

Who Has the Highest Rates of Co-occurring Substance Use Disorders and Suicide Risk?

Results from a Nationally Representative U.S. Survey

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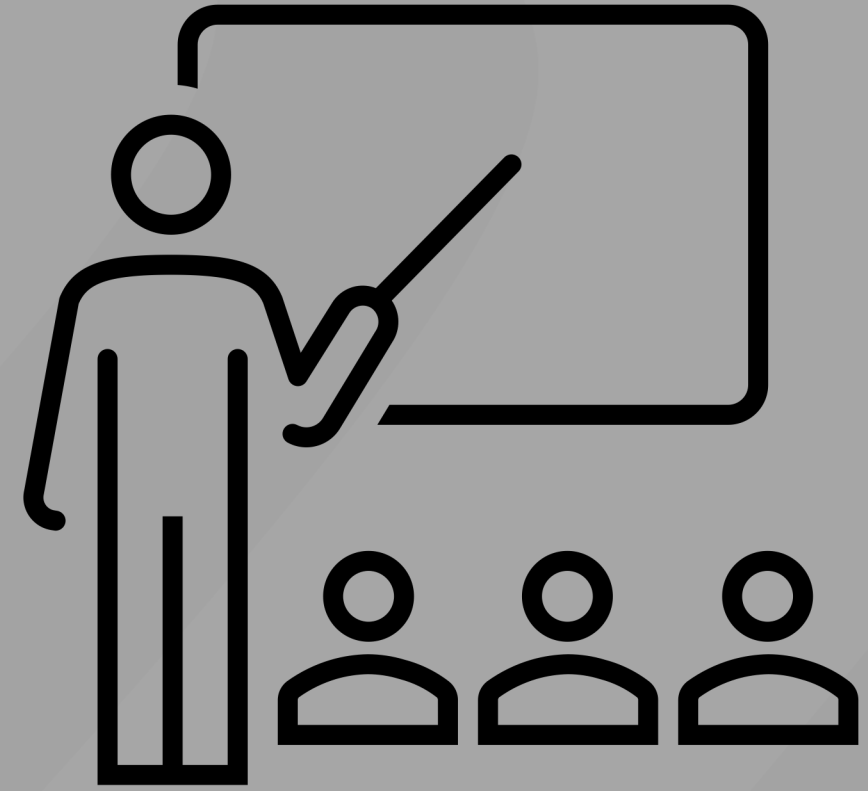
Disclosures: My opinions do not represent those of the NIH or MA DMH

I will not be discussing “off-label” uses of any medications. No actual or potential conflict of interest in relation to this presentation.

- K99AA029154/R00AA029154 - (Role: PI) Development and Evaluation of an Avatar-guided Mobile Health Intervention for Emerging Adults with Alcohol Misuse and Suicidality
- R24DA057632 (Role: Co-I; PI Zajac) - Collaborative Hub for Emerging Adult Recovery Research
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- Consulting unrelated to the content of this presentation, for data analysis for Coordinated Care Services Inc and to provide training in Assessing and Managing Suicide Risk

Learning objectives

1. Identify the age group at highest risk of co-occurring suicidality and substance use disorders
2. Identify demographic groups based on gender, sexuality, and race and ethnicity who face greater risk of co-occurring suicidality and substance use disorders
3. Understand intersectional risk factors for suicidality and substance use disorders



Where is this data from?

National Survey on Drug Use and Health (NSDUH)

The data provide estimates of substance use and mental illness at the national, state, and substate levels. NSDUH data also help to identify the extent of substance use and mental illness among different subgroups, estimate trends over time, and determine the need for treatment services.



- DAWN
Drug Abuse Warning Network
- MH-CLD
Mental Health Client-Level Data
- N-MHSS
National Mental Health Services Survey
- N-SSATS
National Survey of Substance Abuse Treatment Services

Details

The National Survey on Drug Use and Health (NSDUH), conducted annually by the Substance Abuse and Mental Health Services Administration (SAMHSA), provides nationally representative data on the use of tobacco, alcohol, and drugs; substance use disorders; mental health issues; and receipt of substance use and mental health treatment among the civilian, noninstitutionalized population aged 12 or older in the United States. NSDUH estimates allow researchers, clinicians, policymakers, and the general public to better understand and improve the nation's behavioral health.

Where Does Data Come From



Who is included in the NSDUH?

- Civilians aged 12 and older with face-to-face household interviews
- In 2020, added web-based interviews
 - Households
 - Non-institutional group quarters
 - Shelters, boarding houses, college dorms, work camps, halfway houses
- Who does it not include?
 - Institutional group quarters
 - Unhoused, but not in shelters, active military, jails, nursing homes, psychiatric hospitals, long-term care hospitals

**Where are these conclusions
from?**

**Four secondary analyses of the
NSDUH Data**

Four secondary analyses of the NSDUH data



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Journal of Affective Disorders

journal homepage: www.elsevier.com/locate/jad



Comorbid alcohol-related problems and suicidality disproportionately impact men and emerging adults among individuals with depressive symptoms

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Addictive Behaviors

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Co-occurring suicidal ideation and alcohol-related problems: An intersectional analysis of Native American and White adults with minoritized sexual identities

Lourah M. Kelly^a, Benjamin F. Shepherd^b, Paula M. Brochu^b, Kristyn Zajac^a



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Drug and Alcohol Dependence

Volume 226, 1 September 2021, 108848



Short communication

Elevated risk of substance use disorder and suicidal ideation among Black and Hispanic lesbian, gay, and bisexual adults

Lourah M. Kelly^a , Benjamin F. Shepherd^b, Sara J. Becker^{c,d}



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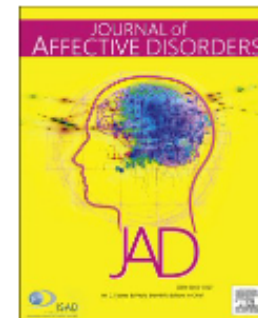
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Among persons with depressive symptoms, emerging adults and men have higher odds of alcohol use disorder + suicidal thoughts/plans

18-25 year olds VS	26-34 year olds	35-49 year olds	50-64 year olds	65+ year olds		Men vs women
Wishes for death	1.18***	1.31***	1.28***	1.83***		.96
AUD	.83*	1.10	1.69**	4.49***		1.92***
Wishes for death + AUD	1.17	1.49***	2.03***	5.76***		1.53***

Emerging adults > odds of:

- wishes for death + AUD vs 35+
- thoughts of suicide/killing oneself + AUD vs 35+
- suicide plans +AUD vs 50+
- *suicide attempts not significant*

Men > odds of:

- wishes for death + AUD
- thoughts of suicide + AUD
- suicide plans +AUD
- suicide attempt + AUD

Among persons with depressive symptoms, emerging adults and men have higher odds of binge drinking+ suicidal thoughts/plans

18-25 year olds VS	26-34 year olds	35-49 year olds	50-64 year olds	65+ year olds		Men vs women
Wishes for death	1.19***	1.34***	1.37***	1.94***		1.02
Binge drink	.94	1.37***	2.30***	4.43***		1.33***
Wishes for death + binge drink	1.17*	1.79***	2.56***	6.67***		1.10

Emerging adults > odds of :

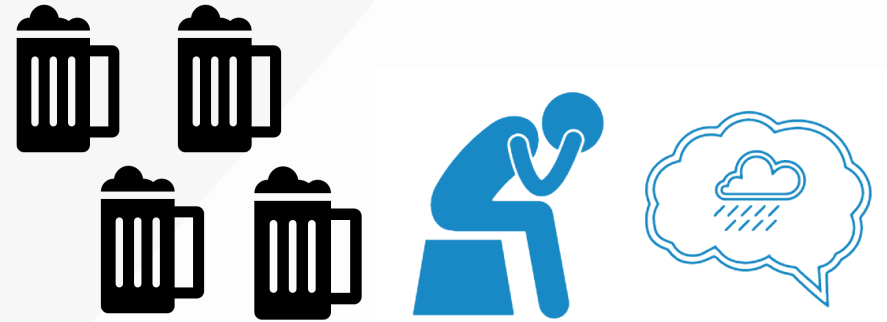
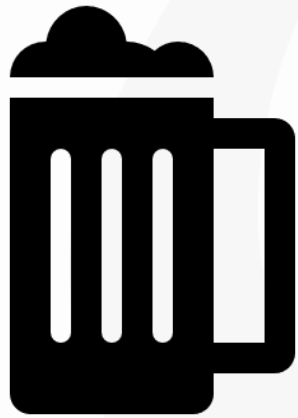
- wishes for death + binge vs 26+
- thoughts of suicide/killing oneself + binge vs 26+
- suicide plans + binge vs 35+
- suicide attempts + binge vs 35+

Men > odds of:

- wishes for death not sig
- thoughts of suicide + binge
- suicide plans + binge not sig
- suicide attempt + binge not sig

**Among persons with any depressive symptoms,
who has the highest rates of:**

Suicidal thoughts + alcohol co-occurrence

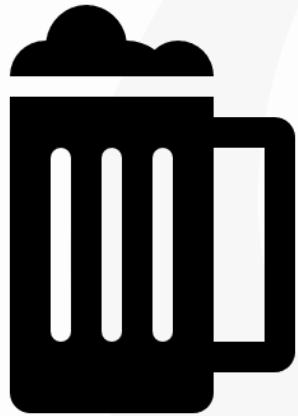


Emerging adults and men

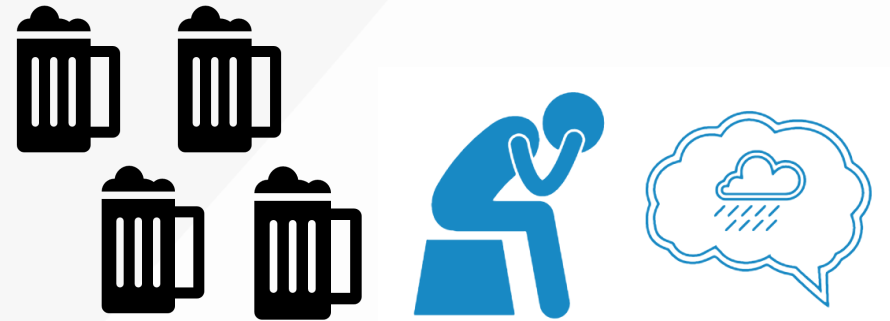
Emerging adults and men

**Among persons with any depressive symptoms,
who has the highest rates of:**

Suicide attempt + alcohol co-occurrence



Men



Emerging adults

Cannabis use disorder and suicide risk

Addictive Behaviors 122 (2021) 107047



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Men and emerging adults have higher odds of cannabis use disorder + suicidal thoughts

18-25 year olds VS	26-34 year olds	35-49 year olds	50+ year olds		Men vs women
Suicidal thoughts	.62***	.40***	.29***		1.13***
CUD	.46***	.20***	.12***		2.48***
CUD+ suicidal thoughts	.37***	.08***	.06***		2.06***

Emerging adults > odds of:

- thoughts of suicide + CUD vs 26+
- suicide attempts + CUD vs 26+

Men > odds of:

- thoughts of suicide + CUD
- *suicide attempt + CUD not sig*

Adults with minoritized sexual identities and racial and ethnic identities have higher odds of cannabis use disorder + suicidal thoughts

Non-Hispanic White	Black/African American	Hispanic/Latine	Asian	Native American/Pacific Islander	Multiracial	Heterosexual	Gay or Lesbian	Bisexual
Suicidal thoughts	.89***	1.0	.73***	1.24***	.84***		2.01***	2.40***
CUD	1.83***	1.25	.60***	1.66***	.96		1.56**	1.87***
CUD+ suicidal thoughts	1.42**	1.37	.76	2.16***	.80		2.04**	3.16***

Black, NA/AI & NH/PI > odds of:

- thoughts of suicide + CUD

Black and Hispanic adults > odds of

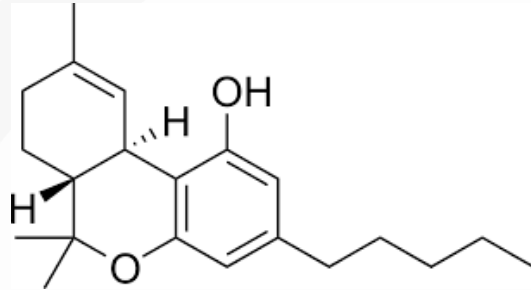
- suicide attempts + CUD

Gay/lesbian and bisexual adults > odds of:

- thoughts of suicide + CUD

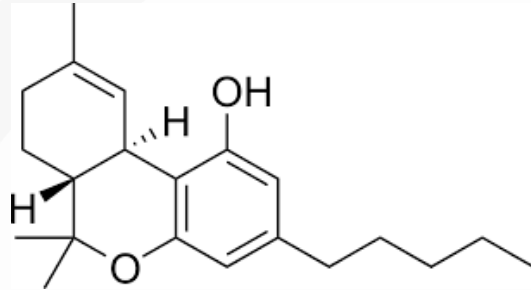
- *suicide attempt + CUD not sig*

Among adults, who has the highest rates of: Suicidal thoughts + cannabis use disorder



- Emerging adults
- Men
- Bisexual adults
- Black/African American adults
- Native American/Alaska Native and Pacific Islander adults

Among adults, who has the highest rates of: Suicide attempts + cannabis use disorder



- Emerging adults
- Black/African American adults
- Hispanic/Latinx/e adults

Substance use disorders and suicide risk



Drug and Alcohol Dependence

Volume 226, 1 September 2021, 108848



Short communication

Elevated risk of substance use disorder and suicidal ideation among Black and Hispanic lesbian, gay, and bisexual adults

Lourah M. Kelly^a  , Benjamin F. Shepherd^b, Sara J. Becker^{c d}

Men with minoritized sexual identities AND racial and ethnic identities have higher odds of substance use disorder + suicidal thoughts

Dependent Reference Group = Neither Suicidal Ideation nor Substance Use Disorder	Suicidal Ideation AOR [95 % CI]	Substance Use Disorder AOR [95 % CI]	Suicidal Ideation + Substance Use Disorder AOR [95 % CI]
Men (n = 87,934)			
Comparisons of sexual identity differences (within race/ethnicity)			
White LGB vs White heterosexual	3.08*** [2.56–3.69]	1.23*** [1.06–1.43]	2.72*** [2.28–3.24]
Black LGB vs Black heterosexual	3.27*** [1.86–5.75]	1.81** [1.22–2.69]	3.26*** [2.10–5.07]
Hispanic LGB vs Hispanic heterosexual	4.45*** [3.15–6.29]	1.43** [1.13–1.79]	3.69*** [2.23–6.10]
Comparisons of race/ethnic differences (within sexual identity)			
Black heterosexual vs White heterosexual	.54*** [.45–.66]	.76*** [.69–.83]	.56*** [.45–.70]
Black LGB vs White LGB	.59 [.33–1.04]	1.10 [.72–1.67]	.70 [.42–1.14]
Hispanic heterosexual vs White heterosexual	.56*** [.47–.67]	.78*** [.71–.85]	.57*** [.45–.71]
Hispanic LGB vs White LGB	.83 [.62–1.10]	.89 [.69–1.14]	.81 [.51–1.27]
Comparisons of multiple marginalized identities compared to non-marginalized identities			
Black LGB vs White heterosexual	1.80* [1.07–3.03]	1.35 [.92–1.98]	1.91* [1.17–3.11]
Hispanic LGB vs White heterosexual	2.51*** [1.87–3.37]	1.09 [.88–1.36]	2.15*** [1.43–3.24]

Black or Hispanic GB men > White heterosexual men

Black or Hispanic or White GB men > Black or Hispanic or White heterosexual men

Black or Hispanic heterosexual men < White heterosexual men

Black or Hispanic GB men ~ White GB men

Women with minoritized sexual identities AND racial and ethnic identities have higher odds of substance use disorder + suicidal thoughts

	Suicidal Ideation AOR [95 % CI]	Substance Use Disorder AOR [95 % CI]	Suicidal Ideation + Substance Use Disorder AOR [95 % CI]
Women (n = 101,193)			
Comparisons of sexual identity differences (within race/ethnicity)			
White LGB vs White heterosexual	2.97*** [2.61–3.38]	1.69*** [1.48–1.94]	3.91*** [3.35–4.57]
Black LGB vs Black heterosexual	2.86*** [2.32–3.51]	3.01** [2.36–3.85]	5.51*** [3.66–8.28]
Hispanic LGB vs Hispanic heterosexual	3.21*** [2.50–4.13]	3.00** [2.35–3.84]	6.85*** [5.00–9.39]
Comparisons of race/ethnic differences (within sexual identity)			
Black Heterosexual vs White heterosexual	.60*** [.52–.69]	.56*** [.50–.63]	.41*** [.32–.53]
Black LGB vs White LGB	.58*** [.46–.75]	1.01 [.78–1.32]	.59** [.42–.83]
Hispanic Heterosexual vs White heterosexual	.65*** [.56–.77]	.52*** [.47–.59]	.43*** [.33–.56]
Hispanic LGB vs White LGB	.72** [.59–.88]	.92 [.72–1.18]	.77 [.58–1.02]
Comparisons of multiple marginalized identities compared to non-marginalized identities			
Black LGB vs White heterosexual	1.71*** [1.42–2.07]	1.69*** [1.31–2.17]	2.27*** [1.66–3.12]
Hispanic LGB vs White heterosexual	2.11*** [1.76–2.53]	1.56*** [1.26–1.93]	2.97*** [2.32–3.81]

Black or Hispanic LGB women > White heterosexual women

Black or Hispanic or White LGB women > Black or Hispanic or White heterosexual women

Black or Hispanic heterosexual women < White heterosexual women

Black LGB women < White LGB women, Hispanic LGB women ~ White LGB women

Alcohol use problems and suicide risk





Addictive Behaviors

Volume 142, July 2023, 107674



Co-occurring suicidal ideation and alcohol-related problems: An intersectional analysis of Native American and White adults with minoritized sexual identities

Lourah M. Kelly^a, Benjamin F. Shepherd^b, Paula M. Brochu^b, Kristyn Zajac^a  

Native American/American Indian and Alaska Native adults have lower or higher alcohol use + suicidal ideation compared to White adults depending on sexual identity

	Suicidal Ideation		Any Alcohol Use		Suicidal Ideation + Any Alcohol Use	
	AOR [95% CI]	% (n) ^a	AOR [95% CI]	% (n)	AOR [95% CI]	% (n)
Total Sample Estimated % (unweighted n)	1.0 (1,608)		70.7 (93,896)		3.6 (6,832)	
Model 1						
Native American Heterosexual	0.66 [0.39–1.13]	1.3 (51)	0.54 [0.43–0.68] ^{***}	52.7 (1,593)	0.57 [0.39–0.83] ^{**}	3.6 (138)
Native American LGB	0.80 [0.28–2.24]	1.1 (7) ^b	1.31 [0.74–2.31]	65.5 (141)	2.84 [1.58–5.13] ^{***}	13.9 (43)
White LGB	3.00 [2.46–3.66] ^{***}	2.5 (257)	1.42 [1.29–1.56] ^{***}	68.1 (5,651)	4.31 [3.82–4.85] ^{***}	13.8 (1,533)
White Heterosexual (ref)	–	0.9 (1,293)	–	70.9 (86,511)	–	3.1 (5,118)
Model 2						
Native American LGB	1.20 [0.37–3.93]	1.1 (7) ^b	2.43 [1.27–4.64] ^{***}	65.5 (141)	5.00 [2.37–10.55] ^{***}	13.9 (43)
White LGB	4.51 [2.60–7.85] ^{***}	2.5 (257)	2.63 [2.07–3.35] ^{***}	68.1 (5,651)	7.57 [5.29–10.85] ^{***}	13.8 (1,533)
Native American Heterosexual (ref)	–	1.3 (51)	–	52.7 (1,593)	–	3.6 (138)
Model 3						
Native American LGB	0.27 [0.10–0.74] [*]	1.1 (7) ^b	0.92 [0.52–1.64]	65.5 (141)	0.66 [0.36–1.22]	13.9 (43)
White LGB (ref)	–	2.5 (257)	–	68.1 (5,651)	–	13.8 (1,533)

Native heterosexual adults < White heterosexual adults

Native LGB > White heterosexual

Native LGB > Native heterosexual

Native LGB ~ White LGB

Native American/American Indian and Alaska Native LGB adults have higher binge drinking + suicidal ideation compared to heterosexual White adults

	Suicidal Ideation		Binge Drinking		Suicidal Ideation + Binge Drinking	
	AOR [95% CI]	% (n) ^a	AOR [95% CI]	% (n)	AOR [95% CI]	% (n)
Total Sample Estimated % (unweighted n)	3.0 (5,186)		25.8 (39,910)		1.6 (3,254)	
Model 1						
Native American Heterosexual	0.75 [0.50–1.11]	2.9 (108)	0.83 [0.70–0.99]*	22.8 (789)	1.00 [0.69–1.45]	2.0 (81)
Native American LGB	1.46 [0.81–2.62]	6.8 (27)	1.05 [0.69–1.57]	28.9 (77)	2.87 [1.67–4.95]***	8.1 (23)
White LGB	3.13 [2.82–3.47]***	9.9 (1,067)	1.18 [1.09–1.28]***	29.0 (2,532)	3.44 [3.09–3.83]***	6.4 (723)
White Heterosexual (ref)	–	2.7 (3,984)	–	25.7 (36,512)	–	1.3 (2,427)
Model 2						
Native American LGB	1.96 [0.97–3.96]	6.8 (27)	1.26 [0.83–1.90]	28.9 (77)	2.87 [1.38–5.96]**	8.1 (23)
White LGB	4.19 [2.85–6.16]***	9.9 (1,067)	1.42 [1.18–1.0]***	29.0 (2,532)	3.43 [2.33–5.05]***	6.4 (723)
Native American Heterosexual (ref)	–	2.9 (108)	–	22.8 (789)	–	2.0 (81)
Model 3						
Native American LGB	0.47 [0.26–0.83]*	6.8 (27)	0.89 [0.59–1.33]	28.9 (77)	0.84 [0.49–1.43]	8.1 (23)
White LGB (ref)	–		–		–	

Native heterosexual adults ~ White heterosexual adults

Native LGB > White heterosexual

Native LGB > Native heterosexual

Native LGB ~ White LGB

Native American/American Indian and Alaska Native LGB adults have higher alcohol use disorder + suicidal ideation compared to heterosexual White adults

	Suicidal Ideation		Alcohol Use Disorder		Suicidal Ideation + Alcohol Use Disorder	
Total Sample Estimated % (unweighted n)	3.8 (6,671)		5.4 (8,733)		0.8 (1,769)	
	AOR [95% CI]	% (n) ^a	AOR [95% CI]	% (n)	AOR [95% CI]	% (n)
Model 1						
Native American Heterosexual	0.84 [0.59–1.20]	3.7 (135)	1.39 [1.17–1.66] ^{***}	7.8 (311)	1.23 [0.75–2.01]	1.2 (54)
Native American LGB	1.85 [1.08–3.15] [*]	10.0 (37)	2.08 [1.14–3.82] [*]	12.3 (30)	3.47 [1.55–7.77] ^{**}	4.9 (13)
White LGB	3.18 [2.89–3.49] ^{***}	12.9 (1,400)	1.60 [1.44–1.78] ^{***}	8.4 (699)	3.37 [2.90–3.91] ^{***}	3.3 (390)
White Heterosexual (ref)	–	3.3 (5,099)	–	5.2 (7,733)	–	0.7 (1,312)
Model 2						
Native American LGB	2.19 [1.12–4.30] [*]	10.0 (37)	1.50 [0.79–2.85]	12.3 (30)	2.82 [1.10–7.23] [*]	4.9 (13)
White LGB	3.78 [2.65–5.38] ^{***}	12.9 (1,400)	1.15 [0.95–1.39]	8.4 (699)	2.74 [1.65–4.55] ^{***}	3.3 (390)
Native American Heterosexual (ref)	–	3.7 (135)	–	7.8 (311)	–	1.2 (54)
Model 3						
Native American LGB	0.58 [0.35–0.96] [*]	10.0 (37)	1.31 [0.71–2.40]	12.3 (30)	1.03 [0.45–2.37]	4.9 (13)
White LGB (ref)	–	12.9 (1,400)	–	8.4 (699)	–	3.3 (390)

Native heterosexual adults ~ White heterosexual adults

Native LGB > White heterosexual

Native LGB > Native heterosexual

Native LGB ~ White LGB

Who has the highest rates of...

Suicidal thoughts + alcohol

Suicidal thoughts + binge drinking

Suicidal thoughts + alcohol use disorder



Native American LGB and White LGB adults

Being Native American is protective – unless you are also LGB

What does this mean?

- Direct suicide and addiction prevention and intervention efforts to emerging adults and men, as well as persons with intersectional and minoritized sexual identity and racial and ethnic identities
 - Black, Indigenous People of Color and Hispanic Lesbian Gay and Bisexual Populations
- Intersectional experience of being a sexual minority within BIPOC communities
- Direct to consumer marketing strategies for prevention and intervention (e.g., Becker, 2015)

Photo from: Hulsey J, Zawislak K, Sawyer-Morris G, Earnshaw V. Stigmatizing imagery for substance use disorders: a qualitative exploration. *Health Justice*. 2023;11(1):28. Published 2023 Jul 4. doi:10.1186/s40352-023-00229-6

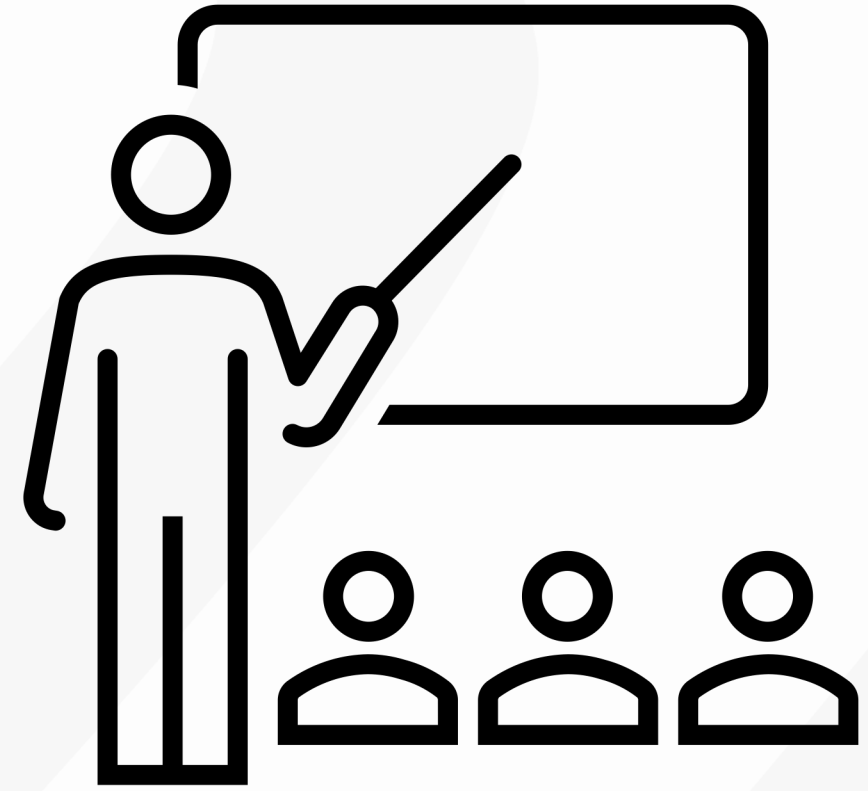


Limitations and what this doesn't mean

- Intersectional identities
 - Risk is due to prejudice and discrimination – not a susceptibility to mental health or addiction among persons with minoritized racial and sexual identities in the United States
- Gender/sex “What is your gender?” options are male and female
 - Intersex
 - Gender identity
- Sexual identity options for gay, lesbian, bisexual only
 - Native groups actually more likely to choose not to answer
 - Responses should resonate with US population

Learning objectives

1. **Emerging adults** consistently at highest risk of co-occurring suicidality and substance use disorders
2. **Men, LGB, Black, Hispanic, Indigenous** populations face greater risk of co-occurring suicidality and substance use disorders
3. **Sexually minoritized Black, Indigenous and Hispanic groups face intersectional risk** for suicidality and substance use disorders



Questions?

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