 (0.26)	2.3 ^a (0.72)
Number of Substances Used in the Past Year ²⁰				
0	27.2 (1.29)	28.0 (1.68)	25.1 (3.54)	23.3 (2.15)
1	58.0 (1.33)	59.3 (1.66)	54.9 (3.84)	56.7 (2.78)
2	10.5 (0.68)	9.4 (0.85)	14.6 (2.92)	13.4 (1.73)
3+	4.4 (0.36)	3.3 (0.38)	5.4 (1.44)	6.6 (1.19)

Table C.2 Demographic, Mental Health, and Substance Use Characteristics of Adults Aged 18 or Older, by SCID Mental Illness (MI) and Mental Health Service Use Status: Percentages and Standard Errors, 2008-2012 MHSS (continued)

Characteristics	Total	No SCID MI and No Mental Health Service Use ^{1,2}	No SCID MI but Mental Health Service Use ^{1,2}	SCID MI and Mental Health Service Use ^{1,2}
NUMBER OF NEED INDICATORS²¹				
0	11.8 (0.95)	14.8 (1.21)	* (*)	* (*)
1-2	41.0 (1.31)	45.1 ^b (1.60)	19.9 (2.80)	12.0 ^a (2.20)
3-4	36.0 (1.22)	32.5 ^b (1.44)	49.9 (3.68)	60.4 ^a (2.89)
5-6	8.9 (0.56)	5.6 ^b (0.52)	24.5 (3.25)	21.9 (2.14)
7+	2.4 (0.40)	1.9 (0.48)	4.2 (1.14)	4.4 (0.90)

SCID = Structured Clinical Interview for DSM Disorders.

*Low precision; no estimate reported.

NOTE: Standard errors of weighted percentages have been computed with the WTADJX procedure of SUDAAN[®] 11.0.1 (RTI International, 2013), recognizing that the clinical sample weights were calibrated annually to estimated totals computed from a larger NSDUH sample of adults.

^a Difference between estimate and No SCID MI but Mental Health Service Use estimate is statistically significant at the 0.05 level.

^b Difference between estimate and No SCID MI but Mental Health Service Use estimate is statistically significant at the 0.01 level.

¹ SCID MI includes respondents with any of the following past year disorders: major depressive episode, manic episode, dysthymic disorder, posttraumatic stress disorder, panic disorder with or without agoraphobia, agoraphobia without panic disorder, social phobia, specific phobia, obsessive compulsive disorder, generalized anxiety disorder, anorexia nervosa, bulimia nervosa, intermittent explosive disorder, psychotic symptoms, and adjustment disorder irrespective of their Global Assessment of Functioning (GAF) score.

² Mental Health Service Use is defined as having received inpatient treatment/counseling or outpatient treatment/counseling or having used prescription medication for problems with emotions, nerves, or mental health. Respondents were not to include treatment for drug or alcohol use. Respondents with unknown treatment/counseling information were excluded.

³ National estimates computed from the clinical sample were calibrated so that the contributions from key variables such as this one matched their census-provided values.

⁴ The Other Employment category includes students, people keeping house or caring for children full time, retired or disabled people, or other people not in the labor force.

⁵ Estimates are based on a definition of Poverty Level that incorporates information on family income, size, and composition and is calculated as a percentage of the U.S. Census Bureau's poverty thresholds. Respondents aged 18 to 22 who were living in a college dormitory were excluded.

⁶ Respondents with unknown data were excluded.

⁷ Respondents could indicate multiple types of health insurance; thus, these response categories are not mutually exclusive.

⁸ CHIP is the Children's Health Insurance Program. Individuals aged 19 or younger are eligible for this plan.

⁹ Other Health Insurance is defined as having Medicare, CHAMPUS, TRICARE, CHAMPVA, the VA, military health care, or any other type of health insurance.

¹⁰ Distress Score is a score with values ranging from 0 to 24 indicating the level of psychological distress. Past month score is based on data collected from a series of six questions known as the K6, asking adult respondents how frequently they experienced symptoms of psychological distress during the past 30 days. Past year score incorporates past month score plus a series of six questions asking about the worst month in the past year if not the past month.

¹¹ Serious Psychological Distress (SPD) is defined for this table as having a score of 13 or higher on the K6 scale.

¹² Functional Impairment refers to interference in a person's daily functioning or limitations in carrying out one or more major life activities, based on the World Health Organization Disability Assessment Schedule (WHODAS). A score ranging from 0 to 24 is created based on responses to eight measures.

¹³ Binge Alcohol Use is defined 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.

¹⁴ Substance use disorder is based on definitions found in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR) (American Psychiatric Association, 2000). See the following reference: American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.). Washington, DC: American Psychiatric Association.

Table C.2 Demographic, Mental Health, and Substance Use Characteristics of Adults Aged 18 or Older, by SCID Mental Illness (MI) and Mental Health Service Use Status: Percentages and Standard Errors, 2008-2012 MHSS (continued)

¹⁵ Subthreshold substance dependence occurs when a respondent who is not classified as having substance use disorder endorses one or two of the dependence criteria.

¹⁶ Respondents with ≥ 1 missing substance use disorder criteria may still be classified as having substance use disorder based on other nonmissing criteria.

¹⁷ Number of Criteria Met for substance use disorder is the number of criteria met out of the seven dependence criteria plus the number of criteria met out of the four abuse criteria. The number of criteria met for illicit drugs is determined as the maximum number of criteria met for marijuana, cocaine, heroin, hallucinogens, inhalants, pain relievers, tranquilizers, stimulants, and sedatives.

¹⁸ Illicit Drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription psychotherapeutics used nonmedically.

¹⁹ Polysubstance Drug Dependence occurs when a respondent meets dependence criteria across multiple substances but not within a single substance.

²⁰ Substances being counted include alcohol, marijuana, cocaine, heroin, hallucinogens, inhalants, and nonmedical use of psychotherapeutics.

²¹ Need Indicators include (1) Substance Use Disorder; (2) Ever Told by Doctor Had Depression or Anxiety Disorder; (3) Past Year K6 Score > 0 ; (4) WHODAS Score > 0 ; (5) Past Month Binge Drinking; (6) Past Month Heavy Drinking; (7) Fair or Poor Overall Health; (8) Attacked Someone with the Intent to Seriously Harm Them; (9) Past Year Arrest; (10) Past Year Probation or Parole; (11) Past Year Illicit Drug Use; and (12) Subthreshold SCID MI.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health (NSDUH) and Mental Health Surveillance Study (MHSS) Clinical Sample, 2008-2012.

Appendix D: Characteristics of Services Used

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Table D.1 Types of Past Year Mental Health Service Use, by Past Year Any Mental Illness (AMI) among Adults Aged 18 or Older Who Used Mental Health Services: Percentages and Standard Errors, 2008-2012 NSDUH

Mental Health Service	Total % (SE)	No AMI¹ % (SE)	AMI¹ % (SE)
TYPES OF MENTAL HEALTH SERVICES²			
Outpatient	48.2 (0.49)	38.2 (0.73)	56.9 ^b (0.62)
Outpatient Mental Health Clinic or Center	10.9 (0.29)	6.4 (0.34)	14.7 ^b (0.43)
Office of Private Therapist, Psychologist, Psychiatrist, Social Worker, or Counselor - Not Part of a Clinic	26.8 (0.43)	22.0 (0.59)	31.0 ^b (0.58)
Doctor's Office - Not Part of a Clinic	10.0 (0.28)	7.0 (0.36)	12.5 ^b (0.44)
Outpatient Medical Clinic	3.7 (0.19)	2.5 (0.25)	4.7 ^b (0.27)
Partial Day Hospital or Day Treatment Program	1.0 (0.08)	0.4 (0.07)	1.5 ^b (0.14)
School or University Setting/Clinic/Center	0.3 (0.03)	0.2 (0.03)	0.4 ^b (0.04)
Some Other Place ³	0.9 (0.08)	0.6 (0.09)	1.2 ^b (0.12)
Therapist/Psychologist/Counselor, Location Unspecified	0.1 (0.02)	0.1 (0.04)	0.0 (0.01)
Doctor's Office, Location Unspecified	0.1 (0.03)	0.1 (0.03)	0.2 ^a (0.06)
Work/Parent's Work/Employee Assistance Program/Job Training/Career Counseling	0.1 (0.02)	0.0 (0.02)	0.1 (0.04)
Victims Assistance (domestic violence shelter/rape crisis)	0.0 (0.01)	* (*)	0.0 (0.02)
Military Facility/VA	0.3 (0.05)	0.2 (0.05)	0.4 ^a (0.07)
Emergency Room	0.0 (0.01)	0.0 (0.01)	0.0 (0.02)
Hospital/Skilled Nursing Facility, Mental Health Unspecified	0.1 (0.03)	0.1 (0.04)	0.1 (0.04)
Clinic/Center/Agency/Program/Class, Type/Government/Mental Health Unspecified	0.1 (0.02)	0.0 (0.02)	0.1 (0.02)
Social Services/Human Services	0.0 (0.01)	0.0 (0.01)	0.0 (0.02)
Halfway House/Transition Housing	0.0 (0.00)	* (*)	0.0 (0.01)
Hospice/Grief Counseling	0.0 (0.02)	0.0 (0.01)	0.1 (0.04)
Prison or Jail	0.0 (0.01)	* (*)	0.0 (0.02)
Shelter Abuse/Violence Unspecified	0.0 (0.00)	* (*)	0.0 (0.01)
Office/Doctor/Therapist, Office Unspecified	0.0 (0.00)	0.0 (0.01)	* (*)
No Location Specified ⁴	1.4 (0.19)	1.7 (0.42)	1.2 (0.18)
Inpatient	5.9 (0.23)	3.7 (0.27)	7.7 ^b (0.36)
Prescription Medication	84.9 (0.33)	82.4 (0.51)	86.9 ^b (0.43)
COMBINATIONS OF MENTAL HEALTH SERVICES²			
Inpatient Only	1.5 (0.15)	1.8 (0.20)	1.3 (0.22)
Outpatient Only	13.2 (0.32)	15.5 (0.50)	11.2 ^b (0.39)
Prescription Medication Only	49.4 (0.48)	59.4 (0.73)	40.8 ^b (0.60)
Inpatient and Outpatient Only	0.4 (0.05)	0.3 (0.05)	0.5 ^a (0.07)
Inpatient and Prescription Medication Only	0.8 (0.07)	0.7 (0.12)	1.0 (0.10)
Outpatient and Prescription Medication Only	31.6 (0.45)	21.4 (0.60)	40.4 ^b (0.62)
Inpatient, Outpatient, and Prescription Medication	3.0 (0.16)	0.9 (0.12)	4.8 ^b (0.26)
PERCEIVED UNMET NEED FOR TREATMENT⁵	18.5 (0.32)	5.7 (0.27)	29.5 ^b (0.51)

SE = standard error.

*Low precision; no estimate reported.

NOTE: Significance testing was conducted between the No AMI estimates and the AMI estimates.

^a Difference between estimate and No AMI estimate is statistically significant at the 0.05 level.

^b Difference between estimate and No AMI estimate is statistically significant at the 0.01 level.

Table D.1 Types of Past Year Mental Health Service Use, by Past Year Any Mental Illness (AMI) among Adults Aged 18 or Older Who Used Mental Health Services: Percentages and Standard Errors, 2008-2012 NSDUH (continued)

¹ NSDUH AMI is defined as having a diagnosable mental, behavioral, or emotional disorder, other than a developmental or substance use disorder, assessed by the Mental Health Surveillance Study (MHSS) *Structured Clinical Interview for the Diagnostic and Statistical Manual of Mental Disorders—Fourth Edition—Research Version—Axis I Disorders* (MHSS-SCID), which is based on the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR) (American Psychiatric Association, 2000). Three categories of mental illness severity are defined based on the level of functional impairment: mild mental illness, moderate mental illness, and serious mental illness. Any mental illness includes people in any of the three categories. These mental illness estimates are based on a predictive model and are not direct measures of diagnostic status. See the following reference: American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.). Washington, DC: American Psychiatric Association.

² Mental Health Treatment/Counseling is defined as having received inpatient treatment/counseling or outpatient treatment/counseling or having used prescription medication for problems with emotions, nerves, or mental health. Respondents were not to include treatment for drug or alcohol use. Respondents with unknown treatment/counseling information were excluded.

³ Respondents with unknown or invalid responses to the other-specify question on Some Other Place Received Outpatient Mental Health Treatment/Counseling were excluded.

⁴ No Location Specified is defined as people who received outpatient mental health treatment/counseling but did not specify a treatment location.

⁵ Perceived Unmet Need for Mental Health Treatment/Counseling is defined as a perceived need for treatment/counseling that was not received. Perception of need was asked of all respondents regardless of disorder status. Respondents with unknown perception of unmet need information were excluded.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health (NSDUH), 2008-2012.

Table D.2 Frequency of Past Year Mental Health Service Use, by Past Year Any Mental Illness (AMI) among Adults Aged 18 or Older Who Used Mental Health Services: Percentages and Standard Errors, 2008-2012 NSDUH

Mental Health Service	Total % or Mean (SE)	No AMI¹ % (SE)	AMI¹ % (SE)
FREQUENCY OF MENTAL HEALTH SERVICE USE²			
Number of Outpatient Visits among Those Who Use Outpatient Services			
Mean Number of Visits	11.7 (0.27)	8.6 (0.37)	13.6 ^b (0.37)
1 Visit	14.5 (0.45)	19.2 (0.89)	11.7 ^b (0.49)
2 Visits	11.9 (0.44)	14.5 (0.82)	10.4 ^b (0.51)
3-6 Visits	32.7 (0.62)	34.1 (1.07)	31.9 (0.77)
7-24 Visits	29.2 (0.58)	24.8 (0.97)	31.8 ^b (0.73)
25+ Visits	11.7 (0.43)	7.4 (0.66)	14.2 ^b (0.54)
Number of Nights Spent in Inpatient Care among Those Who Used Inpatient Services			
Mean Number of Nights	12.7 (1.79)	15.5 (6.08)	11.8 (1.14)
1 st Quintile (1)	24.4 (2.11)	32.4 (3.35)	21.7 ^a (2.59)
2 nd Quintile (2)	10.3 (1.31)	16.2 (3.54)	8.2 ^a (1.19)
3 rd Quintile (3-4)	19.0 (1.46)	15.2 (2.42)	20.3 (1.80)
4 th Quintile (5-11)	26.2 (1.71)	22.1 (3.13)	27.6 (2.02)
5 th Quintile (12-365)	20.2 (1.62)	14.2 (2.93)	22.2 ^a (1.92)

SE = standard error.

*Low precision; no estimate reported.

NOTE: Significance testing was conducted between the No AMI estimates and the AMI estimates.

^a Difference between estimate and No AMI estimate is statistically significant at the 0.05 level.

^b Difference between estimate and No AMI estimate is statistically significant at the 0.01 level.

¹ NSDUH AMI is defined as having a diagnosable mental, behavioral, or emotional disorder, other than a developmental or substance use disorder, assessed by the Mental Health Surveillance Study (MHSS) *Structured Clinical Interview for the Diagnostic and Statistical Manual of Mental Disorders—Fourth Edition—Research Version—Axis I Disorders* (MHSS-SCID), which is based on the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR) (American Psychiatric Association, 2000). Three categories of mental illness severity are defined based on the level of functional impairment: mild mental illness, moderate mental illness, and serious mental illness. Any mental illness includes people in any of the three categories. These mental illness estimates are based on a predictive model and are not direct measures of diagnostic status. See the following reference: American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.). Washington, DC: American Psychiatric Association.

² Mental Health Treatment/Counseling is defined as having received inpatient treatment/counseling or outpatient treatment/counseling or having used prescription medication for problems with emotions, nerves, or mental health. Respondents were not to include treatment for drug or alcohol use. Respondents with unknown treatment/counseling information were excluded.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health (NSDUH), 2008-2012.

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