Service Use and Barriers to Care among Heroin Users: Results from a National Survey

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Abstract

Background—Heroin use is associated with many serious consequences. While effective treatments exist, barriers to services persist. Understanding service use and barriers to treatment can structure treatment practice and target interventions for those who are most at risk.

Objectives—To describe patterns and correlates of substance abuse service utilization and treatment barriers among a nationally representative sample of heroin users.

Methods—Data for this study were derived from the National Epidemiologic Survey on Alcohol and Related Conditions. This study focused on lifetime heroin users ($N = 150$).

Results—Fifty-nine percent of heroin users reported receiving at least one treatment service. The most common services used were 12-step programs, detoxification, and rehabilitation. Approximately 44% reported at least one barrier to treatment. The most common were lack of motivation and beliefs that it could be managed alone. In a multivariate logistic regression, having a heroin use disorder was associated with a greater likelihood of receiving services ($OR = 6.09$) and experiencing a barrier ($OR = 11.11$) compared to those without a disorder.

Conclusions and Scientific Significance—High rates of service use and barriers were observed for all levels of heroin involvement. These findings underscore the importance of improving access to services for this group, even when full criteria for a drug disorder is not met. Integration of motivational approaches is also needed within the most common services used. To our knowledge, this is the first study to describe patterns and correlates of service use using a nationally representative community sample of heroin users.

Keywords

disparities; drug treatment; heroin use; treatment utilization

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Heroin use disorders are associated with significant consequences for individuals and society. It is estimated that lost productivity, crime, health, and social service expenditures due to heroin use disorders costs the United States $21.9 billion annually (1). Drug abuse related healthcare costs of heroin use were approximately $15 billion in 2000 (2). Additionally, heroin is highly addictive. Those individuals who use heroin are more likely to develop DSM-IV (The Diagnostic and Statistical Manual IV) dependence within two years of first use than individuals who initiate use of any other substance (3).

Effective treatments exist for heroin use disorders (4–6). Many heroin users rely on publicly funded health insurance to pay for treatment services (7), which can be a significant barrier to entering drug treatment (8). Furthermore, evidence shows that persons with a heroin use disorder, as with other injection drug use disorders, experience a large gap between the services they receive and the services they need (9). Prior research indicates that persons with a heroin use disorder sometimes avoid treatment because they feel they can handle the problem on their own, feel treatment will not help, or fear stigma associated with treatment (10). The existing research on patterns of use and barriers to treatment is needed to help inform strategies for structuring treatment and targeting interventions for users with and without a disorder.

The purpose of the current study is to describe patterns and to identify correlates of service utilization and barriers to treatment among a community-based nationally representative sample of heroin users.

METHODS

The present study used data from the 2001–2002 National Epidemiologic Survey on Alcohol and Related Conditions (NESARC), which is a nationally representative survey of 43,093 noninstitutionalized U.S. residents aged 18 years and older (11). This survey used the Alcohol Use Disorders and Associated Disabilities Interview Schedule-DSM-IV version (AUDADIS-IV). Descriptions of the NESARC survey, reliability of AUDADIS-IV, sampling protocol, and related publications are described in detail in prior studies (12–14).

MEASUREMENT

Heroin Use—This study included all survey respondents who admitted to using heroin at any time over the course of their lives. DSM-IV criteria were used to classify subjects into one of three mutually exclusive categories: lifetime heroin use (no disorder), lifetime heroin abuse (without dependence), or lifetime heroin dependence (with or without abuse).

Other Drug Use Disorders—Participants were classified as having another lifetime drug use disorder if they met lifetime DSM-IV criteria (abuse or dependence) for marijuana, cocaine or crack, tranquilizers, stimulants, painkillers, other prescription drugs, inhalants or

solvents, hallucinogens, and sedatives. Participants were also classified as having a lifetime DSM-IV alcohol use disorder (abuse or dependence).

Sociodemographic Variables—Several sociodemographic and clinical variables were assessed in this study: racial/ethnic groups, gender, marital status, personal income, and age. Living area (urban or rural) was classified using U.S. census criteria such that rural areas consisted of any area located outside of urban areas or urban clusters.

Service Utilization—Participants were asked to reply yes or no to the questions: "Have you ever gone anywhere or seen anyone for a reason that was related in any way to your use of medicines or drugs—a physician, counselor, Narcotics Anonymous, or any other community agency or professional?" "Did you ever in your life talk to a medical doctor or other professional about your use of drugs?" Participants who endorsed this question were then asked whether they used any of 14 different treatment services (see Appendix 1).

Drug Treatment Barriers—Participants were asked: "Was there ever a time when you thought you should see a doctor, counselor, or other health professional or seek any other help for your drug use, but you didn't go?" Participants who endorsed this question were then asked whether they were impeded from going to treatment for any of 27 possible barriers to getting help (see Appendix 1).

ANALYSES

Analyses were computed using SUDAAN Version 9.0 (15). This system implements a Taylor series linearization to adjust for the complex survey design. Chi-square tests were used to make bivariate comparisons between each categorical variable and dichotomous outcomes. Multivariate logistic regression analyses were used to examine service utilization and barriers to treatment while adjusting for sociodemographic and other clinical variables.

RESULTS

Within the NESARC sample, 150 persons reported lifetime heroin use (see Table 1). The sample was predominately White (71.9%), aged 35 to 54 (69.3%), and male (74.3%). Over half of the sample reported living in a rural area (61.1%). Regarding clinical characteristics, 63% met criteria for a DSM-IV heroin use disorder (abuse or dependence), 76% met lifetime criteria for another drug use disorder, and 87% met criteria for a lifetime alcohol use disorder.

Service Utilization

Of the sample of heroin users, 59% reported receiving at least one type of drug treatment services. As described in Table 1, Hispanics had the highest rate of service use (82.3%), followed by Blacks (70.4%) and Whites (52.9%). Respondents with an income of less than $20,000 annually were more likely to receive services (78.2%), compared to persons at higher income levels. The majority of persons with heroin dependence used some form of service (81.4%), which was substantially higher than those with heroin abuse (69.2%) or no disorder (33.8%). Having any other drug use disorder was also associated with a higher service use.

Table 2 provides a summary of the five most common types of services utilized among persons with a lifetime history of heroin use. The most common type was a 12-step program (Narcotics or Alcoholics Anonymous) (49.5%), followed by detoxification (43.5%) and rehabilitation (41.6%). Significant differences in the prevalence of service use were observed for three of the five most common services. Persons with heroin dependence

showed the highest prevalence of use for 12-step programs (69.0%) and private physicians (47.3%); the prevalence of use of the other types of services for this group was nearly equivalent to those with heroin abuse. While 30% of those with a history of heroin use but no heroin use disorder reported use of drug treatment services, the prevalence of each type of service use was lower for this group than those with abuse or dependence.

Multivariate logistic regression was used to identify factors associated with any type of service use among heroin users while controlling for confounding variables (see Table 1). This model ($\chi^2 = 36.96$, $p < .01$, pseudo-$R^2 = .21$) showed that persons with heroin dependence had 6.09 times greater odds of service utilization compared to those without a disorder (95% CI = 1.71–21.72). No significant differences were observed between those with abuse and those without a disorder. None of the other independent variables showed statistical significance.

Treatment Barriers

Of the sample of heroin users, 44% reported at least one barrier to receiving services. As described in Table 1, Hispanics reported the highest percentage of barriers to treatment (55.3%), followed by Blacks (48.7%), then Whites (40.8%). Respondents with an income of less than $20,000 annually reported the highest percentage of barriers to treatment (55.7%). The majority of persons with heroin dependence reported at least one barrier to treatment (71.1%), following those with heroin abuse (46.9%). Respondents without a heroin use disorder were least likely to report a barrier to treatment (21.6%). Among those with another drug use disorder, 49.1% reported one or more barriers to treatment.

Table 2 provides a summary of the most common treatment barriers among persons with a lifetime history of heroin use. The most common treatment barrier reported was not wanting to go (38.6%), followed by feeling strong enough to handle it alone (37.3%), and thinking the problem would get better by itself (35.0%). Significant differences in treatment barriers by heroin use disorder groups were observed in only one of the most common reported barriers: less than half (42.5%) of persons with heroin dependence reported they wanted to keep using the medicine/drug, while only 20.4% of those with heroin abuse and 0% of those with no heroin use disorder reported the same.

Multivariate logistic regression was used to identify factors associated with experiencing a treatment barrier while controlling for confounding variables (see Table 2). This model ($\chi^2 = 36.77$, $p < .01$, pseudo-$R^2 = .21$) showed that persons with heroin dependence had 11.11 times greater odds of encountering a barrier to services compared to those without a heroin use disorder (95% CI = 3.19–38.64).

DISCUSSION

This study examined service utilization and reported treatment barriers among lifetime heroin users. To our knowledge, this is the first study to describe a nationally representative, community-based sample of lifetime heroin users with a focus on rates and correlates of service use and treatment barriers. The current study provides important trend data from a community sample to improve the generalizability of clinic findings. For example, previous clinic samples show similar demographic characteristics as well as similar patterns in treatment barriers (e.g., not wanting to go, no desire for treatment) (16). This study also incorporated DSM-IV criteria for the measurement of heroin use disorders (i.e., abuse and dependence), as well as other disorders.

Overall, the study found a high rate of service use among persons reporting lifetime use of heroin, including those with and without a disorder. Those participants who met criteria for

either abuse or dependence were most likely to report service use and barriers to treatment. The most common type of service use was a 12-step program, followed by drug or alcohol detoxification and rehabilitation programs. Given the high rates of comorbidity of risk-behaviors among heroin users (17), stronger linkages between the self-help community (i.e., 12-step programs) and professional service organizations can better meet the needs of this group (18).

Over one-third of heroin users endorsed not receiving treatment because they did not want to go, they thought they were strong enough to handle it alone or they thought the problem would get better by itself. In contrast, no financial or practical constraints (i.e., not having a way to get there, need for child care) were among the top five reported barriers to treatment. These findings help shed light on the cognitive struggles associated with treatment barriers. Previous clinic findings highlight importance of structural barriers (such as not being able to afford treatment, lack of child care) (16). When these bodies of work are paired together, a more complete picture of the barriers associated with treatment for heroin use emerges.

We also observed that those heroin users who met criteria for heroin use disorders were far more likely to report they wanted to keep using compared to those who have used heroin but who have not met criteria for abuse for dependence, which underscores the importance of motivational enhancements to promote treatment engagement and adherence. Cognitive-behavioral approaches, when paired with drug maintenance programs have been shown in previous work to improve recovery rates of heroin-related addictions, especially in higher-severity drug users (19). These results also point to the importance of assessing for heroin use in community-based settings, with careful attention being made to differentiating between abuse and dependence. While those with abuse are at risk of transitioning to more serious levels of heroin involvement, a diagnosis of dependence is often necessary to qualify for treatment services in addition to understanding patterns of service use, barriers, and outcomes.

While having a heroin use disorder was associated with service use and barriers, other factors did not exhibit significant associations. A few explanations are possible. First, only 150 individuals reported heroin use in the NESARC study. Although this is adequate statistical power for the analyses conducted, the measurement strategy may not have adequately captured group differences. Heroin users may represent a special group of substance users, in that the opportunity to use heroin is not evenly distributed through the population. As a result, heroin users based on a community sampling strategy may appear to be more homogeneous after accounting for severity of use problems. Finally, heroin users in this study are less often from urban areas. Considering this is a community sample, it is possible that those with the most serious forms of heroin involvement were underrrepresented.

LIMITATIONS

Our main variables of interest, service utilization and treatment barriers, were not specific to heroin but were relevant to drug use in general. While it is known that there are high rates of substance use comorbidities (20), it is possible that responses could relate to other substances and not heroin. The NESARC did not take into account the timing and temporal ordering of service use, which is critical to understanding the natural history and treatment careers of heroin users. It is also important to acknowledge the difficulty determining accuracy in response rates for persons who have ever used heroin. However, the results are consistent with findings from clinical samples (16).

Acknowledgments

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APPENDIX 1. COMPLETE LIST OF SERVICE USAGE CATEGORIES AND TREATMENT BARRIER RESPONSES

Service Usage

1. Ever went to narcotics/cocaine/alcoholics anonymous or any 12-step meeting?

2. Ever went to family services or other social service agency?

3. Ever went to drug/alcohol detoxification ward/clinic?

4. Ever went to inpatient ward of psychiatric/general hospital or community mental health program?

5. Ever went to outpatient clinic, including outreach and day/partial patient program?

6. Ever went to drug/alcohol rehabilitation program?

7. Ever went to methadone maintenance program?

8. Ever went to emergency room because of medicine/drug use?

9. Ever went to halfway house because of medicine/drug use?

10. Ever went to crisis center because of medicine/drug use?

11. Ever went to employment assistance program (EAP)?

12. Ever went to clergyman, priest, or rabbi because of medicine/drug use?

13. Ever went to private physician, psychiatrist, psychologist, social worker, or other professional?

14. Ever went to any other agency or professional?

Treatment Barriers

1. I did not seek help because I wanted to go, but health insurance didn't cover it.

2. I did not seek help because I didn't think anyone could help.

3. I did not seek help because I didn't know any place to go for help.

4. I did not seek help because I couldn't afford to pay the bill.

5. I did not seek help because I didn't have any way to get there.

6. I did not seek help because I didn't have the time.

7. I did not seek help because I thought the problem would get better by itself.

8. I did not seek help because I was too embarrassed to discuss it with anyone.

9. I did not seek help because I was afraid of what my boss, family, friends or others might think.

10. I did not seek help because I thought I should be strong enough to handle it alone.

11. I did not seek help because I was afraid they would put me in the hospital.

12. I did not seek help because I was afraid of the treatment they would give me.

13. I did not seek help because I hated answering personal questions.

14. I did not seek help because the hours were inconvenient.

15. I did not seek help because a member of my family objected.

16. I did not seek help because my family thought I should go, but didn't think it was necessary.

17. I did not seek help because I can't speak English very well.

18. I did not seek help because I was afraid I would lose my job.

19. I did not seek help because I couldn't arrange for childcare.

20. I did not seek help because I had to wait too long to get into the program.

21. I did not seek help because I wanted to keep using the medicine or drug.

22. I did not seek help because I didn't think the medicine or drug problem was serious enough.

23. I did not seek help because I didn't want to go.

24. I did not seek help because I stopped using a drug or medicine on my own.

25. I did not seek help because friends or family helped me stop using a medicine or drug.

26. I did not seek help because I tried getting help before and it didn't work.

27. I did not seek help because of some other reason.

TABLE 1

Sample description of heroin users.

Variable	Overall (N = 150) % (SE)	Service Utilization % (SE)	Services χ^2	Treatment Barriers % (SE)	Barriers χ^2
Race			3.64*		.80
White	71.3 (9.67)	52.9 (6.35)		40.8 (96.05)	
Black	14.4 (2.47)	70.4 (9.58)		48.7 (9.39)	
Hispanic	13.6 (2.83)	82.3 (7.22)		55.3 (11.00)	
Urbanicity			.01		.07
Urban	38.8 (4.84)	59.7 (7.11)		42.3 (7.23)	
Rural	61.1 (4.84)	58.9 (6.61)		45.0 (6.98)	
Gender			.87		.03
Male	74.3 (4.16)	56.5 (6.00)		44.5 (5.73)	
Female	25.6 (4.16)	66.9 (9.06)		42.3 (10.26)	
Marital Status			.29		.46
Married	42.6 (5.22)	62.1 (7.92)		40.1 (7.97)	
Separated/Divorced	25.4 (3.72)	53.9 (8.30)		42.0 (8.09)	
Never married	31.9 (4.77)	59.6 (8.83)		50.6 (8.28)	
Personal income[1]			3.00*		1.35
$0 to $19,999	33.3 (4.80)	78.2 (6.02)		55.7 (8.27)	
$20,000 to $34,999	26.3 (4.25)	45.4 (9.41)		30.5 (7.91)	
$35,000 to $69,999	25.9 (4.36)	54.2 (10.42)		46.6 (9.15)	
$70,000 and over	14.5 (3.87)	50.0 (15.21)		36.9 (15.64)	
Age			1.20		.47
18 to 34	22.3 (4.58)	47.0 (12.37)		42.7 (10.97)	
35 to 54	69.9 (4.82)	60.9 (5.88)		45.9 (5.75)	
55 and over	7.8 (2.31)	77.6 (14.29)		30.6 (14.45)	
Lifetime heroin grouping			8.47**		8.62**
No disorder	36.9 (4.79)	33.8 (8.30)		21.6 (7.21)	
Abuse	37.0 (4.67)	69.2 (7.41)		46.9 (8.45)	
Dependence	26.3 (3.84)	81.4 (6.06)		71.1 (8.01)	

Variable	Overall (N = 150) % (SE)	Service Utilization % (SE)	Services χ^2	Treatment Barriers % (SE)	Barriers χ^2
Lifetime alcohol use disorder	87.5 (3.38)	60.7 (5.46)	.51	46.8 (5.35)	2.80
Lifetime drug use disorder[2]	76.7 (4.41)	65.2 (5.37)	3.99 *	49.1 (5.56)	3.22

[1]Measured in dollars per year.

[2]Non-nicotine drug use disorder.

*
$p < .05$,

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$p < .01$.

TABLE 2

Service utilization and treatment barriers among heroin users.

Service Utilization	Overall % (SE) N = 150	No Disorder % (SE) N = 46	Abuse % (SE) N = 55	Dependence % (SE) N = 49	χ^2
Narcotics/Alcoholics/Cocaine anonymous	49.5 (5.33)	31.0 (8.15)	53.9 (8.29)	68.9 (8.63)	4.67*
Drug or alcohol detoxification clinic	43.5 (5.14)	25.1 (8.11)	54.2 (8.14)	53.2 (8.33)	3.55*
Drug or alcohol rehabilitation program	41.6 (5.04)	29.4 (8.11)	47.8 (8.26)	49.8 (8.34)	1.96
Outpatient clinic	32.3 (5.07)	17.6 (7.36)	40.2 (8.19)	41.7 (8.25)	2.91
Private physician/psychiatrist/social worker	30.5 (4.94)	15.5 (5.64)	33.5 (8.38)	47.3 (8.26)	4.29*
Treatment Barriers	N = 64	N = 10	N = 21	N = 33	
Didn't want to go	38.6 (7.89)	45.2 (20.17)	23.5 (12.41)	42.2 (10.30)	1.30
Strong enough to handle it alone	37.3 (6.60)	26.7 (15.17)	30.8 (11.27)	47.5 (9.29)	.91
Thought it would get better by itself	35.0 (6.83)	44.3 (20.31)	25.8 (10.65)	39.4 (8.43)	.51
Wanted to keep using	26.2 (6.62)	0 (.00)	20.4 (9.87)	42.5 (10.29)	4.16*
Didn't think anyone would help	24.3 (6.69)	44.2 (20.32)	16.5 (9.01)	22.7 (7.84)	.56

*
$p < .05$.