Understanding Mental Health Treatment in Persons Without Mental Diagnoses

Results From the National Comorbidity Survey Replication

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Context: Epidemiologic surveys have consistently found that approximately half of respondents who obtained treatment for mental or substance use disorders in the year before interview did not meet the criteria for any of the disorders assessed in the survey. Concerns have been raised that this pattern might represent evidence of misallocation of treatment resources.

Objective: To examine patterns and correlates of 12-month treatment of mental health or substance use problems among people who do not have a 12-month DSM-IV disorder.

Design and Setting: Data are from the National Comorbidity Survey Replication, a nationally representative face-to-face US household survey performed between February 5, 2001, and April 7, 2003, that assessed DSM-IV disorders using a fully structured diagnostic interview, the World Health Organization Composite International Diagnostic Interview (CIDI).

Participants: A total of 5692 English-speaking respondents 18 years and older.

Main Outcome Measures: Patterns of 12-month service use among respondents without any 12-month DSM-IV CIDI disorders.

Results: Of respondents who used 12-month services, 61.2% had a 12-month DSM-IV CIDI diagnosis, 21.1% had a lifetime but not a 12-month diagnosis, and 9.7% had some other indicator of possible need for treatment (subthreshold 12-month disorder, serious 12-month stressor, or lifetime hospitalization). The remaining 8.0% of service users accounted for only 3.6% of all services and even lower proportions of specialty (1.9%-2.4%) and general medical (3.7%) visits compared with higher proportions of human services (18.9%) and complementary and alternative medicine (7.6%) visits. Only 26.5% of the services provided to the presumed low-need patients were delivered in the mental health specialty or general medical sectors.

Conclusions: Most services provided for emotional or substance use problems in the United States go to people with a 12-month diagnosis or other indicators of need. Patients who lack these indicators of need receive care largely outside the formal health care system.

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health services, community mental health surveys have consistently found that a substantial proportion of people in treatment for emotional problems do not meet the criteria for any of the 12-month diagnoses. Data from the 1980 Epidemiological Catchment Area Survey, the 1990-1992 National Comorbidity Survey, and the 2001-2003 National Comorbidity Survey Replication (NCS-R) all reported that approximately half of persons using mental health services during the year before interview did not meet the criteria for any of the DSM disorders assessed in the surveys. This pattern is not confined to the United States. Persons without diagnosed disorders make up most treated cases in mental health needs assessment surveys throughout the developed and developing worlds. This consistent finding has been interpreted as evidence of potential overuse, and recommendations have been made based on this conclusion to redistribute services from persons without diagnoses to those with more serious conditions.

If overuse of services implies use of services in the absence of need, then evaluating this problem empirically requires carefully considering what we mean by the term need and what we include in the enumeration of mental health services. Clinical need is a complex concept, best conceptualized not as a single entity but as a series of overlapping constructs, including symptoms, disease burden, treatment effectiveness, and consumer perceptions. In assessing potential need it is critical to complement diagnosis with other measures of symptoms and psychosocial burden and with patients’ explanations of why they sought care.

In exploring the implications of use of services in the absence of diagnosis, it is also critical to understand where people are receiving their treatment. The types of mental health care that people obtain are heterogeneous, ranging from services delivered in specialty mental health settings, to those provided by general health professionals, to those obtained from nonprofessionals, such as clergy and self-help group facilitators. Whereas treatment in the formal health care system (either medical or mental health) contributes to rising health care costs, treatment delivered outside of those sectors has fewer implications for allocation of resources.

This study examines the prevalence and characteristics of use of 12-month mental health services in people without 12-month mental disorders based on the most comprehensive survey ever conducted of the prevalence and correlates of mental disorders in the United States. Extending research from previous epidemiologic surveys, we seek to understand the extent to which patients who do not meet the 12-month criteria for any of the disorders assessed in the survey have other indicators of possible need. We examine the sectors where treatment is received, the number of visits made to each treatment sector, and patient self-reported reasons for seeking treatment.

**METHODS**

**SAMPLE**

The NCS-R is a nationally representative face-to-face household survey of respondents 18 years and older in the coterminous United States conducted between February 5, 2001, and April 7, 2003. Part 1 included a core diagnostic assessment administered to all respondents. Part 2 assessed risk factors, correlates, service use, and additional disorders and was administered to all part 1 respondents with lifetime disorders plus a probability subsample of other respondents. The overall response rate was 70.9%. The part 2 sample, which is the focus of this study, included all part 1 respondents with a disorder and a probability subsample of other part 1 respondents, for a total of 3692 part 2 respondents. Part 2 data were weighted to adjust for differential probability of selection in households, differential nonresponse, differential selection of part 1 respondents into part 2, and residual discrepancies with US Census population data. Recruitment and consent procedures were approved by the human subjects committees of Harvard Medical School and the University of Michigan (Ann Arbor).

**MEASURES**

**Diagnosis Assessment of 12-Month Mental Disorders**

The DSM-IV diagnoses were made using the World Health Organization Composite International Diagnostic Interview (CIDI) version 3.0, a fully structured lay-administered diagnostic interview. The DSM-IV criteria were used to generate diagnoses. The 12-month DSM-IV/CIDI disorders considered herein include mood disorders (bipolar I and II disorders, subthreshold bipolar disorder, major depressive disorder, and dysthymia), anxiety disorders (panic disorder, agoraphobia without panic, specific phobia, social phobia, generalized anxiety disorder, obsessive-compulsive disorder, posttraumatic stress disorder, and adult separation anxiety disorder), impulse control disorders (anorexia, bulimia, binge eating disorder, oppositional defiant disorder, intermittent explosive disorder, and pathological gambling disorder), substance use disorders (alcohol and drug abuse with or without dependence), and nonaffective psychosis. All diagnoses were made using organic exclusions and diagnostic hierarchy rules, except for the substance use disorders, in which abuse was defined with or without dependence. Masked clinical reappraisal interviews using the Structured Clinical Interview for DSM-IV (SCID) showed generally good concordance between diagnoses based on the CIDI and the SCID for anxiety, mood, and substance use disorders but CIDI underestimation of the prevalence of nonaffective psychosis. The CIDI lifetime diagnoses of impulse control disorders were not validated.

**Other Indicators of Possible Need for Treatment**

Respondents who did not meet the 12-month criteria for any of the previously mentioned DSM-IV disorders were divided into subsamples based on a 3-category gradient of possible need for treatment: (1) those with at least 1 lifetime DSM-IV/CIDI disorder; (2) those with 1 or more indicators of severity; that is, 12-month subthreshold disorders (ie, lacking only 1 criterion for a diagnosis), exposure to a major stressful event (eg, rape or divorce) in the past 12 months, and lifetime hospitalization for a mental disorder; and (3) those without any lifetime diagnosis or other indicator of possible need.

**12-Month Use of Mental Health Services**

All part 2 respondents were asked whether they had ever received treatment for “problems with your emotions or nerves or your use of alcohol or drugs.” A list of types of treatment professionals and a separate list of settings were presented in a respon-
Table 1. Patterns of 12-Month Treatment Across Subsamples Defining a Gradient of Need for Treatment

<table>
<thead>
<tr>
<th>Subsample</th>
<th>Population Distribution, % (SE)</th>
<th>Received Treatment Distribution, % (SE)</th>
<th>No.</th>
<th>Distribution of Treatment, % (SE)</th>
<th>Visits, Mean (SE), No.</th>
<th>Distribution of Visits, % (SE)</th>
<th>No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any 12-mo DSM-IV/CIDI disorder</td>
<td>27.5 (0.9)</td>
<td>39.9 (1.0)</td>
<td>2392</td>
<td>61.2 (1.5)</td>
<td>16.5 (1.0)</td>
<td>69.0 (3.3)</td>
<td>1000</td>
</tr>
<tr>
<td>Lifetime but not 12-mo DSM-IV/CIDI disorder</td>
<td>20.7 (0.4)</td>
<td>18.3 (1.1)</td>
<td>1575</td>
<td>21.1 (1.2)</td>
<td>13.8 (1.7)</td>
<td>19.3 (2.1)</td>
<td>316</td>
</tr>
<tr>
<td>Any other indicator of possible need†</td>
<td>13.7 (0.5)</td>
<td>12.7 (1.7)</td>
<td>633</td>
<td>9.7 (1.2)</td>
<td>8.4 (1.9)</td>
<td>5.5 (1.2)</td>
<td>100</td>
</tr>
<tr>
<td>No indicator of potential need</td>
<td>38.1 (1.1)</td>
<td>3.8 (0.6)</td>
<td>1092</td>
<td>8.0 (1.1)</td>
<td>10.3 (4.8)</td>
<td>5.6 (2.5)</td>
<td>62</td>
</tr>
<tr>
<td>Total sample</td>
<td>100</td>
<td>17.9 (0.7)</td>
<td>5692</td>
<td>100</td>
<td>14.7 (0.8)</td>
<td>100</td>
<td>1478</td>
</tr>
<tr>
<td>Significance†</td>
<td>NA</td>
<td>χ², 467.5</td>
<td>NA</td>
<td>F₃,1472 = 5.2</td>
<td>NA</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Abbreviations: CIDI, Composite International Diagnostic Interview; NA, not applicable.
† Percentages are based on weighted numbers of respondents in each subsample.
‡ Unweighted number of respondents in each subsample.
§ Estimates are based on the weighted numbers of respondents in treatment in each subsample.
∥ Unweighted number of respondents in treatment in each subsample.
†† Subthreshold 12-month diagnosis, 12-month major stressful event, or lifetime hospitalization for a mental health or substance use problem.
‡‡ Significant association with the gradient at P < .05, 2-sided test.

ANALYSIS PROCEDURES

Basic patterns of service use were examined by computing proportions in treatment and mean numbers of visits among those in treatment. Logistic regression analysis was used to study predictors of 12-month treatment and treatment in particular sectors among those receiving any treatment. Standard errors were estimated using the Taylor series method and implemented using a software system (SUDAAN version 8.0.1; Research Triangle Institute, Research Triangle Park, North Carolina). Logits and their 95% confidence intervals were transformed into odds ratios (ORs) for ease of interpretation. Multivariate significance tests in the logistic regression analyses were made using Wald χ² tests based on coefficient variance-covariance matrices that were adjusted for design effects using the Taylor series method. Statistical significance was evaluated using 2-sided design-based tests and the P < .05 level of significance.

RESULTS

PATTERNS OF 12-MONTH TREATMENT

As reported previously, 17.9% of NCS-R respondents obtained some type of treatment for problems with their mental health or substance use in the 12 months before interview. There was a strong monotonic relationship between the gradient of possible need and the probability of treatment, with 39.9% of respondents with 12-month DSM-IV/CIDI disorders obtaining treatment compared with 18.3% of those with lifetime but not 12-month disorders, 12.7% of those without any lifetime disorder but with another indicator of possible need, and 3.8% of those without any indicator of possible need. Of all patients who obtained treatment, 61.2% met the criteria for 1 or more of the 12-month DSM-IV/CIDI disorders assessed in the survey. These 12-month cases accounted for 69.0% of all visits. An additional 21.1% of patients had a lifetime disorder (19.9% of all visits), and the remaining 17.7% of patients (11.1% of visits) did not meet the criteria for any lifetime or 12-month disorder.

Patients with 12-month disorders accounted for higher proportions of visits to psychiatrists (73.5%), other mental health professionals (74.3%), and general medical professionals (74.3%) than to human services (60.8%) and CAM (60.7%) professionals (detailed results available on request). Patients with lifetime but not 12-month disorders accounted for a higher proportion of visits to CAM professionals (27.7%) than to other treatment sectors (14.1%-17.8%). Persons without any of the disorders assessed in the survey and without any other indicator of possible need, in comparison, accounted for a higher proportion of visits to the human services sector (18.9%) than to other sectors (1.9%-7.6%).

These differences resulted in variation in treatment profiles across sectors among patients in each subsample of the gradient of possible need (Table 2). Among patients with a 12-month diagnosis, more than half of all visits (55.1%) were delivered by either a psychiatrist (13.7%) or another mental health professional (41.4%), and another...
9.7% were delivered in the general medical sector. This means that nearly two-thirds of all visits (64.6%) by patients with a 12-month disorder were made in the formal health care sector. These are all higher proportions than among patients with a lifetime but not a 12-month disorder, for whom 45.5% of visits were delivered by a mental health professional and 6.5% by a general medical professional (32.0% in a health care sector), and among patients without either a lifetime disorder or any of the indicators of potential need (26.5% in a health care sector). Regarding this last result, 73.5% of the visits of patients classified as having the least evidence of need were provided outside of the health care system, in either the human services sector (30.7%) or the CAM sector (42.8%). The highest proportion of visits in a health care sector (70.5%), in comparison, was made by patients without a lifetime disorder but with some other indicator of possible need.

**PREDICTORS OF 12-MONTH TREATMENT AMONG RESPONDENTS WITHOUT 12-MONTH DISORDERS**

Logistic regression analysis documented a variety of significant predictors of 12-month treatment among respondents who met the criteria for 1 or more lifetime disorders but none of the 12-month disorders (Table 3). These predictors include a high number (≥4) of lifetime disorders (OR, 4.0), lifetime hospitalization for a mental illness or substance use problem (OR, 2.5), most recent episode within 1 year of the 12-month recall period (OR, 3.2), a subthreshold episode within the 12-month recall period (OR, 2.4), and a major stressful event within the 12-month recall period (OR, 2.3). Respondents with lifetime bipolar disorder also had a meaningfully elevated OR of 12-month treatment (OR, 1.9), although this was only of marginal significance (P = .07). Significant predictors of 12-month treatment among respondents who did not meet the criteria for any of the disorders considered herein include lifetime hospitalization (OR, 4.1), a subthreshold episode within the 12-month recall period (OR, 3.1), and a major stressful event within the 12-month recall period (OR, 2.9).

A weighted count was created of individual-level predictors of treatment among respondents who did not meet the criteria for a 12-month DSM-IV/CIDI disorder by summing the indicators of possible need with weights based on the ORs in Table 3. In the subsample of these respondents who met the criteria for 1 or more lifetime disor-

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Table 2. Distribution of Visits Across Service Sectors in Subsamples Defining a Gradient of Need for Treatment

<table>
<thead>
<tr>
<th>Subsample</th>
<th>Psychiatrist</th>
<th>Other Mental Health</th>
<th>General Medical</th>
<th>Human Services</th>
<th>CAM</th>
<th>Total No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any 12-mo DSM-IV/CIDI disorder</td>
<td>13.7 (1.8)</td>
<td>41.4 (2.6)</td>
<td>9.7 (0.7)</td>
<td>8.0 (1.2)</td>
<td>27.8 (3.5)</td>
<td>1000</td>
</tr>
<tr>
<td>Lifetime but not 12-mo DSM-IV/CIDI disorder</td>
<td>11.0 (5.4)</td>
<td>34.5 (4.5)</td>
<td>6.1 (1.1)</td>
<td>7.5 (1.7)</td>
<td>44.1 (7.5)</td>
<td>316</td>
</tr>
<tr>
<td>Any other indicator of potential need</td>
<td>17.8 (4.8)</td>
<td>38.1 (11.9)</td>
<td>14.6 (4.3)</td>
<td>6.7 (2.1)</td>
<td>22.8 (14.9)</td>
<td>100</td>
</tr>
<tr>
<td>No indicator of potential need</td>
<td>4.3 (3.4)</td>
<td>16.2 (10.2)</td>
<td>6.0 (3.0)</td>
<td>30.7 (22.2)</td>
<td>42.8 (25.5)</td>
<td>62</td>
</tr>
<tr>
<td>Total sample</td>
<td>12.9 (1.8)</td>
<td>38.4 (3.1)</td>
<td>9.1 (0.6)</td>
<td>31.6 (4.0)</td>
<td>31.6 (4.0)</td>
<td>1478</td>
</tr>
</tbody>
</table>

Abbreviations: CAM, complementary and alternative medicine; CIDI, Composite International Diagnostic Interview.

Table 3. Predictors of Treatment in Respondents Without a 12-Month DSM-IV/CIDI Disorder

<table>
<thead>
<tr>
<th>OR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lifetime But No 12-mo DSM-IV/CIDI Disorder (n = 1725)</td>
</tr>
<tr>
<td>No. of lifetime DSM-IV/CIDI disorders</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2-4</td>
</tr>
<tr>
<td>≥5</td>
</tr>
<tr>
<td>x²</td>
</tr>
<tr>
<td>Lifetime DSM-IV/CIDI bipolar disorder</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td>x²</td>
</tr>
<tr>
<td>Recency of most recent episode, y</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2-4</td>
</tr>
<tr>
<td>5-9</td>
</tr>
<tr>
<td>≥10</td>
</tr>
<tr>
<td>x²</td>
</tr>
<tr>
<td>Lifetime hospitalization</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td>x²</td>
</tr>
<tr>
<td>Subthreshold 12-mo DSM-IV/CIDI disorder</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td>x²</td>
</tr>
<tr>
<td>12-mo major stressful event</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td>x²</td>
</tr>
</tbody>
</table>

Abbreviations: CI, confidence interval; CIDI, Composite International Diagnostic Interview; NA, not applicable; OR, odds ratio.

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In the subsample of respondents who did not meet even lifetime criteria for any of the disorders considered herein, the weighted estimate of need was significantly related in largely monotonic form to the probability of 12-month treatment (χ² = 144.2; P < .001) and mean number of visits among cases (F₁,3151 = 4.6; P = .007) (Table 4). The small (2.7%) proportion of respondents in this subsample with the highest estimated level of need had a 63.9% probability of 12-month treatment and accounted for nearly one-fourth (23.4%) of all 12-month visits in this subsample. The proportion increased to 27.8% of visits to a psychiatrist when examining the distribution by treatment sector (data available on request). The 73.5% of respondents in this subsample with the lowest estimated level of need accounted for 50.4% of all 12-month visits in this subsample. This proportion decreased to 19.8% of visits to a psychiatrist, however, compared with 65.6% of CAM visits when examining the distribution by treatment sector (data available on request).

REASONS FOR SEEKING TREATMENT AMONG PERSONS WITH AND WITHOUT DIAGNOSES

Respondents who received treatment were asked their reasons for doing so. This question series began by asking patients whether they sought treatment based on their own perceived need for professional help or only because someone else urged them to do so. Most patients in all subsamples (67.3%-76.0%) reported that they perceived themselves as needing treatment (Table 6). However, this percentage varied significantly across subsamples (χ² = 9.5;
The results reported herein show that most people who use services for mental health or substance use problems in the United States have either a DSM diagnosis or some other indicator of possible need for treatment. These findings extend those of previous studies in showing that a substantial percentage of service users did not have any of the DSM-IV/CIDI diagnoses assessed in the survey but had at least some symptoms that would meet criteria for a DSM disorder. The high proportion of users with at least some symptoms further suggests an underlying rationality in resource allocation among stable patients receiving maintenance treatment.

To the extent that maintenance treatment is taking place, asymptomatic patients with lifetime disorders in 12-month treatment may be treatment success stories. The comparatively high proportion of people with lifetime bipolar disorder in 12-month treatment despite not having a 12-month manic-hypomanic or depressive episode is an especially important case in point given the literature suggesting the value of maintenance therapy in this population. The fact that asymptomatic people with lifetime diagnoses had fewer visits than those with more symptoms or risk factors further suggests an underlying rationality in resource allocation among stable patients receiving maintenance treatment.

We also found that patients with lifetime but not 12-month diagnoses made up most other 12-month service users in the NCS-R. In this subsample of respondents, those with recent episodes were significantly more likely than others to be undergoing 12-month treatment, suggesting that they may be receiving time-limited treatment for recent episodes. Use of services among other patients with lifetime disorders may reflect the growing awareness that maintenance treatment is important for relapse prevention in people with a history of serious conditions. The fact that indicators of lifetime severity (number of diagnoses and lifetime history of hospitalization) were significant predictors of 12-month treatment is consistent with this hypothesis. This pattern is consistent with earlier NCS-R findings that allocation of services is significantly associated with burden of illness in patients with 12-month diagnoses.

The finding that a meaningful proportion of services is provided to patients who do not meet either 12-month or lifetime criteria for any of the DSM-IV disorders assessed in the NCS-R raises a more complex set of clinical and policy concerns. More than three-fourths of these patients had a subthreshold 12-month condition, reported...
a serious 12-month stressor, or had a history of hospitalization. Subthreshold syndromes are currently less well defined than threshold diagnoses, and relatively little is known about the risks and benefits of treating these conditions.\textsuperscript{36,37} Nonetheless, particularly in the presence of serious psychosocial stressors, arguments have been made that treatment of subthreshold syndromes can have value not only in reducing present distress and suffering but in preventing the future onset of syndromal disorders.\textsuperscript{36-40} The fact that in this subsample a dose-response relationship exists between number of indicators of potential need and service use suggests that treatment decisions are being made based on these types of considerations. More generally, our findings support the notion that need for care may be more appropriately thought of as a continuum than as a categorical construct.

Only a small proportion (8.0\%) of service users did not have any of the indicators of need considered herein. For a wide range of medical interventions, it is commonly necessary to have some false-positive rate of treatment. For example, a review of the appendectomy literature found an inverse relationship between the perforation rate and the surgeon's false-positive rate, leading the authors to recommend that a 23\% error rate (removal of a normal appendix) would be appropriate.\textsuperscript{41} For mental disorders, public health efforts such as social marketing and antistigma campaigns may simultaneously increase the rate of care in persons with and without disorders.\textsuperscript{42} Thus, some level of overtreatment may be an acceptable, and even desirable, consequence of efforts to reduce the problem of undertreatment of mental disorders.

Although service users without potential indicators of need reported similar reasons for using services as other mental health service users, they were much less likely than other patients to receive their care in the formal health care system and much more likely to be treated in the human services sector. This means that these presumably low-need patients are not contributing importantly to formal mental health expenditures, nor do they divert a substantial proportion of professional resources away from patients with diagnosable disorders. They account for only 1.9\% to 2.4\% of all visits to psychiatrists and other mental health professionals and 3.7\% of all visits to general medical professionals for mental health or substance use problems. Note that 44.8\% of these patients who used CAM services reported that prayer was the main service provided. This finding is consistent with previous research demonstrating the common use of prayer\textsuperscript{43} and clergy visits\textsuperscript{44} in the United States for problems in daily life.

These results should be interpreted with the following 2 limitations in mind. First, the CIDI does not provide a fully comprehensive assessment of all DSM-IV disorders, nor is it completely accurate in the diagnoses it assesses, as it is somewhat conservative relative to the SCID. As a result, some of the respondents classified as not having had a 12-month disorder actually had one. Second, the study relied on self-reported measures of service use. Because reporting bias for mental health services seems to be greatest in persons with high levels of distress,\textsuperscript{45} such bias may be less of a concern for the population of primary interest in the present study (ie, patients with low evidence of need for treatment).

Although the study’s findings should provide some reassurance regarding the magnitude of overtreatment of mental health and substance use problems in the United States, there is still much work to be done to ensure that mental health resources are used effectively and efficiently.\textsuperscript{46} Overuse can be a problem not only for persons without need who receive services but also for individuals with evidence of need who receive poor-quality services. From an economic perspective, poor quality of care represents wasted resources.\textsuperscript{46,47} The present study suggests that efforts to reduce waste need to shift from whether the wrong persons are receiving mental health care to ensuring that those who do receive care receive the right services, in the right manner, and at the right time.

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Author Contributions: All authors had full access to all the data in the study. Dr Kessler takes responsibility for the integrity of the data and the accuracy of the data analysis.

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Disclaimer: The views and opinions expressed in this article are those of the authors and should not be construed to represent the views of any of the sponsoring organizations, agencies, or the US government.
Additional Information: A complete list of NCS publications and the full text of all NCS-R instruments can be found at http://www.hcp.med.harvard.edu/ncs. Send correspondence to ncs@hcp.med.harvard.edu. The NCS-R is performed in conjunction with the World Mental Health Survey Initiative. A complete list of World Mental Health publications and instruments can be found at http://www.hcp.med.harvard.edu/wmh.

Additional Contributions: Eric Bourke, Jerry Garcia, and Emily Phares assisted with manuscript preparation, and the staff of the World Mental Health Data Collection and Data Analysis Coordination Centres assisted with instrument development, fieldwork, and consultation on data analysis.

REFERENCES