

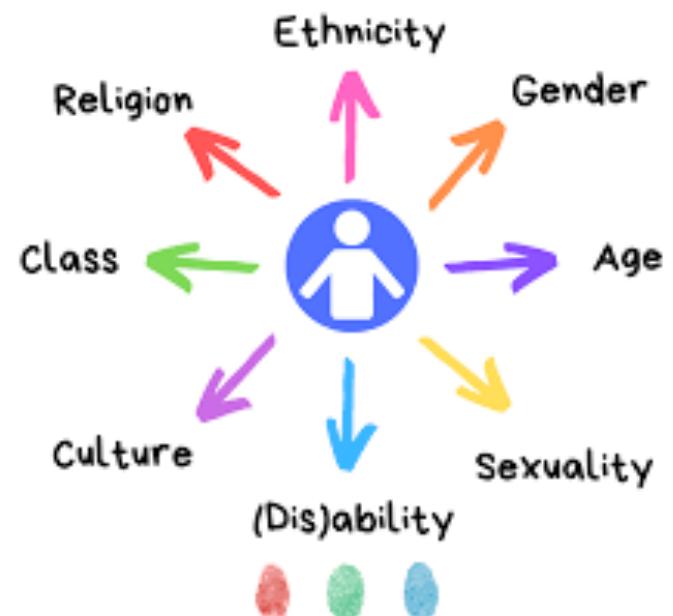


UNDERSTANDING DRUG USE, TRAUMA AND DEMOGRAPHICS OF LESBIAN, GAY, AND BISEXUAL POPULATION IN THE UNITED STATES

Matthew Kusen

BACKGROUND

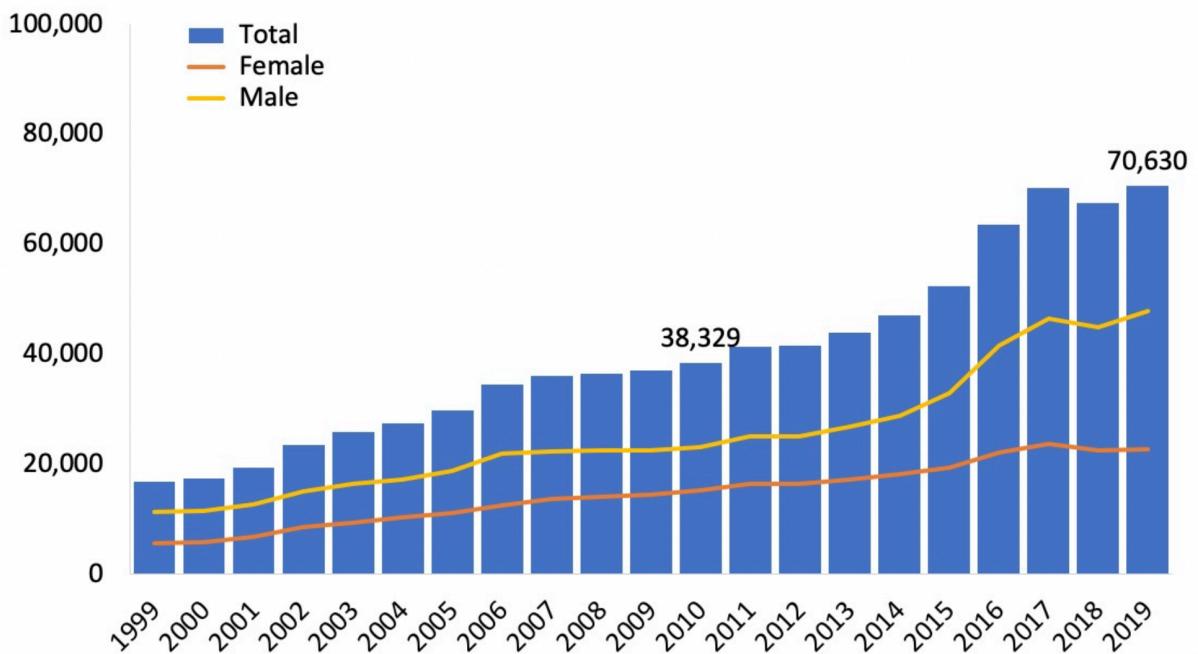
- Lesbian, Gay, Bisexual, Transgender, Intersex, Queer + (LGBTIQ+) persons
- Intersectionality and demographics
- Drug use and mental health issues lead to poor health outcomes
- High rates of drug use among LGB populations
 - “Statistics show that LGBTQ adults are more than twice as likely as their heterosexual counterparts to use illicit drugs and almost twice as likely to suffer from a substance abuse disorder.



BACKGROUND DRUG ABUSE IN THE U.S.

- Rising drug-related death toll
 - 2020: first time in history recorded past **100,000 drug-overdose deaths**
 - increased substance abuse and strain on individuals and healthcare system

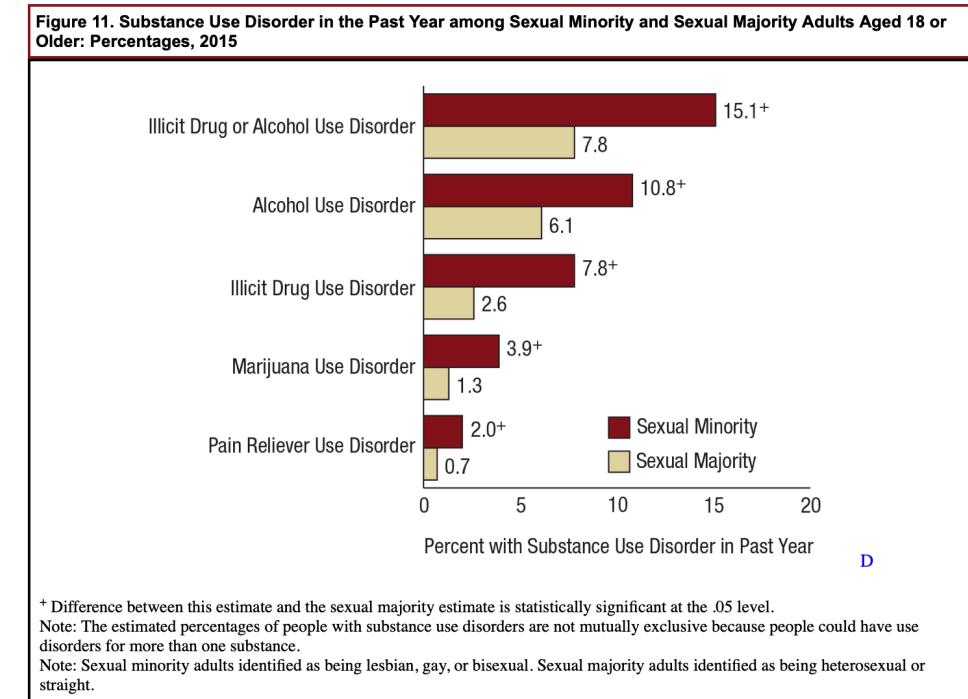
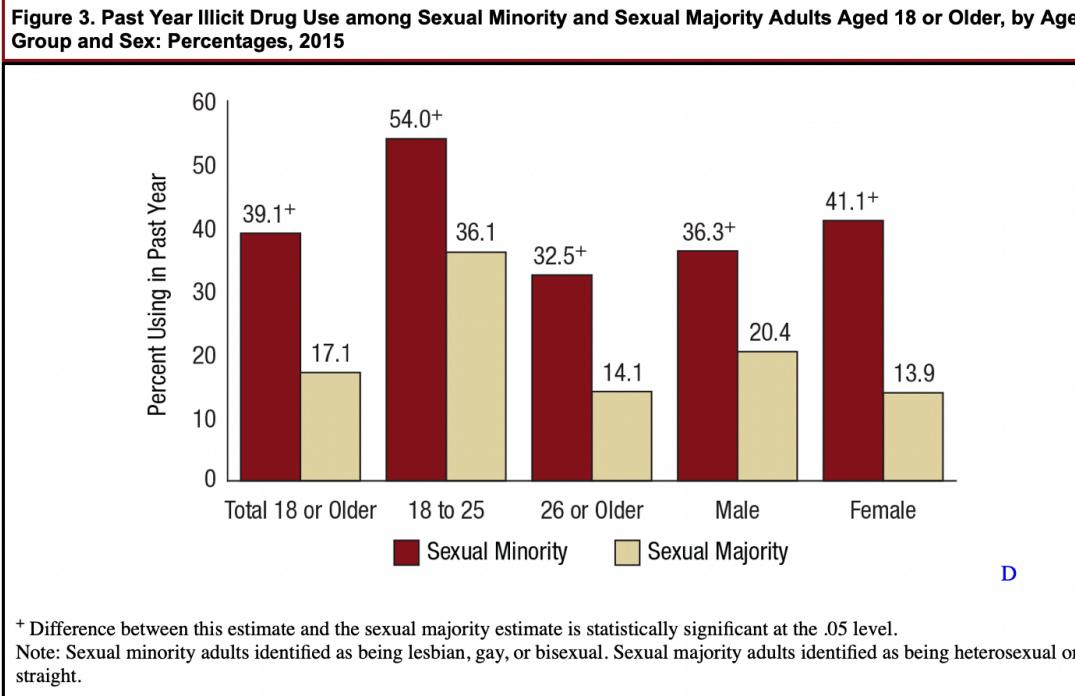
Figure 1. National Drug-Involved Overdose Deaths*
Number Among All Ages, by Gender, 1999-2019



*Includes deaths with underlying causes of unintentional drug poisoning (X40–X44), suicide drug poisoning (X60–X64), homicide drug poisoning (X85), or drug poisoning of undetermined intent (Y10–Y14), as coded in the International Classification of Diseases, 10th Revision. Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999–2019 on CDC WONDER Online Database, released 12/2020.

BACKGROUND LGBTIQ+ AND DRUG ABUSE

- “Statistics show that LGBTQ adults are more than twice as likely as their heterosexual counterparts to use illicit drugs and almost twice as likely to suffer from a substance abuse disorder.”



BACKGROUND LGBTIQ+ AND DRUG ABUSE

- Very few literature on treatments targeted to the SGM community and even fewer studies targeted to the subgroups within the SGM community most at risk.
[LGBTIQ+] people are too often analyzed as a single group when examining substance use disparities, which obscures important subgroup differences within the community.



RESEARCH QUESTION

Which demographic factors and adverse childhood experiences are associated with drug abuse among lesbian, gay, and bisexual persons in the United States across three adult age cohorts?



DATA

generations

A Study of the Life and Health of LGB People in a Changing Society

The *Generations* study is the first long-term, five-year study to examine the health and well-being across three generations of lesbians, gay men, and bisexuals (LGB). The study explores identity, stress, health outcomes, and health care and services utilization among LGBs in three generations of adults who came of age at different historical contexts. Find out more about the study [here](#).



COLUMBIA UNIVERSITY
IN THE CITY OF NEW YORK

UCLA



UCSF



UCL

<http://www.generations-study.com>

DATA

- **Time Method:**
 - **Wave 1 : 2016 – 2017 (n=1518)**
- **Data Type(s):** survey data
- **U.S. Lesbian, Gay, and Bisexual Population of 3 age cohorts**
- Ages 18-25, 34-41, and 52-59 during data collection

This Study

Number of Variables:

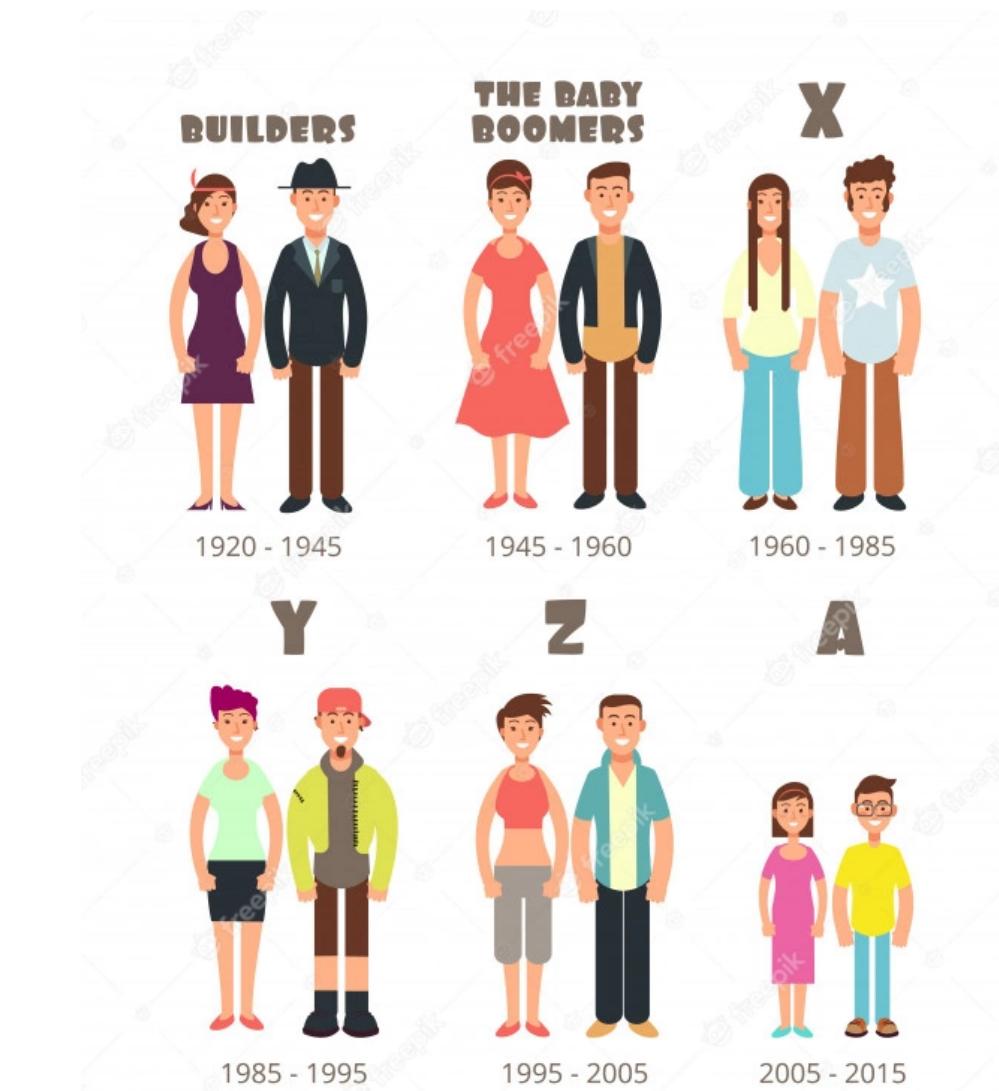
13

Number of observations (n):

1,217 (removed missing values)

Variable Types:

Categorical



VARIABLES

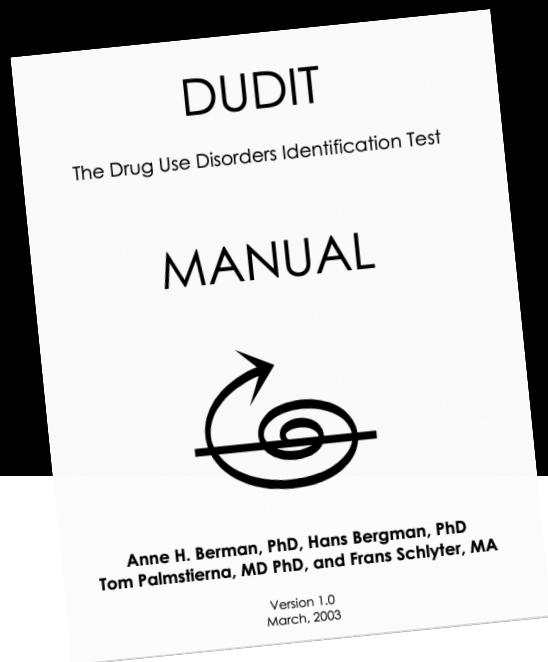
- Outcome variable (Y) – Drug Use

Data Collected: via 11 questions with a DUDIT score ranging from 1-44 points

- Transform this to a binary variable based on Drug Use Disorder Identification Test analysis.

- 0 : do not use drugs / moderate drug use
- 1: drug dependent / extreme drug dependency

Source: <https://pahdelinkki.fi/sites/default/files/duditmanual.pdf>



3. DUDIT

Items

The DUDIT (Drug Use Disorders Identification Test, see Appendix 1) consists of 11 items. The purpose of the DUDIT-items is to identify use patterns and various drug-related problems. Table 1 shows the focus of each item. Please note that we ask you to only use the DUDIT items in the copyrighted layout that you find in the Appendix and which is available in an Acrobat Reader (pdf) file upon request (see correspondence details on first page).

Table 1 Focus for each DUDIT item

Nr.	Item	Focus
1	How often do you use drugs other than alcohol? (See list of drugs on back side.)	Frequency per week/month Polydrug use
2	Do you use more than one type of drug on the same occasion?	
3	How many times do you take drugs on a typical day when you use drugs?	Frequency per day
4	How often are you influenced heavily by drugs?	Heavy use
5	Over the past year, have you felt that your longing for drugs was so strong that you could not resist it?	Craving

7

6	Has it happened, over the past year, that you have not been able to stop taking drugs once you started?	Loss of control
7	How often over the past year have you taken drugs and then neglected to do something you should have done?	Prioritization of drug use
8	How often over the past year have you needed to take a drug in the morning after heavy drug use the day before?	"Eye-opener"
9	How often over the past year have you had guilt feelings or a bad conscience because you used drugs?	Guilt feelings
10	Have you or anyone else been hurt (mentally or physically) because you used drugs?	Harmful use
11	Has a relative or a friend, a doctor or a nurse, or anyone else, been worried about your drug use or said to you that you should stop using drugs?	Concern from others

OUTCOME VARIABLE

Different range for different genders based on biological factors:

Born as Male:

6 points or more: drug dependent / extreme drug dependency

Born as Female:

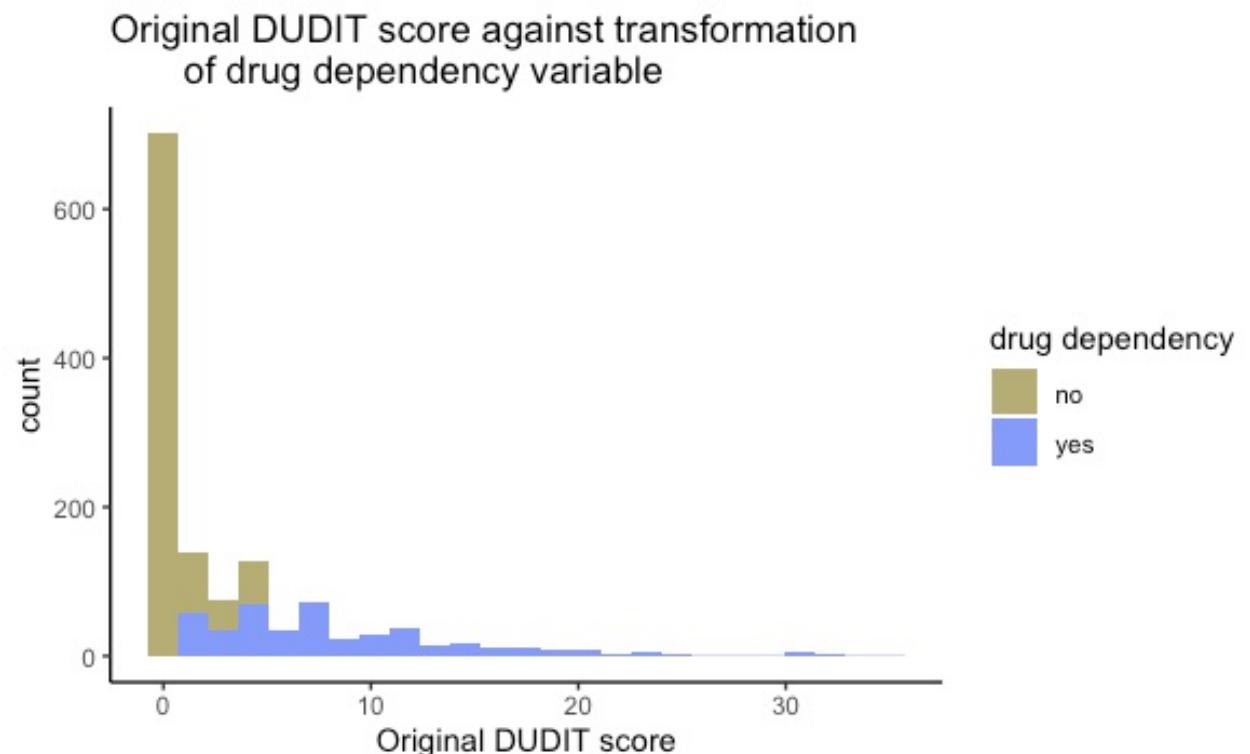
2 points or more: drug dependent / extreme drug dependent

Quick scoring guide for the DUDIT

For items 1-9 the responses are coded 0, 1, 2, 3 or 4. Items 10 and 11 are coded 0, 2 or 4. Sum up all the points for the 11 items. The maximum score is 44.

A male client with 6 points or more probably has drug-related problems, i.e., risky or harmful drug habits that might be diagnosed as substance abuse/harmful use or dependence. A female client with 2 points or more probably has drug-related problems. (These numbers are preliminary but can be used as guidelines until more data are available.)

A client with 25 points or more is probably heavily dependent on drugs.



VARIABLES

Independent variables

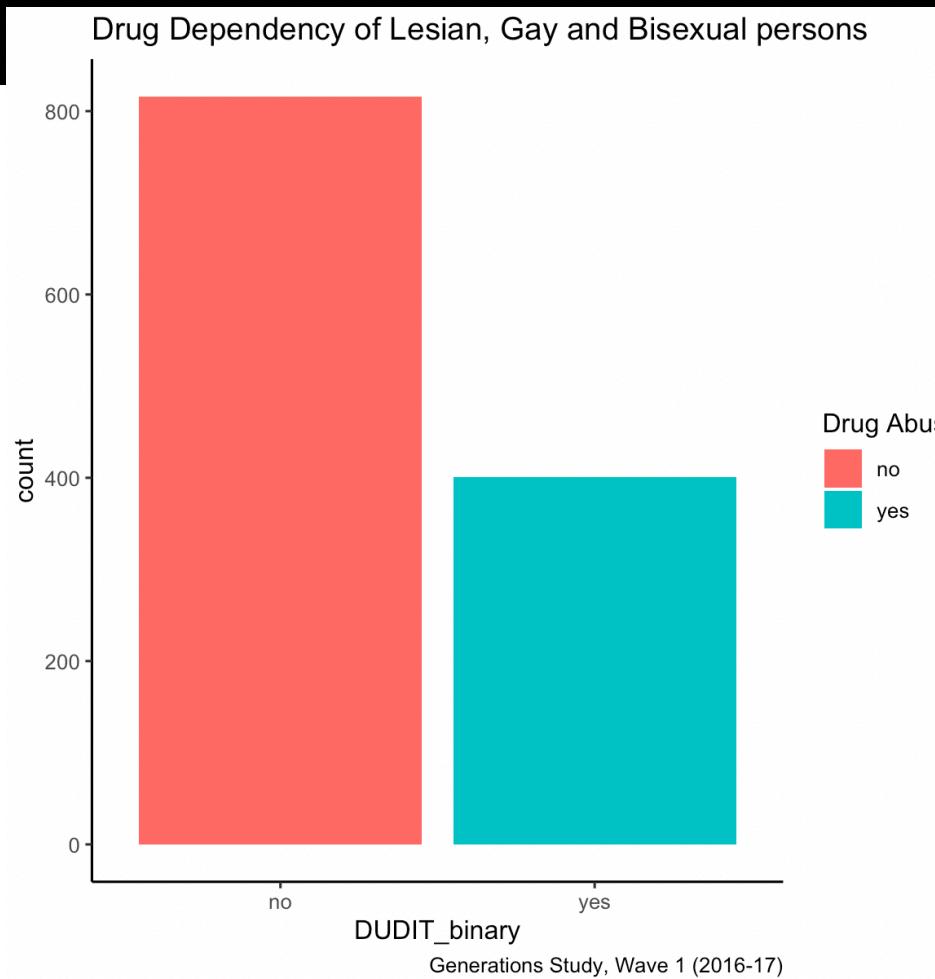
- Demographics
- Family Experience Trauma

Independent Variable						
X	1	Cohort	Categorical	0	Younger	3
				1	Middle	
				2	Older	
X	2	Gender	Categorical	0	Woman	3
				1	Man	
				2	Non-binary/GQ	
X	3	Sexual Orientation	Categorical	0	Lesbian/gay	3
				1	Bisexual	
				2	Other sexual minority identity	
X	4	Race	Categorical	0	White	3
				1	Black	
				2	Latino	
X	5	Poverty	Binary	0	Not in Poverty	2
				1	Experiencing Poverty	
X	6	Education	Binary	0	Less than High School Education	2
				1	More than High School	

INDEPENDENT VARIABLES(CONTINUED)

X	7	Happiness	Categorical	0	Very Happy	3
				1	Pretty Happy	
				2	Not too Happy	
X	8	Childhood Experience: Bullying	Categorical	0	Often	4
				1	Sometimes	
				2	Rarely	
				3	Never	
X	9	Childhood Experience: Sexual Abuse	Binary	0	No	2
				1	Yes	
X	10	Childhood Experience: Incarcerated Parent	Binary	0	No	2
				1	Yes	
X	11	Childhood Experience: Parent Substance Abuse	Binary	0	No	2
				1	Yes	
X	12	Childhood Experience: Parental IPV Abuse	Binary	0	No	2
				1	Yes	

DESCRIPTIVE STATISTICS



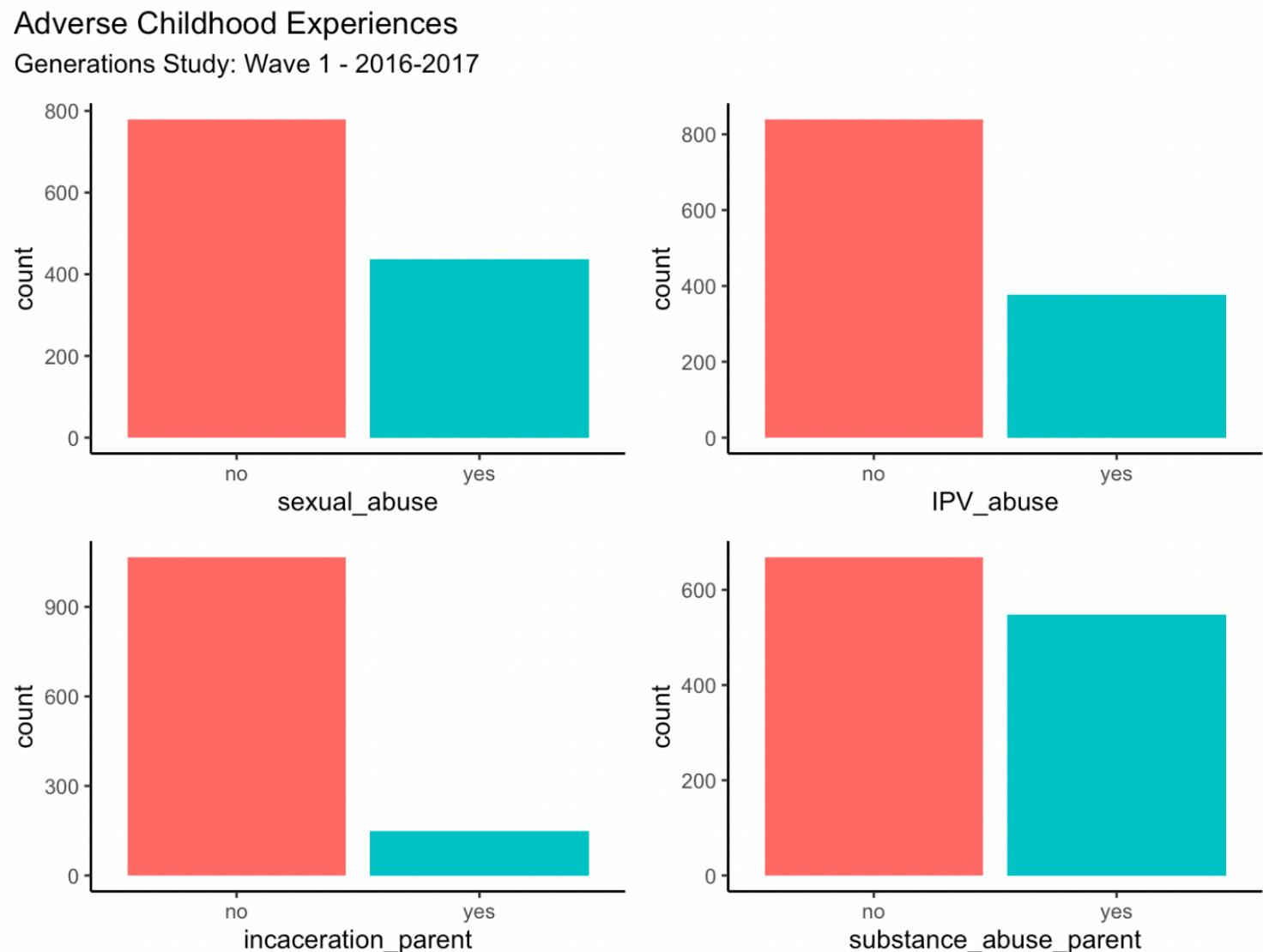
Variable	Coding	Categories	n	%
Dependent Variable				
Y	Drug Use	0	0 – No drug use / moderate drug use	812
		1	1 - Drug abuse	405
Independent Variable				
X 1	Cohort	0	Younger	521
		1	Middle	295
		2	Older	401
X 2	Gender	0	Woman	595
		1	Man	542
		2	Non-binary/GQ	80
X 3	Sexual Orientation	0	Lesbian/gay	675
		1	Bisexual	397
		2	Other sexual minority ident	145
X 4	Race	0	White	912
		1	Black	129
		2	Latino	176
X 5	Poverty	0	Not in Poverty	1065
		1	Experiencing Poverty	152
X 6	Education	0	Less than High School Education	229
		1	More than High School	988

DESCRIPTIVE STATISTICS

		Variable	Coding	Categories	n	%
X	7	Happiness	0	Very Happy	211	17%
X	8		1	Pretty Happy	769	63%
X	9		2	Not too Happy	237	19%
X	10	Childhood Experience: Incarcerated Parent	0	Often	399	33%
X	11		1	Sometimes	417	34%
X	12	Childhood Experience: Parental IPV Abuse	2	Rarely	221	18%
X	13		3	Never	180	15%
X	9	Childhood Experience: Sexual Abuse	0	No	780	64%
X	10		1	Yes	437	36%
X	11	Childhood Experience: Parent Substance Abuse	0	No	669	55%
X	12		1	Yes	548	45%
X	13	Childhood Experience: Parental IPV Abuse	0	No	840	69%
X	14		1	Yes	377	31%

DESCRIPTIVE STATISTICS

Sexual Abuse, IPV abuse and parental substance abuse is quite high for this group of LGB compared to what we may expect in the general population of the U.S.



BIVARIATE STATISTICS

Variables (Categories)	Drug Dependent (Y)		Chi-Squared	p value
	No	Yes		
Gender				<
woman	340 (57%)	255 (43%)		
man	434 (80%)	108 (19%)		
non_binary	38 (47%)	42 (53%)		
COHORT				
young	302 (58%)	219 (42%)		
middle	199 (67%)	96 (33%)		
older	311 (78%)	90 (22%)		
sexual_orientation				
(1) Lesbian/gay	517 (77%)	158 (23%)		
(2) Bisexual	222 (57%)	171 (43%)		
(3) Other sexual minority identity	69 (48%)	76 (52%)		

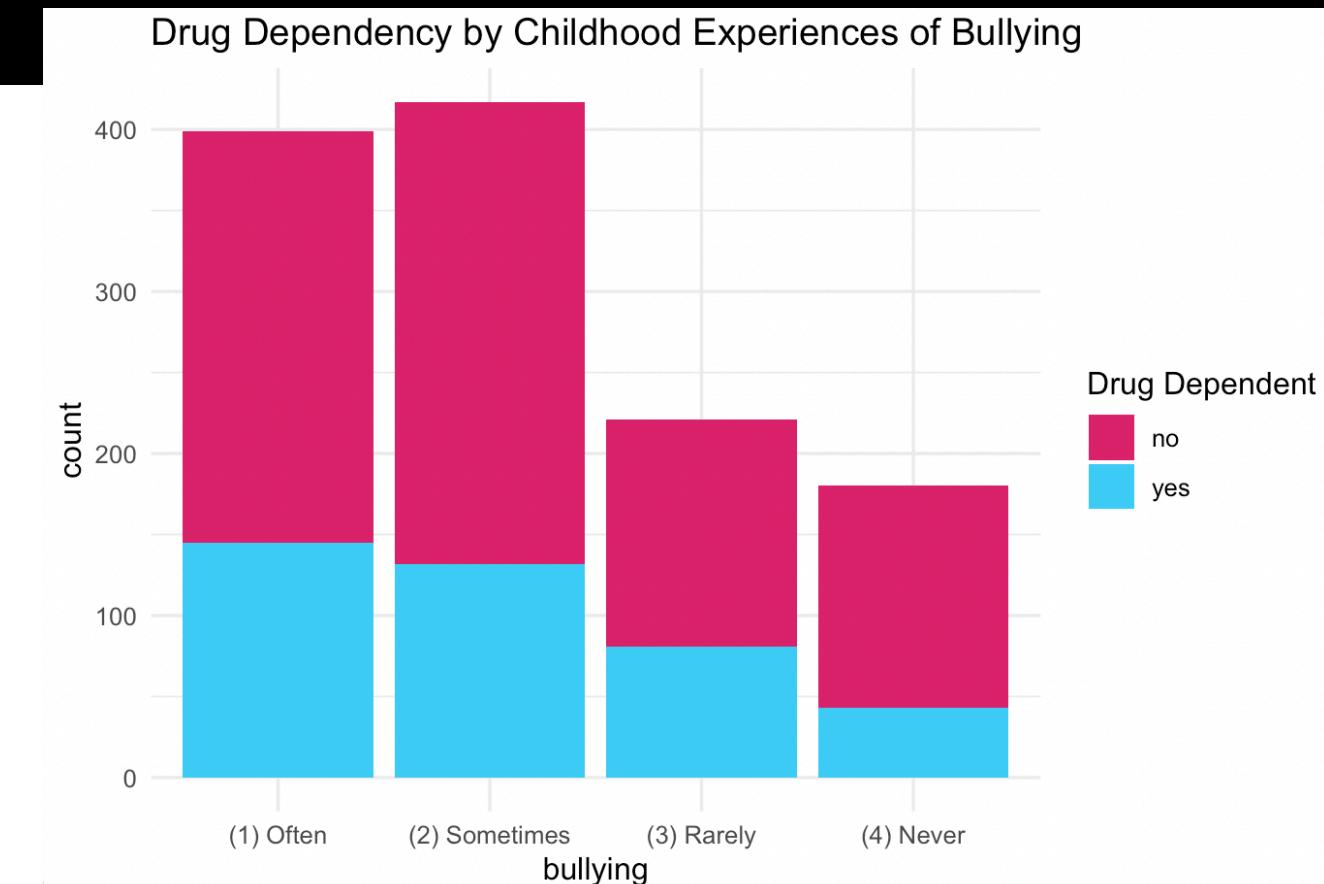
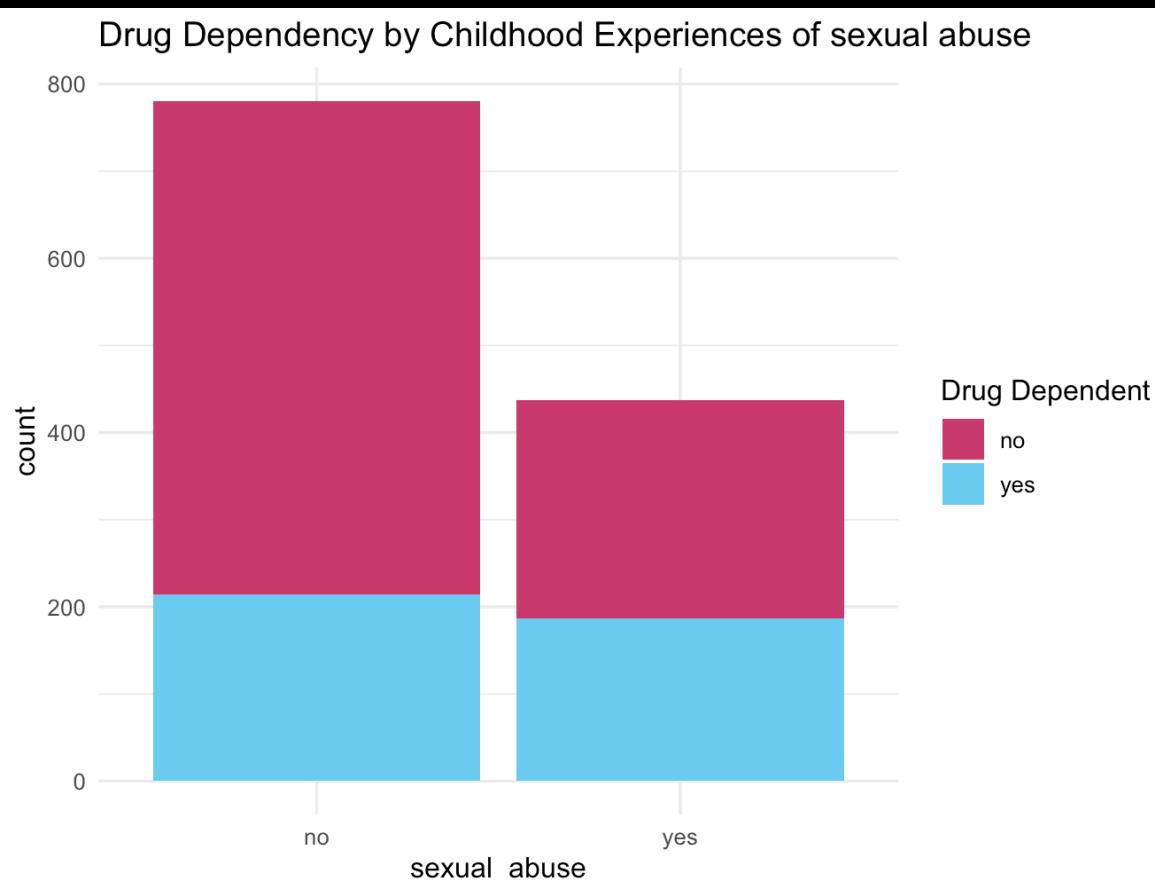
Variables (Categories)	Drug Dependent (Y)		Chi-Squared	p value
	No	Yes		
race				
white	621 (68%)	291 (32%)		
black	82 (63%)	47 (38%)		
latino	109 (61%)	67 (38%)	4.551	0.103
poverty				
(0) Not in poverty	725 (68%)	340 (32%)		
(1) Yes in poverty	87 (57%)	65 (43%)	7.113	0.007
Education				
(1) HS less	140 (61%)	89 (39%)		
(2) More than HS	672 (68%)	316 (32%)	4.367	0.030
happiness				
(1) Very happy	169 (75%)	52 (25%)		
(2) Pretty happy	507 (66%)	262 (34%)		
(3) Not too happy	146 (61%)	91 (39%)	12.321	0.002

BIVARIATE STATISTICS

Variables (Categories)	Drug Dependent (Y)		Chi-Squared	p value
	No	Yes		
Childhood Experience: Bullying				
(1) Often	251 (63%)	148 (37%)	15.087	0.002
(2) Sometimes	285 (68%)	132 (32%)		
(3) Rarely	140 (63%)	81 (37%)		
(4) Never	136 (76%)	44 (24%)		
Childhood Experience: Incarcerated Parent				
no	729 (68%)	338 (32%)	10.405	0.001
yes	83 (55%)	67 (45%)		
Childhood Experience: Parental IPV Abuse				
no	585 (69%)	255 (31%)	9.411	0.002
yes	227 (60%)	150 (40%)		
Childhood Experience: Sexual Abuse				
no	563 (72%)	217 (28%)	28.991	0.000
yes	249 (57%)	118 (43%)		
Childhood Experience: Parent Substance Abuse				
no	470 (70%)	199 (30%)	10.327	0.001
yes	342 (62%)	206 (38%)		

- Interesting proportions for those **never experiencing bullying**
 - must less drug dependency compared to the other categories.
- Those **experiencing childhood sexual abuse** also have higher proportion of drug dependency.

BIVARIATE STATISTICS



MULTIVARIATE ANALYSIS



Multivariate statistical model

- **Logistic Regression Analysis**
 - Used to analyze binary outcome variable
 - Multivariate statistical analysis
 - Calculate odds ratio
 - Interaction term included:
 - sexual orientation & race



MULTIVARIATE ANALYSIS



Survey Weights

- Used survey weights provided by original researchers and utilized in R Studio
 - *svyglm()*
- “When the provided survey weights are applied, results from analyses are generalizable to the U.S. population of LGB (lesbian, gay, and bisexual) adults ages 18-25, 34-41, and 52-59 during data collection. There are no stratification or cluster weights.” (Meyer, 2020). “

MULTIVARIATE STATISTICS

Using logistic regression

Logistic Regression Results

Variable	Beta (robust se)	Odds Ratio (robust se)
	(0.211)*	(0.211)*
COHORT – older *	-0.433	0.649
	(0.223)*	(0.223)*
Gender – man ***	-0.830	0.436
	(0.186)***	(0.186)***
Gender – non- binary / gender-queer *	-0.582	0.559
	(0.336)*	(0.336)*
sexual orientation - (2) Bisexual ****	0.834	2.301
	(0.225)***	(0.225)***
sexual orientation - (3) Other sexual minority identity ***	1.247	3.480
	(0.315)***	(0.315)***
Race - black	0.458	1.581
	(0.339)	(0.339)
Race – Latino	0.235	1.265
	(0.296)	(0.296)

Logistic Regression Results

Variable	Beta (robust se)	Odds Ratio (robust se)
Poverty - (1) Yes in poverty	0.143	1.154
	(0.241)	(0.241)
Education – (2) More than HS	-0.105	0.900
	(0.189)	(0.189)
Happiness - (2) Pretty happy	0.195	1.215
	(0.221)	(0.221)
Happiness - (3) Not too happy	0.384	1.468
	(0.269)	(0.269)
Bullying - (2) Sometimes *	0.361	1.435
	(0.196)*	(0.196)*
Bullying - (3) Rarely *	0.429	1.536
	(0.253)*	(0.253)*
Bullying - (4) Never	-0.326	0.722
	(0.277)	(0.277)

Note:

*p < .10 **p<.05 ***p<0.01

MULTIVARIATE STATISTICS

Using logistic regression

Logistic Regression Results

Variable	Beta (robust se)	Odds Ratio (robust se)
sexual abuse – Yes ***	0.607 (0.182)***	1.835 ***
Incarcerated parent – Yes	0.055 (0.258)	1.056 (0.258)
Substance abuse by parent - Yes	-0.013 (0.180)	0.987 (0.180)
IPV_abuse - Yes	0.159 (0.193)	1.172 (0.193)
Observations	1,217	
Log Likelihood	-688.541	
Akaike Inf. Crit.	1,425.082	
Note:	* p < .10 ** p <.05 *** p<0.01	

Logistic Regression Results

Variable	Beta (robust se)	Odds Ratio (robust se)
sexual orientation - (2) Bisexual: Race – black *	-0.919 (0.534)*	0.399 (0.534)*
sexual orientation (3) Other sexual minority identity : Race - black	-0.627 (0.745)	0.534 (0.745)
sexual orientation - (2) Bisexual: Race -Latino	-0.472 (0.475)	0.623 (0.475)
sexual orientation (3) Other sexual minority identity : Race - latino	-0.320 (0.648)	0.726 (0.648)
Constant	-1.159 (0.335)***	0.314 (0.335)***
Note:	* p < .10 ** p <.05 *** p<0.01	

KEY RESULTS

Statistically significant variables include:

- Cohorts
 - Younger cohort have the highest odds of drug dependency compared with the middle and older cohorts
- Sexual Orientation
 - Other sexual minorities (queer people) have the highest odds of drug dependency at 3.48 times compared to gay/lesbian.
 - Bisexuals were 2.3 times gay/lesbians to be drug addicted
- Gender (compared to women)
 - Men have a lesser likelihood of drug dependency
 - Non-binary / gender queer also have lower likelihood
- Sexual Orientation interaction Race (Bisexual & Black)
 - While race was not significant, race:black interacting with bisexual was. Bisexual white persons had a higher odds of drug abuse compared to bisexual black persons.



KEY RESULTS

Statistically significant variables include:

-Adverse Childhood Experiences (ACE): Bullying

- Those who were sometimes bullyed, the odds of drug addiction is **1.43 times** than those who often received bullying as a child.
- Those who were rarely bullyed, the odds of drug addiction is **1.56 times** than those who often received bullying as a child.

**this finding is quite strange and unexpected*

- Adverser Childhood Experiences (ACE): Sexual Abuse

- Lesbian, Gay and Bisexual persons who were sexually abused as a child the **odds of becoming drug dependent were 1.835 times** than those who did not experience sexual abuse.



IMPLICATIONS / RECOMMENDATIONS



- 1. Additional focus and outreach on anti-bullying initiatives and LGBTIQ+ youth who suffered sexual abuse is required to prevent and mitigate drug abuse behavior.**
 - Comprehensive sexual education and outreach also maybe needed to reduce sexual abuse prevalence in LGBQ youth.
- 2. Further outreach is needed for LBQ women in particular.**
 - Gay men receive the more outreach and funding / support for drug abuse problems. Women targeted funding and programs are needed.
- 3. Further support is needed for bisexual persons and other sexual orientations such as gender queer or pansexual as they have the highest odds of drug addiction)**

LIMITATIONS



1. **DUDIT classifications:** the DUDIT variable classification system includes lower threshold for drug dependency of women.
2. **Age variable:** The survey focuses on three distinct cohorts so LGBTIQ+ youth (under 18) are not included and ages that do not fall in the three cohort categories.
3. **Language requirement :** Only those who have English ability to conduct initial phone screening was included in the survey.
4. **Race:** Asian, native Americans and other ethnic minorities were excluded from the survey as it was not possible to have enough of a sample size to the data representative of LGB ethnic minorities.

STRENGTHS

1. First of its kind: LBQ specific research related to drug abuse looking at demographic and trauma related factors.
2. Generations Survey is the **first nationally representative LBQ longitudinal survey** in the United States.
3. Detailed survey information and large number of variables available for selection and use



thank
you,

Questions

