Self-Reported Alcohol and Drug Problems Among Internal Medicine Outpatients: Relationships With Criminal Behavior

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ABSTRACT

Objective: Previous research indicates relationships between alcohol/substance misuse and criminal behavior, but past studies have restricted investigations to atypical samples and/or utilized limited assessments of illegal behavior. In the present study, we explored relationships between alcohol/drug problems and charges for 27 criminal behaviors in a primary care sample.

Method: Participants were a cross-sectional sample of 376 consecutive men and women, aged 18 years or older, being seen for nonemergent medical care at an outpatient internal medicine clinic staffed predominantly by residents and located in a midsized, midwestern city in October 2010. Using a self-report survey methodology, we examined relationships between alcohol and drug problems ("Have you ever had a problem with alcohol?" and "Have you ever had a problem with drugs?") and 27 illegal behaviors as delineated by the categories used by the US Federal Bureau of Investigation.

Results: Men with alcohol or drug problems statistically exhibited the greatest number of charges for different forms of illegal behavior ($P < .001$). These charges were directly related to alcohol/drug misuse (eg, driving under the influence of alcohol or drugs) and otherwise (eg, aggravated assault, simple assault, gambling, larceny-theft).

Conclusions: In primary care settings, men with alcohol/drug problems may also have a history of illegal behaviors—a finding that is relevant in terms of social and legal implications.

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Relationships between alcohol/drug misuse and criminal behavior have been reported for over 30 years.[1] In this regard, a number of empirical studies in the United States have verified this relationship in different types of substance-using samples, including those misusing various substances,[2–5] alcohol,[6–8] methamphetamine,[9,10] and heroin,[11] as well as in samples of community dwellers.[12–14] Likewise, several international studies have examined and confirmed relationships between alcohol/drug misuse and crime in abusers of various and multiple substances,[15,16] alcohol,[17] and cocaine[18] and in community samples.[19–22]

Despite various types of samples, forms of substance misuse, and measures of criminality, all of the preceding studies have confirmed relationships between alcohol/substance misuse and criminality. However, we were not able to locate any studies of this relationship in a clinical or primary care sample. Such sampling differences are important in terms of anticipating clinical phenomena in various populations. In addition, among studies undertaken in the United States, we noted a number of potential limitations, including the examination of alcohol misuse only[12] or drug misuse only[14] and exploration of only 9 illegal behaviors.[13] However, in 1 community study,[13] which is the most methodologically similar to the present study, males were 2.5 to 3.4 times more likely to demonstrate an association between alcohol/substance misuse and criminal behavior than were females. In the present study, we examined relationships between self-reported alcohol or drug problems and charges for any of 27 criminal behaviors and hypothesized that there would be a relationship between these variables, particularly in males.

METHOD

Participants

Participants were men and women, aged 18 years or older, being seen for nonemergent medical care at an outpatient internal medicine clinic staffed predominantly by residents and located in a midsized, midwestern city in October 2010. After excluding individuals who initially appeared unable to successfully complete a survey (eg, excessive pain, psychosis, dementia), 471 individuals were approached and 417 agreed to participate, for a participation rate of 88.5%. Of these participants, 376 completed all study measures: 129 (34.3%) men and 247 (65.7%) women, who ranged in age from 19 to 97 years (mean = 50.14, SD = 15.39). Most respondents (88.0%) were white, followed by black (7.7%), other (2.1%), Hispanic (1.3%), and Asian (0.8%). All but 6.2% of respondents reported having at least attained a high school diploma; 14.8% had a bachelor's degree and 13.4% had a graduate or professional degree.

To characterize this clinic, during the year 2008, 64% of the consultations were for women; 30% of patients were between the ages of 15 and 44 years, 45% were between the ages of 45 and 64 years, and 25% were aged 65 years or older; and 8% were self-pay, 49% had government insurance (Medicare/Medicaid), and 43% had private insurance. The most common clinical diagnoses were hypertension (8.7%), hyperlipidemia (6.1%), diabetes (5.4%), allergies (4.7%), and hypothyroidism (2.3%). Note that the gender proportions of the current sample mirror the general population of patients being seen at this clinic.

Clinical Points

- According to past empirical studies, there is a relationship between alcohol/drug misuse and criminality, but this relationship has never been explored in a primary care sample.
- In this study, we found that men with alcohol and/or drug problems statistically exhibited the greatest number of charges for illegal behavior.
- Compared to participants who did not endorse alcohol/drug problems, those who did were statistically more likely to be charged with several related crimes (eg, driving under the influence, drug abuse violations, drunkenness) and otherwise (eg, aggravated assault, simple assault, disorderly conduct).

Procedure

During clinic hours, one of the authors (C.L.) positioned herself in the lobby of the clinic, approached consecutive incoming patients, and informally assessed exclusion criteria. The recruiter reviewed the focus of the project and then invited each potential participant to complete a 5-page survey that took about 10 minutes. Participants were asked to place completed surveys into sealed envelopes and then into a collection box in the lobby.

The survey consisted of the following 3 sections:

1. A demographic query.
2. Exploration of past alcohol and drug problems assessed through 2 questions that are typical exploratory queries in the clinical setting, "Have you ever had a problem with alcohol?" and "Have you ever had a problem with drugs?" (with yes/no response options).
3. A query about charges for past illegal behavior ("Have you ever been charged with, *not necessarily convicted of*, any of the following crimes?"), using a 27-item, yes/no, author-developed inventory that is based on the crime-cataloguing schema used by the US Federal Bureau of Investigation.[23] Importantly, this schema does *not* include routine traffic offenses.

This project was reviewed and exempted by the institutional review boards of the community hospital wherein the study took place as well as by the local university. Participants were informed that completion of the survey functioned as implied consent, which was specifically clarified on the cover page of the survey. There was no funding for this study.

RESULTS

Of the 376 respondents, 83 (22.1%) reported having had problems with alcohol (n = 66, 17.6%) and/or drugs (n = 58, 15.4%). Men were more likely to report having had problems with alcohol compared to women (23.3% vs 14.6%, respectively, $\chi^2 = 4.41$, $P < .03$) and drugs (20.2% vs 13.0%, respectively, $\chi^2 = 3.37$, $P < .05$).

Table 1. Results From Analyses of Variance With Scores on the Measure of Illegal Behaviors as the Dependent Variable

Variable	F^a	P
Alcohol misuse		
Gender main effect	14.00	< .001
Alcohol abuse main effect	106.22	< .001
Gender × alcohol abuse interaction	5.27	< .03
Drug misuse		
Gender main effect	14.99	< .001
Drug abuse main effect	102.88	< .001
Gender × drug abuse interaction	5.27	< .03

[a] $df = 1,372$.

Of the 27 illegal behaviors examined, the number endorsed by each respondent ranged from 0 to 13 (mean = 0.56, SD = 1.63), with most participants (78.7%) reporting none of the listed behaviors. Because only 6 respondents endorsed 7 or more illegal behaviors, there was the possibility that these few relatively extreme respondents might have an undue influence on the results of subsequent analyses. To correct for this possibility, scores on the measure of illegal behaviors were truncated at 7 (for those 6 respondents who endorsed 7 or more behaviors). On this truncated measure, men reported a greater number of different criminal charges (mean = 0.84, SD = 1.68) than did women (mean = 0.34, SD = 1.04, $F_{1,374} = 12.94$, $P < .001$).

To examine the potential relationship between alcohol/drug misuse and illegal behavior, we performed a series of 3 analyses of variance for which respondent sex and history of alcohol and/or drug misuse were independent variables and score on the truncated measure of illegal behaviors was the dependent variable (Table 1). With regard to alcohol misuse, there were statistically significant main effects for sex and for history of alcohol misuse ($P < .001$). As expected, respondents with a history of alcohol misuse reported a greater number of different forms of illegal behavior (mean = 1.85, SD = 2.11, n = 66) compared to respondents without a history of alcohol abuse (mean = 0.23, SD = 0.83, n = 310). However, both main effects were subsumed by a statistically significant interaction between sex and history of alcohol misuse ($P < .03$), with men reporting a history of alcohol misuse also reporting the greatest number of different illegal behaviors.

With regard to drug misuse, there were statistically significant main effects for sex and for history of drug misuse ($P < .001$). Compared to respondents without a history of drug misuse (mean = 0.25, SD = 0.85, n = 318), respondents with a history of drug misuse reported a greater number of different charges for illegal behavior (mean = 1.93, SD = 2.21, n = 58). However, both main effects were subsumed by a statistically significant interaction between sex and history of drug misuse ($P < .03$), with men reporting a history of drug misuse also reporting the greatest number of different illegal behaviors.

Finally, to investigate the types of illegal behaviors behind the apparent difference in total number by respondents

Table 2. Endorsement of Charges for 27 Illegal Behaviors by Self-Reported History of Alcohol/Drug Misuse[a]

Illegal Behavior	Alcohol/Drug Misuse (n = 83)	No Alcohol/Drug Misuse (n = 293)
Aggravated assault (assault with a weapon)	11 (13.3)[b]	1 (0.3)
Arson	1 (1.2)	0 (0.0)
Simple assault (assault with no weapon)	14 (16.9)[b]	6 (2.0)
Burglary (unlawful entry to commit a felony or theft)	3 (3.6)	3 (1.0)
Disorderly conduct	19 (22.9)[b]	8 (2.7)
Driving under the influence of alcohol or drugs	25 (30.1)[b]	14 (4.8)
Drug abuse violations (possession, sale, use of illegal drugs)	18 (21.7)[b]	4 (1.4)
Drunkenness (public intoxication)	15 (18.1)[b]	2 (0.7)
Embezzlement	0 (0.0)	0 (0.0)
Forgery or counterfeiting	1 (1.2)	2 (0.7)
Fraud	0 (0.0)	0 (0.0)
Gambling (promoting or engaging in illegal gambling)	7 (8.4)[b]	1 (0.3)
Hate crime	0 (0.0)	1 (0.3)
Larceny-theft (shoplifting, pocket picking, purse snatching, thefts from motor vehicles, bicycle thefts)	7 (8.4)[b]	2 (0.7)
Liquor law violations	7 (8.4)[b]	1 (0.3)
Manslaughter by negligence	0 (0.0)	0 (0.0)
Motor vehicle theft	3 (3.6)	0 (0.0)
Murder	0 (0.0)	0 (0.0)
Nonforcible rape	1 (1.2)	0 (0.0)
Offenses against family/children (nonsupport, neglect, abuse)	3 (3.6)	1 (0.3)
Prostitution	2 (2.4)	0 (0.0)
Rape	1 (1.2)	0 (0.0)
Robbery	0 (0.0)	1 (0.3)
Sex offenses (statutory rape, voyeurism, public nudity, fondling)	2 (2.4)	1 (0.3)
Buying, receiving, or possessing stolen property	6 (7.2)	3 (1.0)
Vandalism	9 (10.8)	1 (0.3)
Weapons law violations (carrying or concealing weapons, illegal selling or possession of weapons)	5 (6.0)	1 (0.3)

[a]Values are presented as n (%).
[b]$P < .001$ based on χ^2 analysis ($df = 1$).

who reported a history of alcohol/substance misuse compared to respondents who did not, we examined the rates of endorsement for each illegal behavior as a function of alcohol/substance misuse history. Respondents who reported a history of alcohol misuse and/or drug misuse (n = 83) were compared to respondents who denied either form of misuse (n = 293) (Table 2). Given the large number of comparisons, we chose $P < .001$ as the effective significance level. Respondents with a history of alcohol/substance misuse reported higher rates of charges on 9 of the 27 different illegal behaviors. Some of these differences were directly related to alcohol/substance misuse, while some were not.

CONCLUSIONS

According to our study findings, there is a relationship between alcohol/drug problems and the number of charges for different illegal behaviors reported, specifically among men being seen in a primary care clinic. This finding, elicited in an entirely different type of study sample to date and through a broad inquiry about illegal behaviors, resonates with the current literature, particularly with regard to gender patterns, and reinforces the importance of routinely questioning patients with alcohol/substance problems about past histories of illegal behavior, particularly with regard to social and legal implications.

In this study, some of the reported charges were directly related to alcohol/substance misuse, such as driving under the influence of alcohol or drugs, drug abuse violations, and drunkenness. However, some reported charges were not directly related, such as aggravated assault and simple assault. It is not clear from these data whether these latter behaviors are indirectly related to alcohol/substance abuse (eg, intoxication with subsequent assaultive behavior) or independent of alcohol/substance misuse (ie, behaviors associated with antisocial features).

This study has a number of potential limitations. First, the data are self-report in nature. Because of this, it is highly likely that a number of participants were either unwilling to acknowledge or denied having alcohol/drug problems—a well-known characteristic feature of addiction. Second, we used a nonstandardized inquiry about alcohol/drug problems (an approach we elected in an effort to mirror typical inquiries in the clinical setting). Third, two-thirds of the participants in this sample were women. While this proportion reflects the service profile for this clinic, the strength of statistical analyses may have been more robust with a larger proportion of men, as they tend to have higher rates of alcohol/substance misuse in general. Fourth, we do not know the temporal relationship between alcohol/substance misuse and illegal behaviors and therefore cannot speculate about possible causal relationships between the two (we did not collect these data). Finally, we do not know the gender profile of participants who declined to participate, as we did not record these data. However, in reviewing this concern with the recruiter, she did not believe that there was a refusal pattern related to gender (ie, she did not perceive that more men than women refused to participate).

In terms of the distinctive aspects of this study, the present sample was consecutive in nature and reasonably large, and findings are from a population that is unique to the literature. These data suggest that in primary care populations, there are likely to be relationships between alcohol/drug problems and the number of charges for different illegal behaviors, particularly among men—an association that needs to be explored in such patients, particularly in terms of social and legal implications.

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