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Short report

Drug use among men by sexual behaviour, race and ethnicity: Prevalence estimates from a nationally representative US sample

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ABSTRACT

Background: Men who have sex with men (MSM) report drug use more frequently than non-MSM, however data are lacking that examine the disparity within racial and ethnic groups.
Methods: Using a nationally representative sample of men in the US stratified by race and ethnicity, we present prevalence estimates of self-reported drug use comparing MSM to non-MSM.
Results: Prevalence of self-reported drug use was greater among MSM compared to non-MSM, with the exception of heroin. White MSM reported greatest drug use overall, with amphetamine use representing the greatest disparity compared to black or Hispanic MSM. Hispanic MSM reported the greatest crack/cocaine and heroin use. Men who reported using drugs were younger then men who did not report using drugs; there were no age patterns of reported drug use among MSM.
Conclusion: Drug use is a public health concern among MSM, compounding a racial and ethnic disparity. Intersectionality is a useful framework for identifying subgroups with highest reported rates of drug use.

Background

In addition to men who have sex with men (MSM) reporting greater drug use compared with non-MSM (McCabe, Hughes, Bostwick, West, & Boyd, 2009), there are also drug use differences between racial and ethnic groups among all men (Cooper, Friedman, Tempalski, Friedman, & Keem, 2005). It is important to consider these characteristics jointly within a framework that acknowledges simultaneous dimensions of minority stress, including racial, ethnic, and sexual discrimination. The minority stress model posits that sexual minorities experience chronic stress as a result of discrimination and stigmatization experienced throughout their lives, which results in increases in anxiety, depression, and substance use (IOM, 2011). The intersectionality framework acknowledges that identities do not exist in a vacuum and focuses on the additive effects of simultaneous dimensions of minority stress, including, racial, ethnic, class, gender, and sexual discrimination (Gamson & Moon, 2004).

While literature is replete with estimates of substance use by sexual identity or race and ethnicity, few consider the intersecting effects of race, ethnicity, and sexual behaviour in the general population. For example, methamphetamines have greater use among Caucasian men (CDC, 2015a), crack has lower use among Hispanic men (Palamar, Davies, Ompad, Cleland, & Weitzman, 2015), while racial minorities may be less likely to use powder cocaine (Palamar et al., 2015). By not considering the joint effects of race, ethnicity, and sexual behaviour, spurious associations with outcomes related to sexual behaviors and drug use (such as risk of HIV infection) may be induced (Kaufman & MacLehose, 2013). It is well known that risk of HIV and other sexually transmitted infections increases after drug use, for example by needle sharing or unprotected anal intercourse (CDC, 2015b; Mimiaga et al., 2010; Plankey et al., 2007). Therefore, the aim of this study was to demonstrate an intersectionality approach to improving estimates of drug use among MSM compared with non-MSM stratified by racial and ethnic groups using example data from a US-based nationally representative sample of men.

Methods

The source population for this study was the National Epidemiologic Survey on Alcohol and Related Conditions

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(NESARC), a longitudinal survey conducted between 2001–2002 (wave #1) and 2004–2005 (wave #2) designed to measure alcohol, tobacco, and drug use in the civilian, non-institutionalized US population 18 years of age and older (Grant & Kaplan, 2005). As sexual behaviour was only assessed in the second wave of NESARC, the study population included all male respondents in wave #2, a subset of men who completed wave #1.

Data in NESARC were collected during face-to-face computer-assisted personal interviews. Drug use was recorded as ever/never for each NESARC drug category based on a positive response to either lifetime use (assessed in wave #1) or recent use since the first wave (assessed in wave #2). These categories included use of sedatives, tranquilizers, opioids, amphetamines, cannabis, crack/cocaine, hallucinogens, inhalants, and heroin. Reporting a history of male sexual partners (yes/no) was used to classify MSM behaviour. Hispanic ethnicity and race were self-reported as non-Hispanic black or African American, non-Hispanic white, and Hispanic or Latino. NESARC methodology only allowed a single race to be captured, with no "other" category; therefore all races could be coded to the preceding categories. Only men that responded to the drug and sexual partner questions were eligible for inclusion in the final analysis.

NESARC employed a complex survey design that oversampled black and Hispanic persons and was weighted to adjust for nonresponse. To arrive at generalizable estimates of drug use prevalences, all proportions take into account the multistage sampling, with stratification, clustering, and weighting of the study population. Analyses were conducted using R 3.1.0 (R Foundation for Statistical Computing, Vienna, Austria) using the *survey* package.

Results

Among 13,773 eligible men in the second wave of NESARC, 617 (4%) reported MSM behaviour, which did not vary by race and ethnicity. The majority of the sample were non-Hispanic white men (76%), with the remainder approximately equally distributed among non-Hispanic black (11%) and Hispanic or Latino (13%) men. Prevalence proportions, counts and 95% confidence intervals of self-reported drug use are given in Table 1.

Among all men in NESARC, prevalence of drug use was greater for MSM compared with non-MSM, with the exception of heroin, which was reported more frequently among non-MSM compared to MSM (1% vs. 0%). Cannabis use was the most prevalent drug reported with 42% use among MSM and 27% use among non-MSM. Inhalants represented the greatest disparity in use: approximately 10% of MSM reported use compared with less than 3% of non-MSM, a four-fold increase.

Among black men, use of tranquilizers (6% vs. 2%), opioids (7% vs. 5%), cannabis (38% vs. 29%), and hallucinogens (5% vs. 3%) were more prevalent among MSM compared to non-MSM. White MSM reported greater drug use for all categories compared to white non-MSM except heroin, which was more frequently reported among non-MSM compared to MSM (1% vs. 0%). Hispanic MSM reported greater drug use for all categories.

When comparing racial and ethnic groups, all drug categories–except crack/cocaine and heroin–appeared more prevalent in white MSM compared with black and Hispanic MSM, while crack/cocaine and heroin had the highest prevalence of use among Hispanic MSM. Proportions of drug use among Hispanic MSM generally mirrored those of white MSM, exceeding black MSM self-reported use. Amphetamine use represented the greatest disparity with greater than seven-fold increase in use comparing white to black MSM (14% vs. 2%), followed by inhalants with a four-fold increase (12% vs. 3%). Among non-MSM, all drug categories–except cannabis and heroin–were again more prevalent in white men,

Table 1
Prevalence proportions, counts and 95% confidence intervals of self-reported drug use (ever/never) among men in NESARC by sexual behavior, race and Hispanic ethnicity.

Drug category %[a] (*N*, 95% CI)	All men (*n* = 13,773)		Non-Hispanic black men (*n* = 2301)		Non-Hispanic white men (*n* = 8775)		Hispanic/Latino men (*n* = 2697)	
	MSM (*n* = 617)	Non-MSM (*n* = 13,156)	MSM (*n* = 97)	Non-MSM (*n* = 2204)	MSM (*n* = 406)	Non-MSM (*n* = 8369)	MSM (*n* = 114)	Non-MSM (*n* = 2583)
Sedatives[b]	**12.6** (78, 11.6–13.6)*	**6.7** (829, 6.5–7.0)	**5.5** (9, 3.6–7.5)	**3.6** (76, 3.2–4.0)	**14.0** (61, 12.7–15.2)*	**7.5** (625, 7.2–7.8)	**10.6** (8, 9.2–12.0)*	**4.9** (128, 4.6–5.2)
Tranquilizers[c]	**11.3** (63, 10.4–12.2)*	**5.6** (659, 5.4–5.9)	**6.4** (6, 5.3–7.4)*	**2.1** (51, 1.7–2.6)	**12.2** (49, 11.0–13.4)*	**6.5** (521, 6.2–6.8)	**10.8** (8, 9.4–12.2)*	**3.3** (87, 3.1–3.5)
Opioids[d]	**14.3** (79, 12.9–15.8)*	**8.5** (1019, 8.2–8.8)	**6.5** (10, 5.3–7.7)*	**4.6** (97, 4.1–5.2)	**16.4** (61, 14.5–18.3)*	**9.6** (779, 9.2–10.0)	**8.6** (8, 7.8–9.4)*	**5.1** (143, 4.8–5.4)
Amphetamines[e]	**12.4** (77, 11.3–13.5)*	**6.5** (798, 6.2–6.7)	**1.8** (3, 1.6–2.0)	**2.2** (53, 2.0–2.4)	**14.2** (65, 12.8–15.6)*	**7.6** (647, 7.3–7.8)	**11.2** (9, 10.2–12.3)*	**3.6** (98, 3.4–3.9)
Cannabis[f]	**41.6** (254, 39.8–43.4)*	**27.2** (3490, 26.8–27.6)	**37.9** (34, 31.7–44.2)	**28.8** (582, 27.7–29.9)	**44.2** (188, 42.1–46.4)*	**28.2** (2368, 27.7–28.7)	**29.0** (32, 24.8–33.2)*	**20.0** (540, 19.2–20.8)
Crack/Cocaine	**17.1** (108, 15.7–18.5)*	**8.7** (1148, 8.4–9.0)	**5.6** (7, 3.7–7.5)*	**6.6** (145, 6.1–7.2)	**18.5** (85, 16.8–20.3)*	**9.3** (800, 8.9–9.6)	**18.7** (16, 14.4–23.0)*	**7.1** (203, 6.7–7.4)
Hallucinogens[g]	**16.4** (102, 15.0–17.9)*	**8.5** (1044, 8.3–8.8)	**4.9** (7, 4.4–5.4)*	**3.2** (72, 3.0–3.4)	**18.3** (82, 16.5–20.0)*	**9.7** (819, 9.4–10.0)	**16.1** (13, 11.7–20.5)*	**6.3** (153, 5.9–6.6)
Inhalants[h]	**10.3** (60, 9.3–11.3)*	**2.6** (329, 2.5–2.8)	**2.5** (3, 2.3–2.8)	**1.2** (29, 1.0–1.5)	**11.7** (51, 10.5–13.0)*	**3.0** (251, 2.8–3.2)	**8.8** (6, 8.0–9.5)*	**1.5** (49, 1.3–1.7)
Heroin	**0.4** (2, 0.4–0.4)*	**0.6** (80, 0.5–0.7)	**0** (0, 0–3.1)	**0.7** (15, 0.6–0.7)	**0.2** (1, 0.2–0.2)*	**0.6** (51, 0.5–0.7)	**2.0** (1, 1.8–2.1)*	**0.5** (14, 0.4–0.6)

NESARC, National Epidemiologic Survey on Alcohol and Related Conditions; MSM, men who have sex with men.
* $p < 0.01$ comparing MSM to non-MSM (referent group) by race/Hispanic ethnicity for each drug category.
[a] Proportions take into account NESARC's multistage sampling, with stratification, clustering, and weighting of the study population.
[b] Sedatives including sleeping pills, barbiturates, Seconal, Quaaludes, or chloral hydrate.
[c] Tranquilizers or anti-anxiety drugs including Valium, Librium, muscle relaxants, or Xanax.
[d] Painkillers including Codeine, Darvon, Percodan, Oxycontin, Dilaudid, Demerol, Celebrex or Vioxx.
[e] Stimulants including Preludin, Benzedrine, Methedrine, Ritalin, uppers, or speed.
[f] Cannabis, hash, THC, or grass.
[g] Hallucinogens including Ecstasy/MDMA, LSD, mescaline, psilocybin, PCP, angel dust, or peyote.
[h] Inhalants or solvents including amyl nitrite, nitrous oxide, glue, toluene or gasoline.

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