

MENTAL HEALTH AND HIV RISK BEHAVIORS AMONG PUERTO RICAN DRUG INJECTORS

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Introduction

Since the Acquired Immunodeficiency Syndrome (AIDS) was first diagnosed among drug abusers behavioral research has focused intensively in detecting those factors that facilitate or impede the practice of HIV/AIDS risk behaviors and risk reduction change processes. However, few of these studies have assessed the influence of mental health problems on those behaviors most likely to put injection drug users (IDUs) at risk of HIV infection. Rates of mental health problems among drug abusers are disproportionately high when compared to other groups in the population. The Epidemiologic Catchment Area (ECA) studies in the US show that more than half of the people who abuse drugs other than alcohol have at least one comorbid mental illness. The data on abusers of drugs other than alcohol indicate that 26% suffer from at least an affective disorder, 28% have an anxiety disorder, 18% have an antisocial personality disorder and 7% meet diagnostic criteria for schizophrenia (1). Cocaine abusers show mental illness rates exceeding 76%. Furthermore, studies on mental health symptomatology among young adult populations show that conduct disorders, alcohol/drug use, depression, suicidal attempt, anxiety and post traumatic stress are associated with higher number of risk behaviors such as prostitution, intravenous drug use and choice of high risk sex partners (2, 3). High prevalence of mental health problems among drug abusers has been found to reduce the effectiveness of drug treatment and of the rehabilitation process in prison systems (4, 5). Although these negative effects of comorbid mental illness among drug abusers have been documented, there is a void of information on the effect of mental health problems on specific HIV risks. In this study we are in search of identifying specific HIV risk behaviors associated to mental health problems. This information will help design interventions with mental health preventive strategies for drug abusers with dual diagnosis practicing those risk behaviors.

Methods

Subjects, recruited at three detoxification clinics in metropolitan San Juan, Puerto Rico, are participants of an ongoing seroepidemiologic and follow-up study of IDUs, the Evaluación de Riesgo de Adictos en Tratamiento Project (ERAT). To be eligible subjects must have injected drugs during the past 12 months, be 18 years of age or more and must have been admitted to a detoxification clinic for a period of at least three days.

The sample comprises 311 IDUs recruited between October, 1990 and March, 1992 and followed-up periodically for re-assessments every 6-8 months. Inasmuch as follow-up assessments are still taking place, final follow-up rates cannot be reported. However allowing for a time window of up to 9 months for relocation, a preliminary follow-up rate of 76% can be estimated.

At each assessment, IDUs are interviewed regarding drug use and sexual behaviors, mental health problems, and health care behaviors. HIV antibody testing is offered to all participants at baseline. Seronegative IDUs are subsequently re-tested during follow-up.

In this report we have used the information regarding mental health problems collected during the second wave of assessments (i.e., approximately six months after undergoing detoxification). A mental health problem has been operationally constructed as an affirmative answer to questions about recent (6 months) depression or anxiety symptoms.

HIV risk behaviors associated to drug injection and sexual activities are asked of the previous six months. For this study we have used the information collected during the third wave of assessments.

Analysis

Bivariate odds ratios and 95% confidence intervals were calculated to examine the HIV risk behaviors associated with reported problems of mental health. Stepwise Multiple logistic regressions were used to simultaneously assess the independent effects of mental health and other covariates on risk. Covariates included in the regression model for adjustment purposes included gender, age, education, marital status, reports of a physical illness, HIV serostatus, utilization of physical or mental health care, currently injecting drugs and years injecting drugs.

References

1. Regier DA, Farmer ME, Rae DS, Locke BZ, Keith SJ, Judd LL, Goodwin FK. Comorbidity of mental disorders with alcohol and other drug abuse: Results from the Epidemiologic Catchment Area (ECA) Study. *JAMA* 1990; 264:2511-8.
2. Stiffman AR, Dore P, Earts F, Cunningham R. The influence of mental health problems on AIDS-related risk behaviors in young adults. *J Nerv Ment Dis* 1992; 180:314-20.

Results

TABLE 1 SOCIODEMOGRAPHIC CHARACTERISTICS OF INJECTION DRUG USERS (N = 311)

Characteristics	n	%
Age		
< 25 years	58	17.4
25 - 34 years	168	54.0
> 34 years	85	26.6
Gender		
female	42	13.5
male	269	86.5
Education		
< high school	128	41.2
high school	110	35.4
> high school	73	23.4
Marital Status		
not married	247	79.4
married	64	20.6
Years of Drug Injection (6)*		
< 6 years	102	32.8
6 - 10 years	132	42.4
> 10 years	77	24.8
HIV Seropositive		
no	234	75.2
yes	77	24.8
Mental Health Problem		
no	228	73.3
yes	83	26.7

* Numbers in parentheses indicate rates with missing information.

Odds ratios and 95% confidence intervals are given for the bivariate associations between HIV risk behaviors and mental health problems in Table 2. In the drug injection risk domain sharing of needles and cooker were the behaviors associated to a problem of mental health. Having sex with multiple partners was the behavior associated to a mental health problem in the sex risk domain (Table 2).

TABLE 3 ADJUSTED ODDS RATIOS AND 95% CONFIDENCE INTERVALS

Dependent Variables	Mental Health Problems		
	OR	95% CI	p-value
Sharing Needles			
OR (95% CI)	2.10	(1.21, 3.60)	.008
Sharing Cooker			
OR (95% CI)	1.94	(1.12, 3.30)	.018
Cleaning Needles with Bleach			
OR (95% CI)	1.30	(0.74, 2.27)	.366
Sex with Multiple Sexual Partners			
OR (95% CI)	2.26	(1.23, 4.14)	.008
Use of Condom***			
OR (95% CI)	0.22	(0.06, 1.02)	.056

* Adjusted for age, gender, education, marital status, previous substance abuse, self-rated health, utilization of physical and mental health care.

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Characteristics of the study population are summarized in Table 1. The mean age of the population studied was 30.6 years. The subjects were predominantly male (86.5%) and had injected drugs for more than 10 years (71.7%). Almost two fifths (41.2%) had not completed high school, and one fifth (20.6%) were married. Twenty five percent of the subjects were HIV seropositive and 26.7% reported a mental health problem.

TABLE 2 BIVARIATE ASSOCIATIONS BETWEEN MENTAL HEALTH PROBLEMS AND HIV RISK/PROTECTIVE BEHAVIORS (N=311)

HIV Risk/Protective Behaviors	Mental Health Problems	OR
Sharing Needles		
Percent	32.0	4.4
OR (95% CI)*		2.07 (1.24, 3.40)
Sharing Cooker		
Percent	36.2	5.2
OR (95% CI)*		1.92 (1.15, 3.19)
Cleaning Needles with Bleach		
Percent	32.9	36.6
OR (95% CI)		1.28 (0.74, 2.15)
Sex with Multiple Sex Partners		
Percent	18.9	33.7
OR (95% CI)*		2.19 (1.25, 3.84)
Use of Condom**		
Percent	41.4	43.3
OR (95% CI)		1.08 (0.60, 1.97)

* OR (95% CI) = Odds Ratio (95% Confidence Interval).

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