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Under-Reporting of Alcohol and Substance Use versus other Psychiatric Symptoms in Individuals living with HIV

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Abstract

Substance use is known to negatively impact outcomes in patients living with HIV by decreasing adherence to and effectiveness of antiretroviral therapies. Alcohol and other drug abuse and dependence are widespread among HIV-positive individuals, though reported rates vary greatly by study, suggesting the possibility of under-reporting. The extent to which patients minimize symptoms and the factors that influence reporting remain to be determined. The present study sought to gauge the degree to which substance use is under-reported in a primary care HIV clinic by evaluating the influence of anonymity versus confidentiality of self-report on endorsement rates. Patients ($n=55$) currently receiving medical treatment completed a confidential questionnaire assessing the presence of alcohol abuse, other drug misuse, and Generalized Anxiety Disorder (GAD). Another group of 55 patients completed a comparable survey, but did so anonymously. The two groups were similar in terms of demographic characteristics, but self-report of substance use differed depending on how symptoms were assessed, with anonymous questionnaires yielding significantly ($p<.05$) higher rates, compared to confidential surveys. Under-reporting appeared specific to alcohol and substance use, with no statistically significant differences between anonymous and confidential surveys in the proportion of patients endorsing symptoms of GAD. The fact that the screener specifically designed to identify patients in need of further evaluation produced lower rates of reported alcohol and drug use suggests that more work is needed to identify appropriate tools for accurately assessing substance use in HIV-positive patients so that adequate services and referrals can be offered to those in need.

Keywords

HIV; alcohol abuse; substance use; under-reporting; prevalence; assessment

Introduction

Alcohol use negatively impacts outcomes in patients living with Human Immunodeficiency Virus (HIV) in at least two ways. First, alcohol use is associated with poor adherence to highly active antiretroviral therapies (HAART) (Samet, Horton, Meli, Freedberg, & Palepu, 2004). Patients either forget to take their medications when drinking, or avoid them due to the widespread belief that mixing alcohol and medications produces side effects or even toxicity (Kalichman, et al., 2009). Second, alcohol consumption limits medication effectiveness, with impaired immune function (reflected in lower CD4 counts and higher HIV RNA levels) in HIV-positive patients receiving HAART and consuming moderate to at-

risk levels of alcohol, compared to non-drinking controls (Samet, Horton, Traphagen, Lyon, & Freedberg, 2003). Other substance use has been similarly related to poor adherence and lowered effectiveness of medications (Hinkin, et al., 2004; Palepu, Horton, Tibbetts, Meli, & Samet, 2004).

Substance use is common in individuals living with HIV. Among a nationally representative sample of HIV-positive patients in care 53% of respondents had consumed alcohol in the prior month, and of those, 15% were classified as heavy drinkers (Galvan, et al., 2002). Forty percent of participants reported having used an illicit drug other than marijuana during the previous year; 12% met formal diagnostic criteria for substance dependence during that time (Bing, et al., 2001).

Though consistently higher than the general population reported rates of substance use among HIV-positive patients vary greatly by study and emerging evidence suggests under-reporting of use in certain contexts. For example, a recent study found discrepancies in reports of alcohol use by HIV/Hepatitis C Virus co-infected patients in physician interviews versus written self-report (Roux, et al., 2011). Under-reporting in interviews was attributed to the pressure patients feel to quit drinking.

The extent to which HIV-infected patients may minimize or deny symptoms remains to be fully determined. This study sought to gauge the degree to which substance use is under-reported in a primary care HIV clinic, compared to other psychiatric symptoms. It was hypothesized that significant under-reporting would take place, as reflected in lower rates of reported alcohol and other substance use in confidential versus anonymous surveys.

Methods

Fifty-five patients currently in care at an HIV outpatient clinic completed an anonymous survey, inquiring about the presence of alcohol abuse using the four-item CAGE screen (Ewing, 1984). Patients also indicated any past illegal substance use, including prescription medications ("Have you used illegal drugs or drugs that were not prescribed for you?"). Symptoms of Generalized Anxiety Disorder (GAD) were assessed via self-report of DSM-IV-TR diagnostic criteria (APA, 2000), similar to prior studies (Newman, et al., 2002; Roemer, Borkovec, & Borkovec, 1995). Participants were recruited in clinic waiting areas and informed that their participation would be anonymous, voluntary, and could be discontinued at any time. Participants returned completed surveys in a sealed envelope, with no option for further contact or follow-up.

Another sample of 55 patients at the same clinic was selected from ongoing clinical data collection via computer-generated random sampling using SPSS. As part of standard clinical care patients at the study site are routinely invited to complete a mental health screen assessing, among other symptoms, the presence of alcohol abuse, other substance use, and GAD, in the same manner as the anonymous questionnaires (i.e., using the CAGE, a single question about past drug use, and DSM-IV criteria for GAD, respectively). As was the case with the anonymous surveys, patients were approached in the waiting areas and invited to complete the screens. However, in the case of the confidential surveys, patients provided responses with the understanding that they would be reviewed by mental health staff to determine need for follow-up services.

Refusal rates in both samples were estimated at approximately 60% and attributed to the lack of incentives offered for participation and the high rate of illiteracy among patients seen at the clinic.

All methods were approved by the Institutional Review Board at the Louisiana State University Health Sciences Center School of Medicine. Approval was given for the anonymous data collection, as well as for access to and use of existing confidential clinical data for research purposes; waivers of signed informed consent and HIPAA authorization were obtained.

Results

The two groups of anonymous and confidential respondents were comparable in terms of age ($M=45.1$, $SD=10.13$ vs. $M=43.04$, $SD=10.83$; $t(98)=0.97$, $p=0.34$) and proportion of women (30.4%, $n=14$ vs. 48.9%, $n=23$; $\chi^2=4.85$, $p=0.09$).

Significant differences emerged in reported rates of substance use. A total of 11.9% ($n=5$) of respondents completing the confidential survey met criteria for alcohol abuse, compared to 28.9% ($n=11$) of anonymous participants ($\chi^2=3.62$, $p=0.05$). Similarly, 4.1% ($n=2$) of patients providing confidential responses indicated ever having used illegal substances, compared to 46.5% ($n=20$) of anonymous participants ($\chi^2=22.66$, $p\leq 0.001$).

By comparison, 29.4% ($n=15$) of confidential and 44.9% ($n=22$) of anonymous respondents currently met criteria for GAD ($\chi^2=2.57$, $p=0.08$). Though this difference was not statistically significant, there was a possible trend towards more endorsement of symptoms of anxiety in participants providing anonymous responses.

Discussion

Results were consistent with previous reports of high rates of substance use among patients with HIV. Findings suggested significant under-reporting of use when responses were associated with identifying information, with anonymous questionnaires yielding significantly higher rates, compared to confidential surveys. Under-reporting may be specific to alcohol and substance use, with no statistically significant differences between anonymous and confidential surveys in the proportion of patients endorsing symptoms of GAD. However, a trend towards higher rates of reported anxiety symptoms on anonymous surveys suggested that under-reporting may extend to other psychiatric symptoms.

Interestingly, results obtained here contradict conclusions drawn by researchers examining the role of confidential versus anonymous self-reports of substance use in other populations (Moore & Ames, 2002; O'Malley, Johnston, Bachman, & Schulenberg, 2000), suggesting that findings may be unique to this patient group and setting. More research is needed to examine this possibility.

Of note, anonymously reported rates of alcohol abuse in the study population were markedly higher than the 13.2% prevalence of alcohol abuse in the general population (Kessler, et al., 2005), though confidential reports yielded a somewhat lower estimate. Similarly, the anonymously reported use of any drugs in the study sample was much higher than the 7.9% prevalence of drug abuse in the general population, though confidential reports yielded lower prevalence estimates. Rates of self-reported GAD symptoms were markedly higher than the estimated prevalence of 5.7% in the general population (Kessler, et al., 2005), regardless of the survey format. It should be noted that a formal diagnosis of GAD is typically assigned based on a clinical interview and the extent to which study participants endorsed GAD symptoms should be interpreted somewhat cautiously.

Despite important findings, certain limitations to the research must be noted. In order to match the format and content of the anonymous survey to existing clinical data, other drug use was assessed via a single question, as opposed to a validated screening tool. Although it

is encouraging that anonymously reported rates of any past substance use (46.5%) closely resemble those detected in prior research (approximately 50%) (Bing, et al., 2001) future studies should nevertheless confirm under-reporting of other drug abuse using validated assessment tools.

There was a relatively high estimated refusal rate in both groups of respondents, which raises concerns about the extent to which the study sample is representative of the target population. Although the basic demographic characteristics of the anonymous and confidential samples were comparable to each other, as well as to the overall clinic population, more work is needed to evaluate the extent to which findings generalize to other groups of HIV-positive patients.

Conclusions

Findings supported the hypothesis that confidentiality of assessments leads to significant under-reporting of alcohol and other substance use in routine clinical screening of HIV-positive patients in a primary care setting. The fact that the screening tool specifically designed to identify patients in need of further assessment and substance abuse treatment produced the highest rates of under-reporting of problems is concerning and suggests that more work is needed to find ways to accurately capture patients' substance use so adequate follow-up services can be provided.

Assessing substance use in an empathic and non-confrontational manner is likely an important first step towards obtaining accurate self-report. Approaches such as Motivational Interviewing provide a formal framework for conducting assessments and interventions in such a manner (Sobell & Sobell, 2008), and the systematic evaluation of their use in the screening of HIV-positive patients for alcohol abuse merits further attention. Research on assessing alcohol use in the general population has consistently shown that inquiring about "typical" consumption of "standard" drinks yields inaccurate estimates of actual consumption; it has been suggested that data on alcohol use instead be collected via weekly diaries (Heeb & Gmel, 2005) or recent and graduated recall methods, which ask about most recent consumption first and gradually extend to inquire about longer-term patterns of use (Stockwell, et al., 2004). Future studies should assess the extent to which these methods may be useful for detecting problem drinking in a primary care HIV setting.

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