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Perceived Need for Treatment for Alcohol Use Disorders: Results from Two National Surveys

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Abstract

OBJECTIVES—Most individuals with alcohol use disorders receive no treatment for their disorder. Past research suggests that a major reason for this is that individuals with alcohol use disorders do not perceive a need for treatment. The current research had two objectives: (i) to provide updated estimates of the percentage of individuals with alcohol use disorders who perceived a need for treatment, and, among those, the percentage who received any alcohol use disorder treatment; and (ii) to investigate the determinants of perceived need for and utilization of alcohol use disorder treatment.

METHODS—Secondary data analysis of two national surveys, the National Epidemiologic Study on Alcohol and Related Conditions (NESARC, n=3,305 individuals with alcohol use disorders) and the National Survey of Drug Use and Health (NSDUH, n=7,009 individuals with alcohol use disorders).

RESULTS—In both surveys fewer than 1 in 9 individuals with an alcohol use disorder perceived a need for treatment. In predicting perceived need, the explanatory power of diagnostic variables was much greater than that of demographic variables. Among those with perceived need, 2 in 3 reported receiving treatment in the past year.

CONCLUSIONS—Our results suggest that failure to perceive need continues to be the major reason individuals with alcohol use disorders do not receive treatment. On the other hand, among those with perceived need, the majority receive treatment. It is likely that high levels of unmet need for alcohol use disorder services will persist as long as perceived need is low. Efforts are needed to increase levels of perceived need among those with alcohol use disorders.

INTRODUCTION

Alcohol use disorders (abuse and dependence) are common, occurring in 4 to 9% of the U.S. population in a given year (1-4) and cause substantial morbidity (5) accounting for about five percent of all disability (6). The negative social and health consequences associated with alcohol use disorders are protean (7) and include increased suicidal behaviors, (8,9) high rates of criminal justice involvement and violence, (10) and substantial medical/ physical consequences (7,11). The medical consequences of alcohol use disorders, such as cirrhosis and premature death, are particularly high among Hispanics, Native Americans, and African Americans compared to whites (12,13).

Despite widespread public skepticism regarding alcohol use disorder services, there are effective, evidence-based psychosocial and pharmacological treatments for alcohol use disorders. These include brief primary care interventions and interventions based on motivational interviewing (14-19). As with other areas in medicine, actual treatment may

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not be high quality or guideline concordant (20,21). These alcohol use disorder treatments are as effective as those for other chronic conditions, including heart disease, asthma, and diabetes (22), although many individuals experience remission of their alcohol use disorder without formal treatment. It has been suggested in an Institute of Medicine monograph that improving the quality of treatment for alcohol use disorders and other behavioral health disorders would decrease the mortality, morbidity, and societal costs of these disorders (20).

However, a large majority of individuals with alcohol use disorders receive no treatment for their disorder (2). A major reason for this may be that individuals with alcohol use disorders do not perceive a need for treatment; (23-25) in the 1992 National Longitudinal Alcohol Epidemiologic Survey (NLAES) only 12.7% of persons with alcohol use disorders perceived a need for treatment (23). This is not surprising, given that a hallmark of alcohol use disorders is denial.

Thus, perceiving a need for alcohol use disorder treatment is likely often a rate-limiting step in receiving treatment. Further, perceived need is potentially modifiable through educational efforts, which could occur anywhere from the clinician-patient interaction to population level-media efforts, as has occurred with direct-to-consumer advertising for antidepressants.

While there has been considerable research in the past 15 years to improve detection tools for alcohol use and develop brief primary care interventions for alcohol use disorders (14-18), we do not know whether rates of perceived need for alcohol use disorder treatment are increasing over time. In addition, the determinants of perceiving a need for treatment are not well understood; if we better understood the determinants we could possibly use this information to design educational efforts to enhance awareness of alcohol use disorders and increase perceived need for alcohol use disorder services in at-risk populations. Using data from the National Comorbidity Survey (NCS), Mojtabai found that men, married individuals, the uninsured, younger individuals (ages 15 to 24) and those with less severe psychiatric illness were less likely to perceive need for substance use disorder and/or mental health services (26). In our analysis of Health Care for Communities (HCC) data, men, the elderly, the less educated, and those who were married were less likely to perceive a need for any substance use disorder/mental health services (27). However, since the determinants of need for any substance use disorder or mental health disorder service was studied as a single outcome in both of these studies, and since perceived need for mental health treatment is greater than the perceived need for substance use disorders treatment, the extent to which these results can be extrapolated to perceived need for substance use disorders or alcohol use disorder treatment is unknown.

In this paper we had two objectives: (i) to provide updated estimates of the percentage of individuals with alcohol use disorders who perceived a need for treatment, and, among those, the percentage who actually utilized any alcohol use disorder treatment; and (ii) to investigate the determinants of perceived need for and utilization of alcohol use disorder services. While past studies have looked at substance use disorders/mental health disorders as determinants of need, we were particularly interested in conducting a more detailed analysis of the effects of individual alcohol use disorder symptoms, as we were interested in whether certain symptoms made individuals with alcohol use disorders more especially likely to perceive a need for treatment. Further, we were interested in comparing the overall explanatory power of sociodemographic factors versus clinical factors in explaining perceived need.

We used two large national surveys, the National Epidemiologic Study on Alcohol and Related Conditions (NESARC) and the National Survey of Drug Use and Health (NSDUH), to investigate these issues. Several characteristics of these studies make them ideal for our

purposes. First, investigating the determinants of perceived need for alcohol use disorder services requires large samples, as perceived need for alcohol use disorder services is an infrequent event in the general population: alcohol use disorders occur in about 5 to 10% of the population, and in past studies, among individuals with alcohol use disorder, perhaps 10 to 15% perceive a need for treatment. Second, they are nationally-representative. Third, they have detailed measures of clinical need, along with sociodemographic measures.

METHODS

Sample

NESARC—The National Epidemiologic Survey on Alcohol and Related Conditions was conducted by NIAAA in 2001−2002 to provide data for the adult U.S. population on alcohol and drug use, abuse and dependence, and associated psychiatric and physical comorbidities (2). Potential respondents were selected by multi-stage probability sampling from the Census 2000/2001 Supplementary Survey and the Census 2000 Group Quarters Inventory. NESARC had a sample size of 43,093 individuals in private residences and certain group quarters housing with a response rate of 81%. NESARC oversampled Hispanics, non-Hispanic blacks, and younger adults (age 18 to 24). Face-to face interviews were conducted by trained lay interviewers from the Census Bureau.

NSDUH—The National Survey on Drug Use and Health is an annual survey sponsored by the Substance Abuse and Mental Health Services Administration (SAMHSA) (28-30) to provide national data on the incidence and prevalence of illicit drug, alcohol, and tobacco use. Each year roughly 80,000 individuals are selected by multistage probability sampling to be representative of the U.S. civilian, non-institutionalized population aged 12 and older. Interviews are face-to-face. Data from the 2004 and 2005 surveys were used for this study.

The response rate for the 2004 survey was 75%, with a total sample of 67,760 individuals. In 2004, a split sample design was implemented, where adult respondents were divided into two samples. Adults in Sample A were administered the Adult Mental Health Module, but not the Adult Depression Module. Adults in Sample B were administered the Adult Depression Module but only six core questions from the Adult Mental Health module. For this study, sample B was used. The overall response rate for the 2005 sample was 74.4 percent, with a total sample of 68,308.

As we were interested in investigating the determinants of perceived need for alcohol treatment services in adults, we limited our samples to those adults (age 18 and older) who met criteria for alcohol abuse or dependence in the past year (n=3,305 for NESARC, and n=7,009 for NSDUH). The samples are described in Tables 1 and 2. The study was approved by the University of Arkansas for Medical Sciences Institutional Review Board.

Measures

Dependent Variables

Perceived Need—NESARC: In NESARC, a respondent was classified as having 12-month perceived need for alcohol treatment if he or she either (i) reported thinking he/she should have received treatment but did not go or (ii) reported receiving treatment in the past 12 months. This is similar to the definition Mojtabai used in his definition of perceived need for alcohol, drug, and mental health problems (26). Regarding (i) the respondent was asked “Was there ever a time you thought you should see a doctor, counselor, or other health professional or seek any other help for your drinking, but you didn't?” The respondent needed to additionally to affirm that this perceived need happened in the last 12 months.

Regarding (ii), the respondent was asked about seeking treatment from the following 13 sources: Alcoholics Anonymous/Narcotics or Cocaine Anonymous; family services or other social service agency; alcohol or drug detoxification ward or clinic; inpatient ward of a psychiatric or general hospital or community mental health program; outpatient clinic, including outreach programs and day or partial patient programs; alcohol or drug rehabilitation program; emergency room for any reason related to drinking; halfway house, including therapeutic communities; crisis center for any reason related to drinking; Employee Assistance Program; clergyman, priest or rabbi for any reason related to drinking; private physician, psychiatrist, psychologist, social worker or other professional; or any other agency or professional.

Perceived Need—NSDUH: The NSDUH measure of perceived need for alcohol treatment was derived in a similar fashion: (i) the respondent reported a need for treatment or counseling, or additional treatment or counseling for their alcohol use, in the past 12 months, or (ii) the respondent reported receiving treatment or counseling in the past 12 months for their alcohol use.

Treatment

Past 12-month treatment was defined in (ii) above.

Independent Variables

Alcohol and Drug Disorders: NESARC utilizes the NIAAA Alcohol Use Disorder and Associated Disabilities Interview Schedule-DSM-IV Version (AUDADIS-IV), a structured interview designed to be administered by lay interviewers. Studies have demonstrated generally good to excellent reliability and validity (2,31-33). The alcohol diagnostic section from NESARC contains 35 questions used to assess the 7 alcohol dependence criteria and the 4 abuse criteria. Thus there are multiple questions for each dependence and abuse criterion.

For each set of questions corresponding to a particular dependence or abuse criterion the number of affirmative responses was summed. For example, in NESARC respondents were asked four questions for the tolerance to alcohol criterion, and thus could endorse 0, 1, 2, 3, or 4 alcohol tolerance symptoms. These different levels were then coded with binary indicator variables. To create a more parsimonious model (decrease the number of degrees of freedom) used by these abuse and dependence symptoms, when odds ratio estimates were similar for two values, they were collapsed into fewer categories. For example, the symptom count for tolerance to alcohol was entered into the final model as 0, 1 or 2, or 3 or more symptoms.

In NSUDH, each alcohol and abuse criterion was assessed with a single question, which was coded with a binary indicator in our analyses. The use of a single question (rather than multiple questions) for each criterion could be seen as a limitation, although many sophisticated, validated instruments, used for research and clinical care for behavioral disorders utilize only one question to assess each criterion.

Mental Health and Personality Disorders: The NESARC AUDADIS-IV instrument contains measures of 12 month and lifetime: major depression, dysthymia, mania and hypomania, generalized anxiety, panic disorder (with and without agoraphobia), agoraphobia without panic, social phobia, specific phobias, PTSD, retrospective childhood ADHD, and self-report of schizophrenia/psychosis. For our analyses, we utilized measures of the number of mental health disorders in the past 12-months (0, 1, 2, 3+). Personality disorders included paranoid, schizoid, anti-social, histrionic, avoidant, dependent, and

obsessive compulsive. We coded the presence of a Cluster A personality disorder (paranoid, schizoid), the presence of a Cluster B personality disorder (anti-social, histrionic) and Cluster C personality disorder (avoidant, dependent, and obsessive-compulsive) with binary indicators.

The K6 is a measure of psychological distress that was developed for use in the National Health Interview Survey and subsequently included in the NSDUH (34,35). The K6 includes six questions that measure on a zero to four scale how frequently respondents experience symptoms of psychological distress (nervousness, hopelessness, restlessness, depressed, feeling worthless, feeling that everything is an effort) during the month in the past year when they were feeling their worst emotionally. Respondents with scores of 13 and higher based on a simple count of the endorsed items are considered to have serious psychological distress (28,29). NSDUH also contains a depression module, which allows for the construction of a variable measuring major depression in the past 12 months.

Sociodemographic variables included gender, age, race, income, education, marital status, and insurance status.

Analysis—Our analytical plan was identical in the NESARC and NSDUH samples. First, we used a logistic regression to assess the effects of our predictors on perceived need.

The analytical sample was individuals with an alcohol abuse or dependence diagnosis. Then among those with perceived need, we regressed any alcohol treatment on the same set of predictors. The sample characteristics are shown in Tables 1 and 2. To measure strength of association, we used the generalized coefficient of determination (R^2) described by Cox and Snell (36).

RESULTS

NSDUH

In NSDUH, 10.4% of individuals with an alcohol use disorder had any perceived need for treatment in the past year (Table 1). Table 3 shows the multivariate predictors of any perceived need. In a multiple logistic regression, the explanatory power of the diagnostic variables (partial pseudo R^2=.13) was much greater than the explanatory power of the demographic variables (partial pseudo R^2=.01). Five of the 7 dependence criteria and 3 of the 4 abuse criteria significantly predicted perceived need, and the results were generally highly significant (e.g., p<.001). The effect of each symptom was moderate to strong (e.g. OR's greater than 1.30). The strongest predictor of perceived need was recurrent alcohol-related legal problems (OR=4.82, 95% CI=3.82−6.09, p<.001). Symptoms not related to perceived need were: tolerance; taken in larger amounts or over a longer period of time than intended; and recurrent use in situations where it is physically hazardous. Individuals with serious psychological distress were more likely to perceive need (OR=1.76, 95% CI=1.42−2.18, p<.001).

Among the sociodemographic variables race was a significant predictor of perceived need (chi-square=16.1, df=3, p=.001), with whites having the highest rates of perceived need. Low-income individuals (OR=1.52, CI=1.21-1.91, p<.004) and unmarried individuals (OR=1.52, CI=1.21-1.91, p<.004) were more likely to have perceived need. Age was highly significant, with younger individuals much less likely to perceive need, and middle-aged individuals the most likely to perceive need (chi-square=42.9, df=2, p<.001). Gender, education, and insurance status were not significant.

Among those with perceived need in NSDUH, 70% (weighted) reported receiving any treatment in the past 12 months. Again, in a multiple logistic regression clinical factors had the greatest explanatory power (partial pseudo R^2=.13), compared to sociodemographics (partial pseudo R^2=.03). In the logistic regression, among the diagnostic symptoms, 2 of the 7 dependence and 1 of the abuse criteria significantly predicted receiving treatment. Low income individuals (chi-square=13.1, df=3, p=.004) were less likely to receive treatment, and individuals who were not married were more likely than those who were to receive treatment (OR=1.62, CI=1.01-2.60, p=.04). Gender, education, race, marital status, and age were not significant.

NESARC—Similar to NSDUH, in NESARC a small percentage of individuals with an alcohol use disorder in the past year perceived a need for alcohol treatment, 11.0% (Table 2). Also, as in NSDUH, in a logistic regression investigating perceived need, diagnostic factors had the greatest explanatory power (partial pseudo R^2=.20), compared to demographic factors (partial pseudo R^2=.01). In the logistic regression most of the abuse/dependence symptom variables were significant (Table 4). Tolerance, drinking in larger quantities or longer periods than anticipated, reduced social activities from alcohol use, failure to fulfill role obligations, and recurrent use in which it was physically hazardous were not significant predictors of perceived need. On the other hand, among the sociodemographic factors, age was the only significant predictor, with younger individuals significantly less likely to perceive a need for treatment (Chi-square=19.7, df=1, p<.001). Race, which was significant in our NSDUH analyses, was not significant in our NESARC analyses. Gender, income, education, insurance, marital status, urbanicity, and self-rated health were all also non-significant.

In NESARC, among those with perceived need, 64% reported receiving some alcohol use disorder treatment in the past year. Again, diagnostic factors had the greatest explanatory power (partial pseudo R^2=.14), versus sociodemographic factors (partial pseudo R^2=.09). Several sociodemographic groups were significantly less likely to receive treatment, including the uninsured, Hispanics, and those who were married.

DISCUSSION

We used two different nationally representative surveys to investigate perceived need for alcohol use disorder services. Given methodological differences inherent across all surveys, the similarity in the results between the two studies is striking. In both surveys we found that fewer than 1 in 9 individuals with an alcohol use disorder perceived a need for treatment. Further, our definition of perceived need, based on whether the individual reported thinking he/she needed treatment in the past year, or actually received treatment, was liberal. It likely included individuals in treatment not because they felt they needed treatment, but rather, in treatment at the behest of family, friends, or the legal system. In both surveys we found that the explanatory power of diagnostic variables was substantially larger than the explanatory power of sociodemographic factors.

The issue of improving treatment for alcohol use disorders and other behavior health conditions has received considerable attention, including a recent report from the Institute of Medicine (20). It has been suggested that improving the quality of treatment for alcohol use disorders (and other substance and mental health disorders) could decrease the mortality, morbidity, and the societal cost of these disorders. However, because the large majority of individuals with alcohol use disorders receive no treatment at all, improving the quality of care for alcohol use disorders while not increasing the proportion of individuals who receive services might have only a modest impact on morbidity, mortality, and societal costs on the population level.

Our results suggest that failure to perceive need continues to be the major reason individuals with alcohol use disorders do not receive treatment, as only a small proportion of individuals with alcohol use disorders perceived need. On the other hand, among those with perceived need, the majority receive treatment. Further, our results offer little reason for optimism concerning perceived need, as the percentage with perceived need in the National Longitudinal Alcohol Epidemiologic Survey (NLAES) , conducted in the early 1990's, was slightly higher, indicating no progress on this important front.

Factors related to access to alcohol treatment, such as insurance parity for the treatment of substance use disorders, have received considerable attention in the past decade. One concern is that lack of parity contributes significantly to unmet need. However, in our analyses, insurance status did not predict perceived need, but did predict receiving treatment only among the relatively few who actually perceive a need for a treatment. This suggests that attempts to make alcohol use disorder services more accessible through efforts such as parity legislation will at best increase modestly the number of individuals receiving alcohol use disorder services, although this should not be seen as a reason not to implement parity. On the other hand, our results suggest that even modest success in increasing the percentage of individuals with perceived need would dramatically increase the number of individuals in treatment. For example, currently more than 8 out of 9 individuals do not perceive a need for a treatment. Thus, if efforts to increase perceived need were successful in 1 out of 8 individuals, the overall number of people receiving alcohol use disorder services could almost double, an increase that would likely overwhelm the capacity of the alcohol use disorder treatment system. Because of this, if efforts to increase perceived need were successful, treatment would have to be better targeted to those with the most severe disorders, or the capacity of the alcohol use disorder treatment system would need to be expanded.

Increasing the proportion of individuals with alcohol use disorders who perceive a need for treatment could possibly be done in several ways. First, in a situation where individuals do not perceive a need for treatment, primary care screening, as recommended by U.S. Preventive Services Task Force (37), is essential in detecting disorders. For policy purposes, it is important to know what proportion of individuals are screened; if screening rates are already high, then there may be little room for improvement. Unfortunately, estimates of alcohol use disorder screening rates in primary care settings vary widely. Clinician surveys suggest that screening occurs frequently (38,39); patient surveys offer less reason for optimism (40-42). However, studies which indicate that about half of primary care patients with alcohol abuse/dependence are known by the clinician to have an alcohol problem (43-45) suggest that patient surveys might be more accurate than physician surveys. Similarly, it is important to know whether screening rates are increasing, decreasing, or static, but we know of no study that assesses this important question.

Clinical studies suggest that approximately half of patients with a mental health or substance use disorder recognized by their clinician as having a disorder receive treatment (43-51), although the proportion receiving guideline concordant treatment is likely lower. Thus screening does not necessarily lead to quality care. Primary care screening could be followed by brief primary care alcohol interventions, or specialty referrals for those with relatively severe disorders. The development of screening instruments and brief interventions has been the subject of intense research efforts in the past 15 years, although most efforts have focused on efficacy and effectiveness studies. We believe that the next logical step is efforts to widely implement these evidence-based screening and brief interventions in community settings.

Along with efforts to increase screening, we also need more effective public health efforts to increase perceived need among individuals with alcohol use disorders and their families on a population basis. While we know of no experimental data on this issue, such efforts appear to have been effective for depression. For example, use of antidepressants increased dramatically during the 1990s (52-55) and it is believed that direct-to-consumer advertising both increased recognition of the symptoms of depression and diminished stigma associated with the disease, resulting in higher treatment rates (53).

However, increasing perceived need among individuals with alcohol use disorders is likely to be more difficult than increasing perceived need for depression treatment. First, while there are FDA approved medications for the treatment of alcohol use disorders (e.g., acamprosate, naltrexone, and antabuse), there has been no significant direct to consumer adverting for these products, or even detailing to physicians. Second, the stigma associated with alcohol use disorders **may be** greater than depression-related stigma. Third, alcohol use disorders are addictive disorders, while depression is not.

It would be useful to know which sociodemographic groups are most likely to not perceive a need for treatment, to better target these groups with appropriate interventions. We found that in both NSDUH and NESARC the explanatory power of the sociodemographic variables in predicting perceived need was relatively small, especially compared to the explanatory power of the diagnostic variables. Age was the only significant sociodemographic predictor of perceived need in both NSDUH and NESARC, although all sociodemographic groups had high levels of not perceiving need for treatment. This suggests that efforts to increase rates of perceived need should be targeted broadly to all sociodemographic groups, although the problem of perceived need is particularly acute in younger individuals.

NESARC and NSDUH are both ongoing studies, and thus are valuable for assessing the evolution of perceived need. Repeated cross-sectional waves, as employed in NSDUH, are the preferred methodology for assessing whether a belief or characteristic, such as perceived need, is increasing over time in a population (56). On the other hand, the panel design of the NESARC survey will allow us to investigate how perceived need for treatment changes in individuals over time. However, neither survey is able to give us detailed insight into the important issue of why individuals do not perceive need for treatment, an issue that we believe is best addressed initially with qualitative interviews.

CONCLUSIONS

It is likely that high levels of unmet need for alcohol use disorder services will continue to persist as long as perceived need is low. Efforts are needed to both increase levels of perceived need among those with alcohol use disorders, and to improve the quality of care they receive.

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Table 1

The NSDUH sample (n=7,009)

NSDUH		
	N	**Percent (Weighted)**
Perceived a Need For Treatment		
No	6320	89.6
Yes	689	10.4
Sociodemographic Characteristics		
Sex		
Male	4322	67.8
Female	2687	32.2
Marital Status		
Married	1174	31.7
Not Married	5835	68.3
Education		
Less Than High School Graduate	1260	16.0
High School Graduate	2215	29.8
Some College	2339	29.8
College Graduate	1195	24.4
Income		
Less than $20,000	2300	22.8
$20,000−$49,999	2461	35.0
$50,000−$74,999	955	15.7
$75,000 or more	1293	26.6
Health Insurance		
Covered	5162	77.1
Not Covered	1847	22.9
Age (years)		
18−25	4858	32.7
26−34	934	22.5
35 and older	1217	44.8
Race		
White	4892	71.8
Black	622	10.1
Hispanic	939	13.2
Other	556	4.9
Alcohol Dependence Symptoms		
Tolerance		
No	3181	51.5
Yes	3828	48.5
Withdrawal		
No	5517	77.8

NSDUH		
	N	**Percent (Weighted)**
Yes	1492	22.2
Large amounts/long periods of use		
No	5436	73.8
Yes	1573	26.2
Desire or unsuccessful efforts to control use		
No	3081	39.6
Yes	3928	60.4
Large amount of time used obtaining or using alcohol		
No	2401	39.8
Yes	4608	60.2
Social Activities reduced because of alcohol		
No	5072	73.3
Yes	1937	26.7
Continued use despite physical or psychological problems		
No	5092	69.8
Yes	1917	30.2
Alcohol Abuse Symptoms		
Failure to fulfill obligations due to abuse		
No	5394	79.1
Yes	1615	20.9
Use in physically hazardous situations		
No	2215	34.5
Yes	4794	65.5
Recurrent alcohol related legal problems		
No	6188	90.1
Yes	821	9.9
Continued use despite persistent social problems		
No	262	69.2
Yes	427	30.8
Other Characteristics		
Overall Health		
Excellent	1629	22.3
Very Good	2925	39.2
Good	1885	28.9
Fair/Poor	570	9.7
Major depression in the last year		
Yes	1164	14.6
No	5845	85.4
Serious Psychological Distress Score >=13		
No	4995	75.7
Yes	2014	24.3

Table 2

The NESARC sample (n=3,305)

NESARC	N	Percent (Weighted)
Perceived a Need for Treatment		
No	2927	89.0
Yes	378	11.0
Sociodemographic Characteristics		
Sex		
Male	2198	69.9
Female	1107	30.1
Marital Status		
Married	1228	44.0
Not Married	2077	56.0
Age (years)		
Less than 35	1718	54.3
35 or older	1587	45.7
Race		
White	2093	74.9
Black	478	9.0
Hispanic	591	10.8
Other	143	5.3
Income		
Less than $20,000	1385	42.7
$20,000−$34999	870	25.4
$35,000 or more	1050	31.8
Education		
Less than High School graduate	456	13.0
High School graduate	959	28.6
Some college or higher	1890	58.5
Health Insurance		
Not Covered	849	25.9
Covered	2456	74.1
Metro Statistical Area		
MSA Central City	1226	31.6
MSA Not in Central City	1468	47.9
Not in MSA	611	20.5
Other Drug Abuse		
No	2903	87.5
Yes	402	12.5
Other Drug Dependence		
No	3143	95.0

NESARC		
	N	**Percent (Weighted)**
Yes	162	5.0
Alcohol Dependence Symptoms		
Tolerance		
No Tolerance Symptoms	2053	61.5
1 or 2 Tolerance Symptoms	879	26.4
3 or more Tolerance		
Symptoms	373	12.1
5 or more withdrawal symptoms		
No	2973	89.3
Yes	332	10.7
Large amounts/Long periods of use		
No Symptoms	1511	44.6
1 Symptom	732	21.9
2 Symptoms	1062	33.6
Desire to Quit		
No Symptoms	1940	59.0
1 Symptom	1042	31.6
2 Symptoms	323	9.3
Large amount of time using or obtaining alcohol		
No Symptoms	2658	80.4
1 Symptom	507	15.4
2 Symptoms	140	4.2
Social Activities reduced because of alcohol		
No Symptoms	3076	93.0
1 Symptom	105	3.5
2 Symptoms	124	3.5
Continued use despite physical or psychological problems.		
No Symptoms	2595	72.3
1 Symptom	567	17.7
2 or 3 Symptoms	343	10.0
Alcohol Abuse Symptoms		
Failure to fulfill obligations due to abuse		
No Symptoms	3024	91.0
1 Symptom	220	7.2
2 Symptoms	61	1.8
Use in physically hazardous situations		
No	639	18.1
Yes	2666	81.9
Recurrent alcohol related legal problems		
No	3063	92.6
Yes	242	7.4

NESARC		
	N	**Percent (Weighted)**
Continued use despite persistent social problems		
No Symptoms	2665	80.0
1 Symptom	528	16.7
2 Symptoms	112	3.3
Personality Disorders		
Cluster A		
No	2848	87.4
Yes	457	12.6
Cluster B		
No	2752	83.5
Yes	553	16.5
Cluster C		
No	2810	85.1
Yes	495	14.9
Other Characteristics		
Mental Health Disorders		
No Mental Health Disorders	2296	70.2
1 Mental Health Disorder	591	17.3
2 Mental Health Disorders	238	7.4
3 or more Mental Health Disorders	180	5.0
Self Reported Health		
Excellent/Very Good	2064	63.9
Good/Fair/Poor	1241	36.1
Relative with Alcohol Abuse Diagnosis		
No	1635	50.9
Yes	1670	49.1
Other Drug Abuse		
No	2903	87.5
Yes	402	12.5
Other Drug Dependence		
No	3143	95.0
Yes	162	5.0

Table 3

Multiple logistic regression predictors of perceived need for AUD treatment, and treatment among those with perceived need (NSDUH)

NSDUH						
	Perceived a Need for Treatment			Sought Treatment Among those that Perceived a Need		
	OR	95% CI	p-value	OR	95% CI	p-value
Sociodemographic Characterstics						
Sex						
Male	1	--		1	--	
Female	.91	.75−1.12	.38	.87	.58−1.30	.48
Marital Status						
Married	1	--		1	--	
Not Married	1.52	1.21−1.91	<.001	1.62	1.01−2.60	.04
Education						
Less than High School graduate	1	--		1	--	
High School graduate	.86	.66−1.11	.24	1.47	.88−2.48	.14
Some College	.79	.60−1.04	.09	.84	.49−1.44	.52
College Graduate	.76	.55−1.05	.10	.74	.38−1.43	.37
Income						
Less than $20,000	1	--		1	--	
$20,000−$49,999	1.06	.85−1.33	.60	.58	.38−.90	.01
$50,000−$74,999	.59	.42−.81	.001	.65	.32−1.30	.22
$75,000 or more	.61	.45−.82	<.001	1.25	.68−2.30	.47
Health Insurance						
Covered	.93	.76−1.15	.51	1.44	.96−2.15	.08
Not Covered	1	--	1	--	1	--
Age (years)						
18−25	1	--		1	--	
26−34	1.18	.90−1.55	.22	1.00	.58−1.72	.995
35 or older	2.09	1.65−2.64	<.001	1.08	.68−1.73	.74
Race						
White	1	--		1	--	
Black	.77	.56−1.04	.08	.75	.42−1.34	.34

NSDUH						
	Perceived a Need for Treatment			Sought Treatment Among those that Perceived a Need		
	OR	95% CI	p-value	OR	95% CI	p-value
Hispanic	.76	.58−.99	.04	1.10	.66−1.84	.71
Other	.46	.27−.78	.004	.48	.16−1.48	.20
Alcohol Dependence Symptoms						
Tolerance						
No	1	--		1	--	
Yes	.88	.72−1.07	.18	.92	.61−1.39	.70
Withdrawal						
No	1	--		1	--	
Yes	1.61	1.32−1.97	<.001	1.88	1.25−2.83	.002
Large amounts/long periods of use						
No	1	--		1	--	
Yes	1.17	.95−1.43	.14	2.85	1.86−4.36	<.001
Desire or unsuccessful efforts to control use						
No	1	--		1	--	
Yes	1.40	1.13−1.73	.002	.45	.29−.68	<.001
Large amount of time used on alcohol						
No	1	--		1	--	
Yes	1.33	1.06−1.68	.02	1.32	.79−2.21	.30
Social Activities reduced because of alcohol						
No	1	--		1	--	
Yes	1.87	1.51−2.32	<.001	.54	.33−.87	.01
Continued use despite physical or psychological problems						
No	1	--		1	--	
Yes	1.92	1.56−2.35	<.001	.58	.37−.92	.02
Alcohol Abuse Symptoms						
Failure to fulfill obligations due to abuse						
No	1	--		1		
Yes	1.82	1.46−2.27	<.001	1.35	.87−2.09	.18
Use in physically hazardous situations						

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NSDUH						
	Perceived a Need for Treatment			Sought Treatment Among those that Perceived a Need		
	OR	95% CI	p-value	OR	95% CI	p-value
No	1	--		1	--	
Yes	1.15	.95−1.40	.16	.46	.29−.72	<.001
Recurrent alcohol related legal problems						
No	1	--		1	--	
Yes	4.82	3.82−6.09	<.001	2.00	1.29−3.08	.002
Continued use despite persistent social problems						
No	1	--		1	--	
Yes	1.35	1.10−1.65	.004	.91	.59−1.39	.65
Other Characteristics						
Overall Health						
Excellent	1	--		1	--	
Very Good	2.33	1.72−3.15	<.001	1.52	.82−2.83	.19
Good	1.97	1.44−2.68	<.001	1.52	.82−2.80	.19
Fair/Poor	1.47	1.02−2.14	.04	2.20	1.05−4.60	.04
Major Depression in the Last Year						
Yes	1	--		1	--	
No	.70	.55−.88	.003	1.04	.68−1.61	.85
Serious Psychological Distress Score >=13						
No	1	--		1	--	
Yes	1.76	1.42−2.18	<.001	.60	.40−.91	.02

Table 4

Multiple Logistic regression predictors of perceived need for alcohol use disorder treatment, and treatment among those with perceived need in NESARC

NESARC	Perceived a Need for Treatment			Received Treatment among those that Perceived a Need		
	OR	95% CI	p-value	OR	95% CI	p-value
Sociodemographic Characteristics						
Sex						
Male	1	--		1	--	
Female	.90	.64−1.27	.55	.74	.38−1.42	.37
Marital Status						
Married	1	--		1	--	
Not Married	1.1	.78−1.47	.68	1.85	1.02−3.34	.04
Age (years)						
Less than 35	1	--		1	--	
35 or older	2.10	1.51−2.92	<.001	1.12	.59−2.14	.73
Race						
White	1	--		1	--	
Black	1.03	.64−1.65	.91	.53	.22−1.26	.15
Hispanic	1.4	.89−2.18	.13	.4	.18−.99	.05
Other	1.56	.88−2.79	.15	.6	.21−1.51	.25
Income						
Less than $20,000	1	--		1	--	
$20,000−$34999	1.27	.89−1.80	.19	.92	.48−1.77	.81
$35,000 or more	.86	.56−1.32	.49	.62	.27−1.40	.25
Education						
Less than High School				1	--	
Graduate	1	--				
High School Graduate	1.15	.76−1.75	.51	.91	.42−1.96	.80
Some College or Higher	1.07	.71−1.64	.74	1.64	.76−3.54	.21
Health Insurance						
Not Covered	1	--		1	--	
Covered	1.32	.95−1.85	.10	3.80	2.03−7.11	<.001

NESARC	Perceived a Need for Treatment			Received Treatment among those that Perceived a Need		
	OR	95% CI	p-value	OR	95% CI	p-value
Metro Statistical Area						
MSA Central City	1	--		1	--	
MSA Not in Central City	1.14	.81−1.60	.47	.51	.26−1.00	.05
Not in MSA	1.39	.93−2.08	.11	1.04	.47−2.30	.93
Other Drug Abuse						
No	1	--		1	--	
Yes	.75	.46−1.23	.26	2.20	.86−5.63	.10
Other Drug Dependence						
No	1	--		1	--	
Yes	1.80	.98−3.30	.06	1.09	.38−3.12	.88
Alcohol Dependence Symptoms						
Tolerance						
No Tolerance				1	--	
Symptoms	1	--				
1 or 2 Tolerance Symptoms	1.1	.78−1.52	.64	1.43	.70−2.93	.33
3 or more Tolerance Symptoms	.76	.48−1.20	.24	1.10	.47−2.54	.83
5 or more withdrawal symptoms						
No	1	--		1	--	
Yes	2.09	1.42−3.07	<.001	.96	.47−1.94	.91
Large amounts/Long periods of use						
No Symptoms	1	--		1	--	
1 Symptom	1.18	.78−1.76	.43	1.14	.462−.82	.78
2 Symptoms	1.05	.71−1.56	.81	.6	.26−1.45	.27
Desire to Quit						
No Symptoms	1	--		1	--	
1 Symptom	2.60	1.84−3.68	<.001	.79	.35−1.75	.55
2 Symptoms	7.57	4.92−11.66	<.001	.60	.25−1.45	.26
Large amount of time used on alcohol						
No Symptoms	1	--		1	--	

NESARC						
	Perceived a Need for Treatment			Received Treatment among those that Perceived a Need		
	OR	95% CI	p-value	OR	95% CI	p-value
1 Symptom	1.61	1.11−2.34	.01	.40	.20−.78	.007
2 Symptoms	2.04	1.13−3.70	.02	.5	.20−1.16	.10
Social Activities reduced because of alcohol						
No Symptoms	1	--		1	--	
1 Symptom	.65	.35−1.21	.17	.75	.27−2.06	.58
2 Symptoms	1.23	.66−2.29	.51	1.86	.76−4.58	.18
Continued use despite physical or psychological problems						
No Symptoms	1	--		1	--	
1 Symptom	1.78	1.24−2.56	.002	.68	.32−1.42	.30
2 or 3 Symptoms	2.46	1.56−3.87	<.001	.7	.29−1.54	.34
Alcohol Abuse Symptoms						
Failure to fulfill obligations due to abuse						
No Symptoms	1	--		1	--	
1 Symptom	1.50	.96−2.36	.08	2.07	1.03−4.19	.04
2 Symptoms	1.92	.86−4.31	.11	1.86	.64−5.40	.25
Use in physically hazardous situations						
No	1	--		1	--	
Yes	.94	.67−1.33	.72	.76	.38−1.51	.43
Recurrent alcohol related legal problems						
No	1	--		1	--	
Yes	8.36	5.63−12.42	<.001	1.90	.97−3.72	.06
Continued use despite persistent social problems						
No Symptoms	1	--		1	--	
1 Symptom	2.43	1.74−3.40	<.001	2.08	1.07−4.03	.03
2 Symptoms	2.97	1.61−5.48	<.001	3.51	1.32−9.38	.01
Personality Disorders						
Cluster A						
No	1	--		1	--	
Yes	.72	.47−1.12	.14	.47	.22−1.02	.06

NESARC	Perceived a Need for Treatment			Received Treatment among those that Perceived a Need		
	OR	95% CI	p-value	OR	95% CI	p-value
Cluster B						
No	1	--		1	--	
Yes	1.20	.83−1.73	.34	1.25	.65−2.39	.51
Cluster C						
No	1	--		1	--	
Yes	1.12	.74−1.70	.61	2.34	1.04−5.27	.04
Other Characteristics						
Mental Health Disorders						
No Mental Health				1	--	
Disorders	1	--				
1 Mental Health Disorder	1.3	.87−1.86	.22	.8	.38−1.73	.59
2 Mental Health Disorders	1.3	.76−2.10	.38	.44	.18−1.06	.07
3 or more Mental Health Disorders	1.7	.92−2.96	.10	1.09	.40−3.02	.86
Self Reported Health						
Excellent/Very Good	1	--		1	--	
Good/Fair/Poor	1	.74−1.37	.96	.61	.34−1.09	.09
Relative with Alcohol Abuse Diagnosis						
No	1	--		1	--	
Yes	1.63	1.19−2.22	.002	.53	.28−1.02	.06
Other Drug Abuse						
No	1	--		1	--	
Yes	.75	.46−1.23	.26	2.20	.86−5.63	.10
Other Drug Dependence						
No	1	--		1	--	
Yes	1.80	.98−3.30	.06	1.09	.38−3.12	.88