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Article

HIV risk behaviors in male substance abusers with and without antisocial personality disorder

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Abstract

Antisocial personality disorder (ASP) is common in male substance abusers and may be associated with increased human immunodeficiency virus (HIV) risk behaviors. In this study, 91 male substance abusers were recruited from the community, and 42% met diagnostic criteria for ASP. Although ASP and non-ASP subjects demonstrated equivalent knowledge about HIV, subjects with ASP participated in more risky behaviors. On a lifetime measure of drug risk behaviors, ASP subjects reported higher rates of intravenous drug use (IVDU), frequency of needle-sharing, and number of equipment-sharing partners and lower rates of needle-cleaning. On a measure of past-month risk behaviors, ASP subjects reported higher rates of IVDU and lower rates of needle-cleaning. Subjects with ASP also reported greater participation in lifetime sexual risk behaviors, including number of sexual partners and frequency of anal sex. These findings suggest that clients entering substance abuse treatment programs should be screened for ASP, and clients identified with ASP should be provided risk-reduction interventions early in treatment.

Keywords: Substance abuse; HIV risk behaviors; Antisocial personality disorder

1. Introduction

In 1998, the Center for Disease Control and Prevention reported over 36,000 new acquired immunodeficiency syndrome (AIDS) cases were identified in adult males; 21% of cases were intravenous drug users, and another 5% were homosexuals who also used intravenous drugs. Females comprised the remaining 11,000 new adult AIDS cases, and 29% resulted from heterosexual contact with a male intravenous drug user (Centers for Disease Control and Prevention, 1998). Thus, male substance abusers are at high risk for contracting and spreading HIV.

The two primary modes of HIV transmission are intravenous drug use (IVDU) and unsafe sex behaviors. Rates of IVDU range from 32 to 47% among cocaine-abusing clients (Booth, 1995; Compton et al., 1995) and are as high as 90% in heroin-abusing clients (e.g., Ball & Ross, 1991). Even alcohol-dependent clients engage in IVDU, with studies showing a history of IVDU among 37% of primary alcoholics (Avins et al., 1997; see Petry, 1999). Despite growing awareness of safe injection practices (Gibson et al., 1993), 15 to 40% of intravenous drug users report recent (past 30 days) risky needle practices, such as borrowing and lending of needles (Darke et al., 1994; Magura et al., 1989).

Risky sexual behaviors are prevalent in substance abusers as well. For example, 72% of male substance abusers report multiple sex partners (Edlin et al., 1994) and only 11% report consistent condom use with casual sex partners (Magura et al., 1989). Over 20% of male substance abusers acknowledge trading sex for drugs or money (Booth, 1995), and 10% report that their last penetrative sexual experience was commercial sex (Watkins et al., 1993). Finally, up to 35% of male substance abusers participate in anal intercourse (Kim et al., 1993), with 7% stating they have had over 50 partners for homosexual anal intercourse (Edlin et al., 1994).

Antisocial personality disorder (ASP) is a psychiatric condition that is common among substance abusers and may be associated with increased participation in HIV risk behaviors. Rates of ASP range from 30 to 44% in heroin-abusing populations (Brooner et al., 1990, 1992), from 35 to 53% in cocaine-abusing populations (Carroll et al., 1993; Compton et al., 1995) and from 6 to 23% in alcohol-abusing populations (Holdcraft et al., 1998; Morgenstern et al., 1997). Rates of ASP are higher among male (26–50%) compared to female substance abusers (9–35%; Brooner et al., 1992; Morgenstern et al., 1997).

A growing body of evidence suggests that ASP may be a risk factor for engaging in behaviors that increase the likelihood of contracting and spreading HIV. Among a sample of 55 heroin-abusing clients, ASP was associated with increased needle risk behaviors, such as frequency of needle-sharing

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and number of needle-sharing partners (Gill et al., 1992). In cocaine abusers, ASP was associated with increased rates of IVDU and sharing of needles within the past 6 months (Compton et al., 1995). In a general sample of intravenous drug users, a diagnosis of ASP was associated with a greater likelihood of sharing injection equipment and a greater number of needle-sharing partners (Brooner et al., 1990, 1993).

ASP may be associated with increased sex risk behaviors as well. Compared to their non-ASP counterparts, both heroin and cocaine abusers with ASP reported more sex partners and participation in commercial sex (Compton et al., 1995, 1998; Gill et al., 1992). Thus, ASP seems to be associated with increased participation in both IVDU and sexual risk behavior.

In the present study, we replicated and extended these findings by examining risk behaviors in a heterogeneous group of substance abusers, including individuals both in and not in treatment. We evaluated the prevalence of ASP in males with heroin, cocaine, or alcohol use disorders. We also compared participation in risky IVDU and sexual behaviors among substance abusers with and without ASP, utilizing both lifetime and recent rates of risk behaviors.

2. Materials and methods

2.1. Setting and sample

Ninety-one male subjects participated in the study. Subjects were recruited from newspaper advertisements and flyers distributed at substance abuse treatment programs, in low-income housing projects, and at social service agencies throughout the Hartford, CT, area. A telephone screen assessed eligibility criteria. After answering questions about demographics, employment, and health, respondents were asked if they ever (and how frequently) used alcohol, marijuana, cocaine, sedatives, and heroin. An abbreviated form of the Structured Clinical Interview for DSM-III-R (SCID; Williams et al., 1992) for substance use disorders (Kranzler et al., 1996) was used to evaluate inclusion criteria of lifetime alcohol, cocaine, or heroin dependence.

Current suicidal ideation, psychosis, and known HIV seropositive status were exclusion criteria. Individuals with known HIV seropositivity were excluded because knowledge of HIV infection may affect sexual and/or drug use behaviors. The sample, however, may have included some HIV-positive subjects who were unaware of their status; 32% reported a negative HIV test.

Individuals who telephoned in response to the ads were not informed of the inclusion or exclusion criteria and were not told why they did not qualify. Over 70% of respondents did not qualify because they did not evidence sufficient levels of drug use, were HIV-positive, or reported current psychotic episodes or suicidal ideation. Individuals excluded for these latter reasons were provided with telephone numbers for crisis services and/or psychiatric treatment.

Individuals who met inclusion/exclusion criteria via the phone screen were invited to participate in the assessment. All subjects provided written informed consent and were compensated up to $50 for completion of the assessment. All subjects received HIV education following completion of the assessment battery, and those who were not in treatment were referred for treatment.

2.2. Drug testing

During the assessment, all subjects provided a breath sample that was screened for alcohol using an Alcosensor IV Alcometer (Intoximeters, St. Louis, MO, USA) and a urine specimen that was screened for opioids, cocaine, and marijuana using EZScreen (Editek, Inc., Burlington, NC, USA).

2.3. Questionnaires and assessments

Research assistants collected demographic information (gender, age, and education) and administered the Addiction Severity Index (ASI; McLellan et al., 1985). The ASI provides reliable and valid indices of problems in seven domains for the 30-day period preceding the interview, with higher scores reflective of greater problems (McLellan et al., 1985).

Items derived from the SCID were used to evaluate conduct disorder and ASP. Specifically, subjects needed to endorse at least 3 of 15 conduct disorder criteria prior to age 15 and 3 of 7 ASP criteria since age 18 to receive a diagnosis of ASP. This instrument is reliable and valid in diagnosing ASP (Williams et al., 1992).

The HIV Risk Behavior Scale (HRBS; Darke et al., 1991) was administered to assess IVDU and sexual risk behaviors. Adequate reliability of the individual items on this instrument has been established, and subjects' and their sexual partners' responses are highly correlated (Darke et al., 1991). Measures of both past-month and lifetime risk behaviors were evaluated. In both versions, responses were coded on a 6-point scale from 0–5, with higher values associated with more risky behaviors. Past-month and lifetime composite scores for both the IVDU and sexual risk behaviors were developed by summing respectively the responses on the six items measuring drug use and the five items measuring sexual risk behaviors (Darke et al., 1991).

The HIV Risk Knowledge Test (Kelley et al., 1989) is a true-false test of knowledge of HIV transmission. Percent correct responses were coded. This test has established test-retest reliability and construct validity (Kelley et al., 1989).

2.4. Data analysis

Using *t*-tests for continuous variables and chi-square tests for nominal variables, differences in demographic characteristics, ASI scores, drug use histories, and HIV risk knowledge scores were evaluated between male substance abusers with ASP and without ASP.

Because HIV risk composite scores were non-normally distributed, Mann–Whitney *U*-tests were used to evaluate four a priori hypotheses of HIV risk behaviors: whether or not ASP subjects differed from non-ASP subjects on life-