Title

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Increased Difficulties Managing Chronic Medical Conditions During the COVID-19 Pandemic Are Associated With Increased Alcohol and Cannabis Use Among Unhoused and Unstably Housed Women

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Objectives: The COVID-19 pandemic caused dramatic upsurges in stress and anxiety across the United States, as well as increased substance use to cope with pandemic-related stress. Few studies have focused exclusively on extremely disadvantaged individuals who are already at risk for substance use. We sought to understand factors associated with increased alcohol and cannabis use during the first 10 months of the COVID-19 pandemic among unsheltered and unstably housed women.

Methods: Between July and December 2020, we conducted phone surveys with San Francisco unhoused and unstably housed women regarding substance use, health, and health services use since the beginning of the pandemic (March 2020).

Results: Among 128 participants, increased use of alcohol and cannabis were reported by 15% and 23%, respectively. The odds of increased use of both substances were 4 times higher in participants who also had increased difficulties managing symptoms of a chronic medical condition during the pandemic.

Conclusions: An intentional and comprehensive approach to managing the health of particularly vulnerable individuals during the COVID pandemic could help alleviate its exacerbating influences. Such an approach should include resources, tools and interventions for managing substance use, as well as chronic, non-COVID medical conditions, which are common and strongly tied to substance use in unhoused and unstably housed women.

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The COVID-19 pandemic has led to record-breaking increases in morbidity and mortality across the United States. Studies point to poverty, particularly housing instability, and congregate living, as contributing to US COVID disparities,[1] effects that may be modified by sex.[2] The substantial overlap between risk factors for COVID-19 disease and for chronic diseases (eg, hypertension, diabetes, heart disease, and immune disorders), which are already excessively high among people living in poverty, accentuate the disparity in COVID-19 morbidity and mortality by socioeconomic status.[3]

In addition to increased risks for health complications, significant increases in stress and anxiety and increases in substance use have been reported widely.[4–6] Alcohol and cannabis have been 2 of the most commonly used substances during the pandemic; alcohol consumption has gone up disproportionately in women and Black individuals,[7,8] while cannabis consumption has been linked to health and socioeconomic COVID-19 stressors.[9] However, there are few reports that focus on extremely disadvantaged individuals. We recently reported that among unhoused and unstably housed women, anxiety and depression were significantly associated with increased challenges obtaining care for chronic medical conditions during the pandemic.[10] Whether there are similar associations for substance use is unknown but could provide insight for handling future public health crises.

We conducted a study among community-recruited unhoused and unstably housed women to understand how COVID-19–related disruptions in health care impacted alcohol and cannabis use.

METHODS

Between July and December 2020, we conducted a structured 1-time phone survey among 128 women from a single city to understand correlations between COVID-related challenges and increased substance use. Study participants included (1) persons previously recruited from San Francisco venues (ie, homeless shelters, free meal programs, low-income single room occupancy hotels, street encampments, and the Zuckerberg San Francisco General Hospital HIV clinic ["Ward 86"]) for a study regarding cardiac dysfunction,[11] and who agreed to be contacted

for future research; as well as (2) additional individuals recruited through advertising flyers at the same venues during the study period. We also oversampled women living with HIV to address HIV-specific aims of the original study.

Eligibility criteria during all phases of recruitment included female sex at birth, age older than 18 years, and a history of housing instability (ie, slept in public or a homeless shelter or stayed temporarily with friends/acquaintances ["couch-surfed"]). Participants were reimbursed $50 for completing a study interview.

All survey questions were self-reported and asked about the time since the beginning of the pandemic (March 2020). This translated into a 4- to 9-month recall period, depending on the participant's interview date. Increased self-reported alcohol and cannabis use since the start of the pandemic were our primary outcomes. Questions that identified a change in use were based on content validity of questions tested during a pilot study, which resulted in the following response categories: used more of each substance since mid-March, less, about the same amount, or did not use the substance at all. Exposure variables included age, race (indicator variable assessing Black, Latina, Native American, Asian/Pacific Islander, multiracial, or other participants, relative to White participants), and experiencing any of the following during the pandemic: living unsheltered (slept in a shelter, on the street, or in public); any unmet subsistence needs (ie, in separate questions, affirmed insufficient access to at least one of the following: food, clothing, housing, and hygiene needs)[12]; social isolation was based on an adapted version of the National Social Life, Health, and Aging Project social isolation question[13] ("Do you feel isolated, like you're by yourself and don't have anyone else to rely on?"); increased difficulties managing symptoms of a chronic medical condition (yes/no); and increased difficulties getting treatment for mental health (yes/no), substance use (yes/no), or a chronic medical condition (ie, any one of the following: HIV, cardiovascular disease, diabetes, asthma, emphysema; yes/no). We used separate multiple logistic regression models to estimate the odds of increased cannabis and alcohol use; adjusted models were derived by fitting an initial model with all correlates and removing nonsignificant correlates via backward elimination. This approach for determining the most parsimonious model was used to reduce type I error in a study with a small sample. All study procedures were approved by the institutional review board at the University of California, San Francisco.

RESULTS

Among 128 participants (76 prior study participants and 52 participants recruited through study flyers), 40% were Black and the median age was 56 years (Table 1). Since the pandemic, 29% of participants had at least one unmet subsistence need, 38% lived unsheltered, 33% made decisions about where to

TABLE 1. Correlates of Increased Substance Use* During the COVID-19 Pandemic in Unhoused and Unstably Housed Women (N = 128)

		Outcome = More Cannabis Use* Since the Pandemic		Outcome = More Alcohol Use* Since the Pandemic	
	Prevalence	Unadjusted OR (95% CI)	Final Parsimonious Model, Adjusted OR (95% CI)	Unadjusted OR (95% CI)	Final Parsimonious Model, Adjusted OR (95% CI)
Age	Median = 56 y	0.97 (0.94–1.00)	**0.96 (0.92–0.99)**†	0.98 (0.95–1.02)	
White race/ethnicity (ref.)	26%	1.0	1.0	1.0	
Black	40%	0.46 (0.17–1.23)	0.36 (0.12–1.07)	0.52 (0.15–1.78)	
Latina	8%	0.097 (0.007–0.88)†	0.021 (0.001–0.26)†	1.29 (0.21–6.29)	
Native American	4%	0.19 (0.001–1.88)	0.08 (0.004–0.98)†	3.13 (0.44–20.00)	
Asian/Pacific Islander	3%	0.88 (0.08–6.10)		0.49 (0.004–5.56)	
Multiracial	16%	1.06 (0.33–3.26)		1.84 (0.51–6.57)	
Other	2%	1.23 (0.10–10.3)		0.63 (0.004–7.76)	
Any time spent unsheltered (slept on the street, in a shelter or other place not meant for human habitation) since the pandemic	38%	2.54 (1.11–5.91)†		1.05 (0.40–2.66)	
Any unmet subsistence needs (food, clothing, housing and hygiene needs) since the pandemic	29%	2.79 (1.08–8.40)†		2.24 (0.79–7.64)	
Socially isolated since the pandemic	53%	1.58 (0.69–3.71)		1.90 (0.74–5.19)	
Increased difficulties getting care or medication for a chronic condition‡ since the pandemic	22%	1.61 (0.61–4.02)		2.06 (0.73–5.50)	
Increased difficulties managing symptoms of a chronic condition‡ since the pandemic	29%	2.06 (0.87–4.83)	3.96 (1.49–11.04)†	4.21 (1.63–11.20)†	4.21 (1.63–11.20)†
Increased difficulties getting care or medications for mental health since the pandemic	24%	2.38 (0.97–5.74)		2.24 (0.82–5.87)	
Increased difficulties getting drug treatment since the pandemic	7%	0.57 (0.06–2.68)		1.72 (0.30–7.06)	

CI, confidence interval; OR, odds ratio

*Started use or increased prior use.

†5% CI does not include 1.

‡HIV, cardiovascular disease, diabetes, asthma, and emphysema.

sleep based on avoiding violence, and 53% reported feeling socially isolated.

Four of 5 study participants (80%) had a chronic medical condition, including a cardiovascular condition (eg, heart failure, arrhythmia, or hypertension) (56%), asthma (44%), emphysema (13%), diabetes (13%), or HIV infection (23%). During the pandemic, 22% reported difficulties getting care for a chronic medical condition, 29% had difficulties managing symptoms of at least one condition, 24% had problems getting care or medication for mental health, and 7% had problems receiving drug treatment.

Since the pandemic, 49% of study participants used cannabis and 23% increased cannabis use (ie, frequency of use or number of days used). Similarly, 46% used alcohol and 15% increased alcohol use since the pandemic (ie, frequency of use or number of days used). Adjusting for age and race, increased difficulties managing symptoms of a chronic medical condition during the pandemic was associated with higher odds of increased cannabis use (adjusted odds ratio [AOR], 3.96; 95% confidence interval, 1.49–11.04) and increased alcohol use (AOR, 4.21; 95% confidence interval, 1.63–11.20) (Table 1).

DISCUSSION

Almost 1 in 4 participants increased cannabis use, while more than 1 in 7 increased alcohol use since the pandemic's onset; difficulties in managing symptoms of chronic medical conditions were associated with these increases. Given the cross-sectional data, it is unclear whether participants were self-medicating to relieve unmanageable symptoms or whether the increased substance use aggravated symptoms of chronic medical conditions. Either way, results indicate an important relationship between increased substance use and difficulties managing chronic medical conditions during the pandemic in community-recruited unhoused and unstably housed women.

While it is possible that the underreporting of drug use may have biased results, this would have biased results toward the null, suggesting that correlations are at least as strong (if not stronger) than those reported here.

Managing chronic health conditions includes a range of issues (eg, diet, exercise, obtaining medical care, and/or obtaining a prescription for medication). Successfully addressing these issues is disproportionately problematic for people with unmet material needs in the best of times and became even more problematic during the initial months of the COVID pandemic. An intentional and comprehensive approach to managing the health of particularly vulnerable individuals during the pandemic could help alleviate its exacerbating influences. Such an approach should include resources, tools and interventions for managing substance use, as well as chronic, non-COVID medical conditions, which are common and strongly tied to substance use in unhoused and unstably housed women. Efforts to improve population health could emphasize low-barrier access to health services and substance use counseling via community-based and street-based outreach, and/or bundling with other social services. In addition, increasing access to technology that facilitates telemedicine participation is a COVID-conscious means of connecting unhoused and unstably housed women with healthcare providers.[14]

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