

Sexual risk behaviours associated with unlicensed driving among young adults in Miami's electronic dance music nightclub scene

Mance E. Buttram^{A,B}, Steven P. Kurtz^A and Roddia J. Paul^A

^ACenter for Applied Research on Substance Use and Health Disparities, Nova Southeastern University, 7255 NE 4th Avenue, Suite 112, Miami, FL 33138, USA.

^BCorresponding author. Email: mance.buttram@nova.edu

Abstract. Literature indicates that unlicensed driving (UD) offenders report substance use risk behaviours, yet data related to sexual risk behaviours is unknown. This study examined sexual and other risk behaviours among young adults in Miami, Florida, comparing UD and non-UD offenders ($n=498$). Compared with others, UD offenders were more likely to report group sex history, being high for sex half the time or more, purchasing sex and sexually transmissible infection history. Results suggest that locating sexual risk reduction interventions inside of the justice system would benefit UD offenders.

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Research demonstrates that young adult participants in the electronic dance music (EDM) nightclub scene report alcohol and drug use (e.g. cocaine, ecstasy, prescription opioids and benzodiazepines) in addition to multiple sexual risk behaviours, including condomless vaginal and anal sex, and group sex.^{1–4} EDM nightclub scene participants also report risky driving behaviours.⁵ One such risky driving behaviour, unlicensed driving (UD), is relatively understudied. Although literature suggests a connection between UD and substance use,^{6,7} the connection between UD and sexual risk behaviours is not apparent. Given this, we examined sexual and other risk behaviours among young adult EDM nightclub scene participants in Miami, Florida, comparing UD and non-UD offenders.

Data are drawn from baseline assessments conducted between September 2011 and November 2014 as part of a substance use and sexual risk reduction intervention trial. Participants ($n=498$) were aged 18–39 years and met the following past-90-day eligibility criteria: 1) heterosexual sex; 2) use of club drugs (i.e. cocaine, ecstasy, γ -hydroxybutyric acid [GHB], methamphetamine, ketamine, lysergic acid diethylamide [LSD]) three or more times; 3) non-prescribed use of prescription medications one or more times; and 4) attendance at large EDM nightclubs once or more in a typical month.

The assessments were primarily comprised of the Global Appraisal of Individual Needs (version 5.4),⁸ which includes core sections on substance use, sexual risk behaviours, sexually transmissible infection (STI) history and arrest history. Participants reported the offences for which they were ever arrested, including UD, which was dichotomised into UD

arrest versus not. Measures of past-90-day substance use and sexual behaviours, and STI history were dichotomised into endorsement and not. Descriptive statistics were calculated for the variables of interest. Bivariate logistic regression models were constructed to examine differences in characteristics and behaviours between UD and non-UD offenders. All analyses were conducted using SPSS Statistics version 24 (IBM Corporation, Armonk, NY, USA).

As shown in Table 1, compared with others, UD offenders were more likely to be Black and to report group sex history, being high for sex, half the time or more, purchasing sex, and STI history. In multivariate models controlling for significant demographic variables, all significant bivariate relationships remained, with the exception of group sex history ($P<0.031$; data not shown). No measure of past-90-day substance use was significant, likely because the sample comprised frequent and heavy substance users.

This study shows associations between UD and multiple sexual risk behaviours, which are concerning given the association between substance use and HIV and STI transmission. Moreover, it is common for group sex events to include participants from multiple high-risk populations (e.g. men who have sex with men, injection drug users) and lower risk populations (e.g. heterosexual young adults). These events serve as potential bridge environments in which HIV and STI may be transmitted across group boundaries and expose participants to greater risk.⁹

Findings from this study suggest that upon entering the justice system, UD offenders would likely benefit from interventions focused on sexual risk behaviours, in addition to substance use and driving safety. Although sexual risk

Table 1. Sample characteristics and bivariate logistic regression models of unlicensed driving ($n = 498$)UD, unlicensed driving; OR, odds ratio; CI, confidence interval; LSD, lysergic acid diethylamide; GHB, γ -hydroxybutyric acid

Variable	UD Offender		Non-UD Offender		P	OR	95% CI
	n = 118	23.7%	n = 380	76.3%			
Demographics							
Hispanic	62	52.5%	258	67.9%	0.003	0.524	0.344, 0.797
Black	37	31.4%	67	17.6%	0.002	2.134	1.334, 3.414
White	17	14.4%	43	11.3%	0.369	1.319	0.721, 2.413
Other	2	1.7%	12	3.2%	0.167	0.34	0.073, 1.571
Female	32	27.1%	190	50.0%	0.000	0.372	0.237, 0.585
Young age (18–24 years)	36	30.5%	224	58.9%	0.000	0.306	0.197, 0.476
Education	95	80.5%	327	86.1%	0.145	0.669	0.390, 1.149
Substance use^A							
Alcohol	118	100.0%	379	99.7%	0.999		
Marijuana	115	97.5%	360	94.7%	0.229	2.130	0.622, 7.297
Cocaine (powder)	114	96.6%	347	91.3%	0.065	2.710	0.940, 7.816
Crack cocaine	31	26.3%	103	27.1%	0.858	0.958	0.600, 1.531
Ecstasy	118	100.0%	364	95.8%	0.998		
LSD	50	42.4%	187	49.2%	0.195	0.759	0.500, 1.151
Hallucinogens	66	55.9%	212	55.8%	0.978	1.006	0.664, 1.525
Methamphetamine	34	28.8%	84	22.1%	0.136	1.426	0.895, 2.274
GHB	24	20.3%	54	14.2%	0.111	1.541	0.905, 2.626
Heroin	24	20.3%	83	21.8%	0.728	0.914	0.549, 1.521
Rx benzodiazepines	114	96.6%	348	91.6%	0.075	2.621	0.907, 7.570
Rx opioids	107	90.7%	339	89.2%	0.649	1.176	0.584, 2.369
Sexual behaviours							
Condomless vaginal sex ^A	107	90.7%	343	90.3%	0.894	1.049	0.517, 2.128
Condomless anal sex ^A	49	41.5%	150	39.5%	0.691	1.089	0.715, 1.657
Group sex history	59	50.0%	144	37.9%	0.020	1.639	1.081, 2.485
High for sex \geq half the time ^A	103	87.3%	285	75.0%	0.006	2.289	1.270, 4.126
Traded/sold sex ^B	20	16.9%	47	12.4%	0.205	1.446	0.818, 2.556
Purchased sex ^B	26	22.0%	31	8.2%	0.000	3.182	1.800, 5.624
Sexually transmissible infection history	27	22.9%	56	14.7%	0.040	1.717	1.026, 2.872

^APast 90 days.^BPast year.

reduction interventions delivered inside of the justice system have been studied,¹⁰ no apparent interventions have targeted UD offenders, whose infractions are less severe than other risky driving offences (e.g. driving under the influence) and are unlikely to be sentenced to confinement. Thus, for UD offenders, brief sexual risk reduction interventions could be delivered alongside the existing non-correctional facility justice system infrastructure (e.g. mandated safe driving education or court appearances). In addition, referrals for HIV and STI testing in these settings would assist in diagnosing unknown infections and connecting individuals to treatment.

This study has some limitations. The ability to generalise the findings to other populations is limited by the eligibility requirements and the high frequencies of reported substance use and sexual risk behaviours. All data are based on self-report, potentially leading to underreporting of socially undesirable behaviours.

Miami reports the highest HIV and syphilis prevalence rates in the USA, including among heterosexual populations, notably heterosexual Black women,^{11,12} thus identifying opportunities to reach populations at risk is a high priority. Locating adjunct sexual risk reduction interventions inside of the justice system in non-jail settings could likely be done at low cost and require little additional commitment from participants, including UD

offenders. Future research should focus on developing intervention approaches for young adult UD offenders.

Conflicts of interest

None declared.

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References

- 1 Kurtz SP, Surratt HL, Buttram ME, Levi-Minzi MA, Chen M. Interview as intervention: the case of young adult multidrug users in the club scene. *J Subst Abuse Treat* 2013; 44: 301–8. doi:10.1016/j.jsat.2012.08.004
- 2 Buttram ME, Kurtz SP. Characteristics associated with group sex participation among men and women in the club drug scene. *Sex Health* 2015; 12: 560–2. doi:10.1071/SH15071
- 3 Kurtz SP, Buttram ME, Surratt HL. Benzodiazepine dependence among young adult participants in the club scene who use drugs.

- J Psychoactive Drugs* 2017; 49: 39–46. doi:[10.1080/02791072.2016.1269978](https://doi.org/10.1080/02791072.2016.1269978)
- 4 Ibañez GE, Kurtz SP, Surratt HL, Inciardi JA. Correlates of heterosexual anal intercourse among substance-using club-goers. *Arch Sex Behav* 2010; 39: 959–67. doi:[10.1007/s10508-010-9606-3](https://doi.org/10.1007/s10508-010-9606-3)
 - 5 Voas RB, Johnson MB, Miller BA. Alcohol and drug use among young adults driving to a drinking location. *Drug Alcohol Depend* 2013; 132: 69–73. doi:[10.1016/j.drugalcdep.2013.01.014](https://doi.org/10.1016/j.drugalcdep.2013.01.014)
 - 6 Hanna CL, Hasselberg M, Laflamme L. Young unlicensed drivers and fatal road traffic crashes in the USA in the past decade. A neglected public health issue. *Inj Prev* 2014; 20: 54–6. doi:[10.1136/injuryprev-2013-040809](https://doi.org/10.1136/injuryprev-2013-040809)
 - 7 Elliott MR, Ginsburg KR, Winston FK. Unlicensed teenaged drivers: who are they, and how do they behave when they are behind the wheel? *Pediatrics* 2008; 122: e994–1000. doi:[10.1542/peds.2008-1257](https://doi.org/10.1542/peds.2008-1257)
 - 8 Dennis ML. Global appraisal of individual needs. Version 5.4. Bloomington, IL: Chestnut Health Systems; 2006.
 - 9 Friedman SR, Mateu-Gelabert P, Sandoval M. Group sex events amongst non-gay drug users: an understudied risk environment. *Int J Drug Policy* 2011; 22: 1–8. doi:[10.1016/j.drugpo.2010.06.004](https://doi.org/10.1016/j.drugpo.2010.06.004)
 - 10 Underhill K, Dumont D, Operario D. HIV prevention for adults with criminal justice involvement: a systematic review of HIV risk-reduction intervention in incarceration and community settings. *Am J Public Health* 2014; 104: e27–53. doi:[10.2105/AJPH.2014.302152](https://doi.org/10.2105/AJPH.2014.302152)
 - 11 Centers for Disease Control and Prevention Diagnosed HIV infection among adults and adolescents in metropolitan statistical areas – United States and Puerto Rico, 2013. *HIV Surveill Suppl Rep* 2015; 20: 15–7.
 - 12 Centers for Disease Control and Prevention. Table 25. All stages of syphilis – reported cases and rates of reported cases in selected metropolitan statistical areas (MSAs) in alphabetical order, United States 2011–2015. 2016. Available online at: <https://www.cdc.gov/std/stats15/tables/25.htm> [verified 3 April 2017].