

# Opiate Injection among Young Adult Multidrug Users in the Club Scene

Steven P. Kurtz  
Mance E. Buttram



**ARSH** | Center for Applied Research on Substance Use and Health Disparities  
arsh.nova.edu

## The South Beach Project



A randomized clinical trial of behavioral interventions to reduce drug use and HIV risk among young adults in the club scene.



## Background

Miami is an international center of electronic dance music (EDM) culture. The tendency to mix numerous substances puts nightclub attendees at high risk for health problems, including HIV; mental distress; and drug overdose. Although drug injection is not often considered part of EDM cultures, the opioid epidemic in the US may have changed this dynamic.



## Analysis

Bivariate logistic regression models examined relationships between demographics; substance use overdose, dependence and treatment histories; mental health; and, non-opioid substance use and injection status.

Measures that exhibited significant predictive values in the bivariate models were included in a multivariate logistic regression model, using the backward step likelihood ratio method of withdrawing variables that failed to meet the .05 significance level.

## Purpose and Methods

**Purpose:** The evolving intertwined epidemics of heroin and prescription (Rx) opioid abuse in the US have most severely impacted young adults. We examined demographic, health and social characteristics of young adult participants in the EDM scene in Miami, Florida who reported **past-90 day injection of opiates (PWIO)**.

**Methods:** Using respondent driven sampling, we recruited heterosexually active men and women ages 18 to 39 who use club drugs (e.g., cocaine, ecstasy, LSD) and misuse psychoactive prescription (Rx) medications (e.g., opioids, benzodiazepines). Participants also reported regular and frequent attendance at well known EDM nightclubs in Miami, Florida.

The study is a 3-armed intervention trial designed to examine differences in behavior change by type of assessment modality (self- vs. interviewer-administered) and compared to a waitlist control. Data were collected in the two assessment arms (N=498) using identical standardized instrumentation.

**Instrumentation:** Participants were interviewed using a modified version of the Global Appraisal of Individual Needs (Dennis et al. 2002) structured interview, which includes measures of demographics/ environment, substance use and dependence, HIV risk behaviors, and mental health functioning.

- Perceived HIV infection risk was measured on a 4-point Likert-type scale ranging from "None" to "High" and was dichotomized as 1 = high or moderate risk vs. 0 = no or low risk.
- The mental health measure consists of 24 items inquiring about past year anxiety, depression and somatic symptoms; clinical serious mental illness is defined as 7 or more symptoms.
- The substance dependence measure consists of 7 items, including withdrawal symptoms and tolerance. Substance dependence is defined as 3 or more symptoms.
- Frequencies of use (days using out of the past 90 days) for the most prevalent non-BZD substances other than marijuana (alcohol, powder cocaine and MDMA) were dichotomized at the 75<sup>th</sup> percentile, with use above that mark defined as "heavy." Heavy marijuana use was defined as daily use, which was reported by 42.7% of the sample.

## Results

Table 1. Sample characteristics by opiate injection status (N=498)

Variable	Non-injectors		Injectors	
	N (443)	% (87.4)	N (55)	% (12.6)
Age (mean; SD)	25.3 (5.3)		25.4 (6.0)	
Gender female	198	44.7	24	43.6
Race/ ethnicity				
Hispanic	284	64.1	36	65.4
Black non-Hispanic	101	22.8	3	5.5***
White non-Hispanic	44	9.9	16	29.1***
Other	14	3.2	0	0
Education some college or more	200	45.1	28	50.9
Health and social characteristics				
DSM-IV substance dependence	300	67.9	51	92.7***
Substance abuse treatment history	112	25.3	27	48.1***
Drug overdose history	91	20.5	25	45.5***
Severe mental distress (GMDS scale)	211	47.7	38	69.1**
Victimized before age 18	264	59.6	34	61.8
Heavy substance use (75 <sup>th</sup> pctl)				
Alcohol	139	31.4	13	23.6
Marijuana	174	39.3	16	29.1
Cocaine	120	27.1	20	36.4
MDMA	119	26.9	11	20.0
Benzodiazepines	107	24.2	25	45.5**
Sources of Rx opioid supply	N	%	N	%
Medical sources	41	9.3	7	12.7
Theft	26	5.9	6	10.9
Dealer	307	69.3	46	83.6*
Sharing / trading	195	44.0	24	43.6
Characteristics of opiate injectors	N	%	N	%
Initiated with Rx opioids			44	80.0
Use both heroin and Rx opioids now			50	90.1
Share needles or works			25	45.5
HCV infection			5	9.1
HIV infection			1	1.8
Low to no chance of future HIV infection			45	81.8

\*  $\chi^2 = p \leq .05$ ; \*\*  $\chi^2 = p \leq .01$ ; \*\*\*  $\chi^2 = p \leq .001$



Table 2. Bivariate logistic regression models of opiate injection

Predictor of opiate injection	p	OR	95% CI
Demographic characteristics			
Age	.826	1.006	0.955, 1.059
Female	.882	0.958	0.545, 1.685
Race/ ethnicity			
Hispanic	(ref.)		
Black non-Hispanic	.018	0.234	0.071, 0.778
White non-Hispanic	.002	2.869	1.469, 5.601
Health and social characteristics			
DSM-IV substance dependence	.001	6.035	2.139, 17.025
Substance abuse treatment history	<.001	2.850	1.611, 5.041
Drug overdose history	<.001	3.223	1.807, 5.749
Severe mental distress	.004	2.447	1.341, 4.466
Heavy benzodiazepine use	.001	2.617	1.475, 4.644

Table 3. Multivariate logistic regression model of opiate injection

Predictor of opiate injection	p	OR	95% CI
Black non-Hispanic	.042	0.283	0.084, 0.958
White non-Hispanic	.002	3.106	1.500, 6.433
Substance abuse treatment history	.029	2.015	1.075, 3.779
Drug overdose history	.068	1.831	0.956, 3.507
Severe mental distress	.053	1.916	0.992, 3.698
Heavy benzodiazepine misuse	.012	2.241	1.190, 4.039

## Conclusions

- The large majority of young adult PWIO in our sample initiated with Rx opioid abuse, and almost all PWIO reported current use both Rx opioids and heroin.
- Needle sharing practices are common and HIV risk perceptions are low. Although HIV in our sample was limited, HCV infection was more prevalent.
- PWIO were much more likely to be White and not Black, mirroring the larger opioid epidemic in the U.S.
- PWIO were more than twice as likely to also report heavy benzodiazepine use, which was defined as 60 or more days use in the last 90 days. This is a dangerous combination of drugs, and opiate-benzodiazepine combination treatment admissions and overdose cases are rising.
- Interventions to reduce needle risks and increase HIV/HCV testing are needed to prevent transmission among young adult PWIO.

## Acknowledgements

This research was supported by Grant Number R01 DA019048 from the National Institute on Drug Abuse. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institute on Drug Abuse or the National Institutes of Health.

There are no conflicts to report.

## Contact

Steven P. Kurtz  
steven.kurtz@nova.edu  
arsh.nova.edu

7255 NE 4<sup>th</sup> Ave, Suite 112  
Miami, FL 33138

