

Alcohol Misuse During the COVID-19 Stay-at-Home Orders Among Youth at Risk or Living with HIV: A Study in Los Angeles and New Orleans

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Background

- To slow the spread of the COVID-19 virus, governments instituted stay-at-home orders leading to increased stress and social isolation.^{1, 2}
- Stressful life events can induce negative emotions and psychological distress, which trigger anxiety, depression, and alcohol/substance use.³
- Marginalized subgroups such as sexual and gender minorities, youth living with HIV, and youth experiencing housing insecurity are particularly susceptible to alcohol use and misuse.⁴⁻⁷
- Recent studies of college students have shown that alcohol use either stayed the same or slightly decreased during the stay-at-home period.^{8,9}
- This study examines important factors linked to alcohol misuse during COVID-19 stay-at-home orders in a sample of marginalized youth and young adults at-risk or living with HIV in Los Angeles, CA and New Orleans, LA.

ATN Case Study

Aim of the Adolescent Medicine Trials Network (ATN) CARES ¹⁰⁻¹³

- Evaluate interventions to improve HIV prevention continuum outcomes.

Eligibility criteria

- Ages 12 – 24.
- Test seronegative on a rapid HIV test.
- Score above a threshold based on a composite risk score.

Data


- 478 youth living or at risk of acquiring HIV.
- Participants were recruited from homeless shelters, LGBTQ organizations, community health centers, and using social media and online dating apps.




Methods

- We examined risk factors associated with hazardous alcohol use (33%) and binge drinking (43%), including changes in risk behaviors, life stressors, and demographic characteristics.
 - Demographics
 - Assessment site
 - Age
 - Sex assigned at birth
 - Sexual orientation & Gender identity
 - Race & ethnicity
 - Education
 - Employment
 - Changes during the stay-at-home orders
 - Changes in living arrangements
 - Changes in number of work hours
 - Changes in levels of anxiety/worry
 - Changes in levels of depression/sadness
- Hazardous alcohol use and binge drinking were assessed using the AUDIT-C

Methods

- We entered demographic characteristics and factors that differed significantly by hazardous alcohol use or binge drinking into three separate logistic regression models for each outcome with progressive adjustment of covariates.
 - Model A: demographic variables and adjusted for HIV status and the coaching intervention
 - Model B: further accounted for variables measured during the stay-at-home orders
 - Model C: further adjusted for hazardous alcohol use or binge drinking measured at baseline, accounting for previous information on alcohol consumption.
 - Accommodating for incomplete data using multiple imputation
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Description of Sample

- N = 478 (69% from Los Angeles, 31% from New Orleans)
 - Mean age = 23.6 years (range of 15-27); 80% were assigned male at birth
 - Gender identity:
 - Cisgender: 84.3%
 - Transgender/Gender diverse: 15.7%
 - Sexual Orientation:
 - Gay/lesbian: 53.1% Bisexual: 21%
 - Heterosexual: 13.5% Other: 12.4%
 - Race/ethnicity
 - African-American/Black: 36%
 - Latino: 37%
 - White: 16%
 - Asian/HPI/NA/AN/Other: 11%
 - Employment: 52.2% unemployed, 17.4% student, 30.4% unemployed.
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Factors Associated with Hazardous Alcohol Use

Characteristics	Model A: Demographics		Model B: Demographics & COVID-19 measurements		Model C: Demographics & COVID-19 & Baseline hazardous alcohol use	
	aOR	(95% CI)	aOR	(95% CI)	aOR	(95% CI)
<i>Demographic</i>						
Sex assigned at birth						
Female	1.20	(0.60, 2.40)	1.24	(0.62, 2.48)	1.07	(0.52, 2.21)
Male	-	-	-	-	-	-
Gender identity						
Cisgender	-	-	-	-	-	-
Transgender/Gender diverse	0.63	(0.32, 1.24)	0.47*	(0.22, 1.01)	0.55	(0.25, 1.21)
Sexual orientation						
Heterosexual	-	-	-	-	-	-
Gay/Lesbian	1.39	(0.65, 2.97)	1.29	(0.61, 2.72)	1.31	(0.56, 3.07)
Bisexual	1.12	(0.51, 2.50)	0.98	(0.43, 2.22)	0.96	(0.40, 2.33)
Other sexual orientation	1.31	(0.53, 3.21)	1.05	(0.41, 2.70)	1.09	(0.39, 3.03)
Race & Ethnicity						
Black/African American	0.38***	(0.21, 0.69)	0.41**	(0.21, 0.78)	0.62	(0.31, 1.23)
Latino	0.54**	(0.31, 0.95)	0.49**	(0.27, 0.90)	0.61	(0.33, 1.16)
White	-	-	-	-	-	-
Asian/HPI/NA/AN/Other	0.22***	(0.09, 0.54)	0.24***	(0.09, 0.63)	0.36**	(0.13, 0.96)
Coaching intervention	0.82	(0.53, 1.28)	0.81	(0.51, 1.30)	0.83	(0.50, 1.38)
Living with HIV	0.52*	(0.26, 1.02)	0.46*	(0.23, 0.94)	0.47*	(0.22, 0.99)
<i>Baseline measurements</i>						
Hazardous alcohol use					4.39***	(2.68, 7.19)
<i>Changes during COVID-19 stay-at-home orders[‡]</i>						
Moved to another place to live			1.38	(0.87, 2.17)	1.21	(0.75, 1.95)
Number of paid work hours decreased			1.28	(0.75, 2.16)	1.48	(0.87, 2.52)
Levels of anxiety, worry, depression or sadness increased			1.18	(0.65, 2.15)	1.32	(0.73, 2.39)
Illicit drug use [§]			4.31***	(2.70, 6.89)	3.56***	(2.16, 5.88)

Factors associated with binge drinking

Characteristics	Model A: Demographics		Model B: Demographics & COVID-19 measurements		Model C: Demographics & COVID-19 measurements & Baseline binge drinking	
	aOR	(95% CI)	aOR	(95% CI)	aOR	(95% CI)
<i>Demographic</i>						
Sex assigned at birth						
Female	0.91	(0.50, 1.65)	0.84	(0.44, 1.62)	0.79	(0.40, 1.57)
Male	-	-	-	-	-	-
Gender identity						
Cisgender	-	-	-	-	-	-
Transgender/Gender diverse	0.62	(0.32, 1.19)	0.48**	(0.23, 0.96)	0.54*	(0.26, 1.13)
Sexual orientation						
Heterosexual	-	-	-	-	-	-
Gay/Lesbian	1.25	(0.64, 2.42)	1.02	(0.49, 2.09)	1.00	(0.47, 2.12)
Bisexual	1.47	(0.72, 3.00)	1.22	(0.56, 2.64)	1.16	(0.52, 2.62)
Other sexual orientation	1.42	(0.62, 3.27)	1.15	(0.48, 2.79)	1.09	(0.43, 2.75)
Race & Ethnicity						
Black/African American	0.33** *	(0.18, 0.60)	0.36**	(0.19, 0.69)	0.54*	(0.27, 1.08)
Latino	0.64	(0.37, 1.13)	0.60*	(0.33, 1.09)	0.78	(0.41, 1.47)
White	-	-	-	-	-	-
Asian/HPI/NA/AN/Other	0.25** *	(0.11, 0.57)	0.26***	(0.11, 0.62)	0.34**	(0.13, 0.84)
<i>Baseline measurements</i>						
Binge drinking					3.69***	(2.33, 5.85)
<i>Changes during the COVID-19 stay-at-home orders[‡]</i>						
Moved to another place to live			1.43	(0.93, 2.19)	1.33	(0.85, 2.08)
Number of paid work hours decreased			1.02	(0.62, 1.67)	1.13	(0.68, 1.88)
Levels of anxiety, worry, depression or sadness increased			1.65*	(0.93, 2.93)	1.65	(0.91, 2.99)
Illicit drug use [§]			4.10***	(2.55, 6.59)	3.43***	(2.10, 5.61)

Discussion/Summary

- Participants who reported hazardous alcohol use or binge drinking during lockdown had higher rates of alcohol misuse and illicit drug use at baseline compared with those who did not.
 - This demonstrates that past behavior is one of the best predictors of future behavior and points to the importance of prevention and early intervention.
- Our study findings mirror non-COVID-19 related studies of alcohol and drug use behaviors among young adults:
 - participants who reported hazardous alcohol use or binge drinking were more likely to be White and illicit drug users than those who did not.
 - binge drinkers were more likely to report increased levels of anxiety/depression during the stay-at-home orders than non-binge drinkers.

Limitations & Future Directions

- Self-selection bias: Findings should be interpreted with caution because they are based on the subset of ATN-CARES participants who completed the COVID-19 survey, and thus our results could be impacted by self-selection
- Respondent vs non-respondent differences: There were differences between respondents and non-respondents on some baseline characteristics (income, level of education, health insurance, etc).
- Measurement error: Standardized and validated measures of COVID-19 related changes in quality-of-life indicators and daily activities were not available, it could be that measurement error impacted our findings
- Generalizability: Our sample is comprised of marginalized AYA who met strict eligibility criteria; thus, our results do not generalize to the broader population.
- Future studies could look at longitudinal data to find predictive variables associated with hazardous alcohol use and binge drinking.

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