

Health and Social Factors Associated with Alternate Routes of Administration of Prescription Opioids among Young Adult Multidrug Users

Mance E. Buttram and Steven P. Kurtz

ARSH | Center for Applied Research on Substance Use and Health Disparities
Nova Southeastern University



Background

The electronic dance music nightclub culture is especially popular in Miami, with many participants reporting recent (past 90 days) use of club drugs (e.g. ecstasy, cocaine, LSD) and the misuse of prescription (Rx) medications. Mixing numerous substances puts these participants at risk for health and social problems including HIV transmission, criminal justice involvement, victimization, and mental distress.

At the same time, the misuse of Rx opioids continues to be a problem in South Florida, especially among nightclub participants. Rx opioid misuse can contribute to the health and social problems experienced by this population, with participants potentially experiencing opioid addiction and/or dangerous drug interactions. Alternate routes of administration (ARA) of Rx opioids can be especially dangerous and is related to HIV and HCV infection.

Recent data suggest sexual risk behaviors are associated with both club drug use and Rx opioid misuse, including unprotected intercourse, group sex participation, and selling or trading sex.

Purpose and Hypothesis

Aims: To examine health and social factors associated with alternate routes of administration (ARA) among young adult multidrug users in Miami.

Hypothesis: ARA of prescription opioids will be associated with increased health and social risks.

Methods: Data are drawn from baseline assessments in an ongoing behavioral intervention trial. Participants were recruited through respondent-driven sampling and randomized to one of three arms: Computer-Assisted Personal Interview (CAPI), an Audio-Assisted Computer Self-Interview (ACASI), or a wait-list control. Data presented combine both CAPI and ACASI study arms, as no data have yet been collected from the control arm.

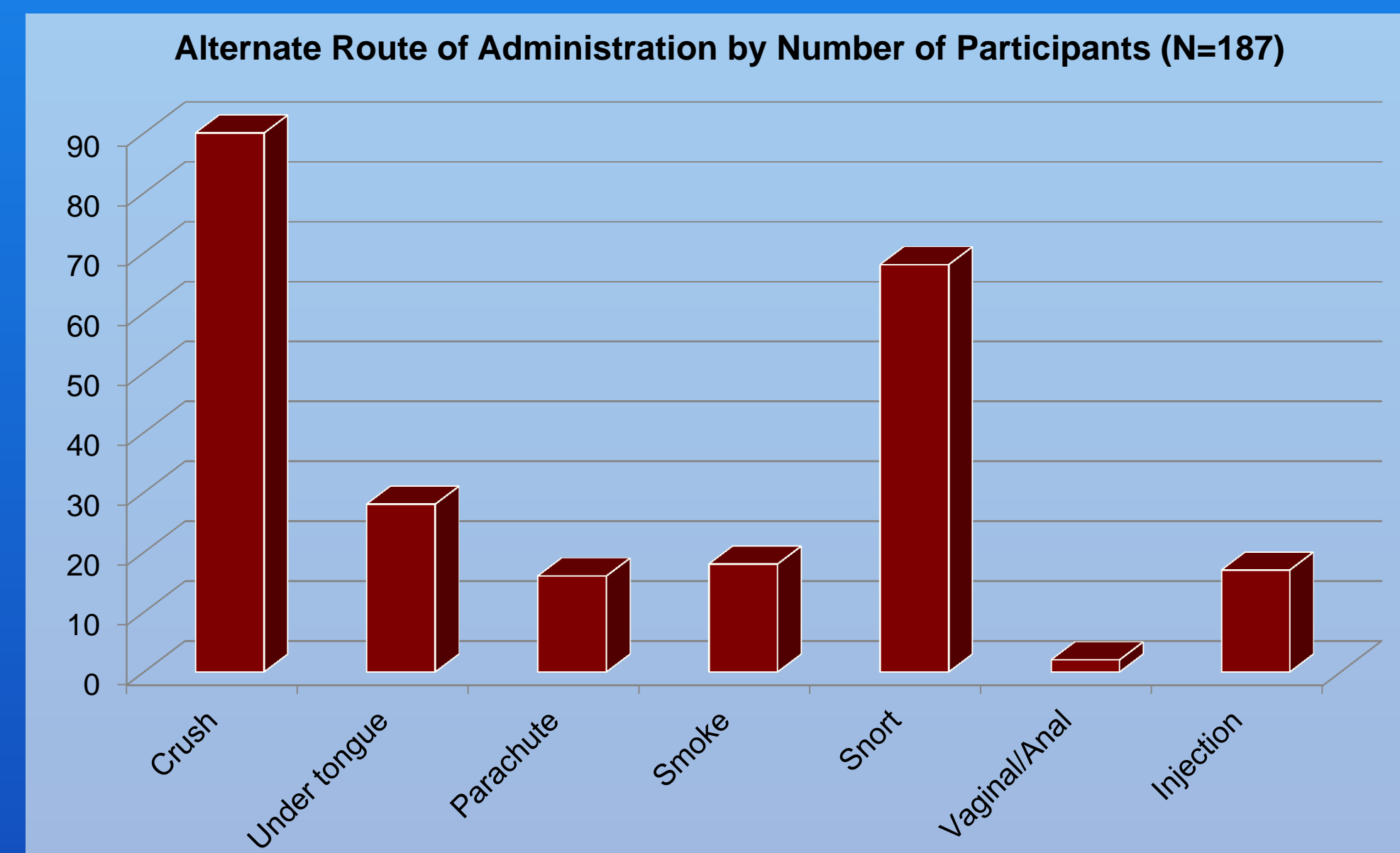
Eligibility:

- reported sex with a partner of the opposite gender during the past 90 days
- used “club drugs” (cocaine, ecstasy, LSD, GHB, ketamine or methamphetamine) at least 3 times and misused or abused prescription medication (ex. OxyContin; Xanax,) at least 3 times during the last 90 days
- between ages of 18-39
- Regular attendance at large Miami nightclubs

Results

Sample Characteristics (N=431)

	N	%	Mean	SD
Demographics				
Race/Ethnicity				
Hispanic	283	65.7%		
African American	82	19.0%		
Caucasian	54	12.5%		
Other	12	2.8%		
Female	193	44.8%		
Age			25.18(5.37)	
Years of education			10.73(4.83)	
Hours worked per week			22.83(22.13)	
Rx Opioid Misuse*				
Rx opioids- any route	383	88.9%		
Rx opioids- alternate route (ARA)	187	43.3%		
Substance Use*				
Alcohol	429	99.5%		
Marijuana	409	94.9%		
Cocaine	399	92.6%		
Crack cocaine	117	27.1%		
Ecstasy	416	96.5%		
LSD	202	46.9%		
Hallucinogens	243	56.4%		
Methamphetamine	99	23.0%		
GHB	68	15.8%		
Heroin	92	21.3%		
Rx sedatives	405	94.0%		
Drug injection	58	13.5%		
Sexual Risk Behaviors				
Unprotected vaginal intercourse*	390	90.5%		
Unprotected anal intercourse*	178	41.3%		
Group sex participation†	180	41.8%		
Selling or trading sex*	62	14.4%		
Health and Social Risks				
Physical victimization†	188	43.6%		
Sexual victimization†	81	18.8%		
Severe mental distress*	214	49.7%		
Substance dependence*	244	56.6%		
Arrest†	277	64.3%		



Predictors of ARA of Rx Opioids (N=383)

	Bivariate Models		Multivariate Model	
	OR	P	OR	P
Demographics				
Race/Ethnicity				
Hispanic	0.890	0.569		
African American	0.542	0.019		ns
Caucasian	3.294	0.000	3.287	0.001
Age (< 25 years)	0.786	0.216		
Female	0.662	0.036	0.599	0.029
Sexual Risk Behaviors				
Unprotected vaginal intercourse*	1.376	0.446		
Unprotected anal intercourse*	0.672	0.206		
Group sex participation†	2.029	0.002	1.579	0.045
Selling or trading sex*	1.669	0.092		
Health and Social				
Physical victimization†	1.142	0.558		
Sexual victimization†	1.597	0.084		
Severe mental distress*	1.586	0.018	2.423	0.000
Substance dependence*	1.173	0.418		
Arrest†	1.432	0.138		
*Past 90 days				
† Lifetime				

Discussion

Participants are broadly representative of the diversity of Miami-Dade County; mean age is 25. Though recent Rx opioid misuse is reported by nearly 89% of participants, a large majority of participants reports using multiple substances. Sexual risk behaviors and other health and social problems are also common. ARA was reported by 43% of the sample.

Bivariate regression models reveal that race/ethnicity is associated with alternate routes of administration among recent Rx opioid misusers. African American and female participants have lower odds of engaging in ARA, while Caucasian participants have higher odds.

In addition, participants who report group sex participation and severe mental distress have higher odds of engaging in ARA. While no other predictors were significant in the bivariate models, selling or trading sex and lifetime sexual victimization approached significance.

The multivariate logistic regression model found that Caucasian race/ethnicity, group sex participation, and severe mental distress were all associated with higher odds of ARA, while female participants had lower odds.

Looking at the list of ARA reported by Rx opioid misusers in the past 90 days, crushing the pill is the most common, followed by snorting, dissolving the pill under the tongue, smoking, parachuting, and vaginal and/or rectal insertion. Injection of Rx opioids was reported by 17 participants.

Conclusion

ARA is associated with several health and social problems among Rx opioid misusers. The risk of HIV and HCV transmission is elevated for participants who report injection and share needles or other equipment. The association of ARA and group sex participation is of concern as research shows that group sex facilitates the transmission of HIV and other sexually transmitted infections (STI) across multiple populations. Thus, the risk of HIV, HCV, or STI transmission is exacerbated for these participants.

These findings have important public health implications. First, they reveal trends in substance use and sexual risk behavior among young adults. Second, these findings identify a population in need of Rx opioid and sexual risk reduction interventions.

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Further Information

2 NE 40th Street, Ste. 404
Miami, FL 33137

arsh.nova.edu
mance.buttram@nova.edu

305-571-2774

