

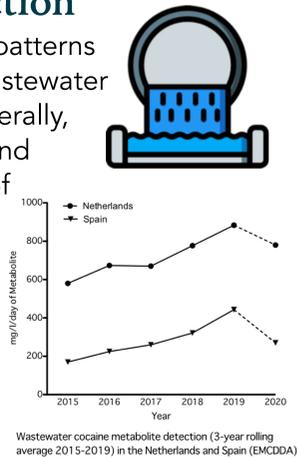
COVID-19, alcohol and drugs: Trends and changes through lockdown and beyond

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Lockdown periods show mixed patterns in cocaine and amphetamine wastewater metabolites across Europe. Generally, use dropped during lockdown and increased following the easing of restrictions.

Comparison with the 3-year average in Spain and the Netherlands illustrates reduction in cocaine use at a national level. This matches overall patterns of stimulant use



Online and Darknet trends

Surge in darknet use, notably Hydra and Cannazon – both used for drug acquisition. Google trend searches related to stimulant drug use dropped compared to the previous year.

National drinking patterns

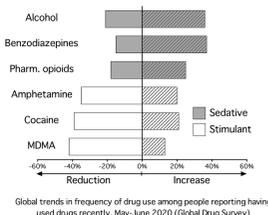
Population level increase in alcohol consumption is clear. Detailed investigation shows 3 distinct groups: those who increase, decrease, and maintain their consumption. Across countries the ratios of these were roughly split 1:1:2.

Global Drug Surveys

Self reports from 55,000 drug users sampled globally match stimulant vs. sedative patterns of use during lockdown.

Patterns of use, taken together with individual narratives, show reduction in stimulant drug use and increase in sedative drug use. Greatest increase observed in sedative drugs with anxiolytic properties (alcohol and BZDs).

Boredom and anxiety were the most commonly cited reasons for drug taking during periods of isolation.



Background

Major theories of drug addiction are underpinned by dopamine transmission as a substrate of addiction. This unitary conception of addiction is brought into question by the environmentally-cued double dissociation observed in lab experiments with rats; stimulant drugs are preferred outside of home, sedative drugs within the home. fMRI studies assessing the affective and neural states of human drug-users suggest a similar pattern of environmentally-driven drug preference, but direct replication of animal studies with human participants is untenable. However, restrictions imposed in response to the 2020 COVID-19 pandemic offer situational data which parallel lab testing. Individuals were restricted to their home environments - resulting changes to patterns of drug-use offer insight into context-induced drug preference and lingering questions around unitary models of addiction.

Previously

Initial data collated and presented from a number of macro and micro level sources in 2020 found:

- Overall drug consumption decreased during periods of lockdown
- Stimulant drug use dropped most drastically
- Death linked to sedative use increased
- Divergent population responses, with some increasing and decreasing their drug use.

We anticipated that an environmentally-cued double-dissociation between sedative and stimulant drugs would be discernible through a switch away from stimulant drug use and towards sedative drug use during periods of lockdown. Early data broadly confirmed this, but mixed findings within the broad categories of sedative and stimulant necessitated more detailed, multi-level analysis. We also sought to determine whether observed changes during lockdown would reverse as restrictions eased.

Conclusions

In line with our initial analysis, sedative use increased during lockdown, while stimulant use decreased. There were, however, important variations within specific drug classes and subpopulations. Wastewater analysis and clinical metrics show varied reversal with regard to stimulant use. Some indications show stimulant use returning to and exceeding pre-lockdown levels. Comparison of pre and post lockdown sedative use shows cessation does not necessarily follow the easing of restrictions. Maintained sedative drug use alongside resumed use of stimulants has led to increase in poly-drug use, particularly in the case of sedative drugs with an anxiolytic component, such as benzodiazepines and alcohol. The risks of these persistent changes in patterns of drug use are exemplified by elevated drug-related deaths during and following periods of restriction.

Lockdown

- ▼ Stimulants
- ▲ Sedatives

Post-lockdown

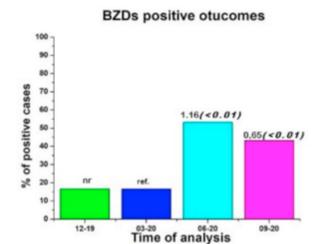
- ▲ Stimulants
- ▲ Sedatives

Our findings support an environmentally-cued double-dissociation of drug preference in human drug-users, in turn lending weight to existing questions around unitary models of addiction with dopaminergic transmission at their centre. Beyond this, the persistence of increased sedative drug use alongside resumed stimulant use in the wake of lockdown restrictions reveals an additional dimension not captured in laboratory studies. The particular prominence of anxiolytic drugs within this category is noteworthy; granular analysis at service user level highlights the importance of cognitive and narrative experience in real-world drug use. If treatment approaches which neglect these factors should lack efficacy on that account, they will be doing so against a backdrop of rising poly-drug use and an ever-increasing availability of illicit sedative drugs.

Drug and service users

Individual hair analysis in Italy saw cocaine, MDMA, and heroin use drop significantly. This was restored subsequent to lockdown. Benzodiazepines and alcohol saw increased use during the pandemic. This introduces polydrug use, and highlights drug-class specific patterns of use.

Easing of restrictions saw a return of stimulant use, and continued benzodiazepine and alcohol use. Similar findings were gleaned in the World Drug Report 2021.



Experiences of drug procurement indicated only minor disruptions to supply at local level. In contrast to earlier speculation, this suggests a minimal role for availability in driving shifting patterns of drug use.

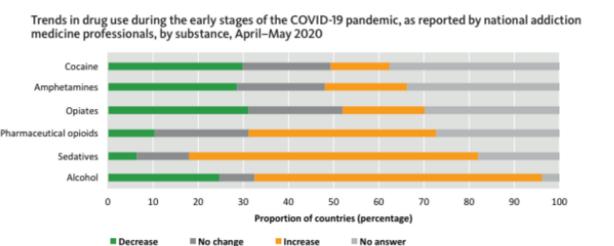


Hospital admissions and overdose-related deaths

In Canada, quarterly data showed almost 60% increase in opioid OD-related deaths following onset of restrictions, and remained elevated into the successive quarter. US data echoes lockdown-related increase with accelerated OD deaths from March 2020. 10 states reported over 98% increases in synthetic opioid related deaths.

Expert and clinician reports

Reports by addiction medics reiterate the double dissociation: lockdown periods saw increased use of alcohol, sedatives, and pharmaceutical opioids in the majority of service users.



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