RESEARCH SUMMARY
Date Compiled: February 2025

Key takeaways from included research:

- A new study sought to investigate effects of alcohol on individuals with alcohol use disorder (AUD) and those subject to negative affects due to having comorbid depressive disorder (DEP). They found that those with AUD consumed an average 8.5 standard drinks vs non-AUD participants only consumed 3.7. Those with AUD reported having increased stimulation and rewarding effects throughout the drinking episode.

- An Australian study monitored the alcohol industry's use of health messages on alcohol products and reports on the frequency and types of government-required and voluntary health messages found on alcohol products. They found high compliance (97-99%) with governmental requirements however voluntary health-related messages were less common (65%). Researchers suggest continuing monitoring to enforce compliance with labeling regulations and assessment of voluntary messaging.

- This study examined differences between planned and unplanned alcohol and cannabis use in motives, contexts of use, and sexual and gender minority-specific (SMG) factors. They found that while unplanned alcohol and cannabis use were associated with lighter use, unplanned cannabis use was associated with more negative outcomes. Social and enhancement motives, as well as drinking with other SMG were connected to lower chances of unplanned use, while conformity motives increased the likelihood of unplanned alcohol use.

- Researchers in Canada examined whether non-medical cannabis legalization in Canada was associated with initial changes in population-level alcohol consumption. They found that while annual beer sales decreased by 0.06 liters per capita and other beverages increased by 0.05 liters per capita between 2004 and 2022, there were no significant population-level changes in alcohol sales after non-medical cannabis legalization in 2018.

- A team of researchers examined whether prenatal alcohol and tobacco exposure differs by neighborhood environment. They found that lower neighborhood deprivation, less air pollution, higher lead risk, and better perceived safety were linked to prenatal alcohol exposure, while higher neighborhood deprivation and lower perceived safety were linked to prenatal tobacco exposure.

REAL-TIME ASSESSMENT OF ALCOHOL REWARD, STIMULATION, AND NEGATIVE AFFECT IN INDIVIDUALS WITH AND WITHOUT ALCOHOL USE DISORDER AND DEPRESSIVE DISORDERS
February 2025

Objective: The allostasis theory states that, as addiction develops, alcohol is consumed to relieve negative affect rather than to produce positive effects. This study aimed to investigate the real-time subjective effects of alcohol in individuals with alcohol use disorder (AUD) and those prone to negative affect by virtue of having comorbid depressive disorder (DEP).

Methods: Participants (N=221) completed high-resolution ecological momentary assessments during 3-hour monitoring of one alcohol drinking episode and one non-alcohol drinking episode in their natural environment. Participants also completed daily mood surveys and next-day surveys. Linear mixed-effect models were used to compare drinking behavior and subjective responses (stimulation, sedation, liking, wanting, negative affect) among 120 participants with AUD (AUD+; with depression [DEP+]: N=64, without depression [DEP−]: N=56) and 101 participants without AUD (AUD−; DEP+: N=45, DEP−: N=56).

Results: During the monitoring period, participants with AUD consumed an average of 8.5 standard alcohol drinks (estimated blood alcohol concentration [eBAC]=0.115 g/dl) versus 3.7 drinks (eBAC=0.040 g/dl) for non-AUD participants. The AUD group, regardless of comorbid DEP, reported increases in stimulation and rewarding effects that persisted throughout most of the alcohol episode relative to the non-alcohol episode. To a lesser extent, alcohol relieved negative affect but this was not specific to AUD or DEP groups.

Conclusions: Contrary to the allostasis model of addiction's emphasis on negative reinforcement drinking, findings demonstrated that people with AUD prone to negative affect displayed positive alcohol reinforcement with pronounced and prolonged sensitivity to alcohol's pleasurable effects, akin to their noncomorbid counterparts. The findings provided critical testing of addiction theories in the natural environment to enhance external validity.

Source: King, A. C., Fischer, A. M., Cursio, J. F., Didier, N. A., Lee, Z., & Fridberg, D. J. (2025). Real-time assessment of alcohol reward, stimulation, and negative affect in individuals with and without alcohol use disorder and depressive disorders. *American Journal of Psychiatry*, *182*(2), 187-197. https://doi.org/10.1176/appi.ajp.20240069

THE PREVALENCE OF MANDATED AND VOLUNTARY HEALTH INFORMATION ON ALCOHOL PRODUCTS IN AUSTRALIA
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Objective: Regulations to restrict alcohol promotion and requirements for mandatory display of information about health risks associated with alcohol use have been minimal and hard-won in Australia. This study (i) outlines an approach to monitoring alcohol industry use of health messages on alcohol products and (ii) reports prevalence and nature of government-mandated health-related information and voluntary health messages on alcohol products.

Methods: Images of 5,923 alcohol products sold in four large alcohol stores in Sydney were captured. Data were collected in-store and via web-scraping. Label content was extracted from the images.

Results: There was high compliance (97%-99%) with government-mandated requirements other than the pregnancy warning label (63%). Presence of voluntary health-related messages was common (65%), but typically present in the form of DrinkWise (an industry-led social aspects/public relations organisation) statements that are unlikely to be effective.

Conclusions: This study provides a unique and systematic approach to examining alcohol industry compliance with government-mandated on-product information requirements and voluntary inclusion of other health-related messages.

Implications for Public Health: The results demonstrate the need for ongoing monitoring to enforce alcohol industry compliance with Australia's existing and future labelling regulations and to assess the industry's voluntary use of other forms of health messaging.

Source: Pettigrew, S., Yusoff, A., Staruli, B., Booth, L., O'Brien., P ... & Jones, K. (2025). The prevalence of mandated and voluntary health information on alcohol products in Australia. *Australian and New Zealand Journal of Public Health*. https://doi.org/10.1016/j.anzjph.2024.100215

PLANNED VERSUS UNPLANNED ALCOHOL AND CANNABIS USE: MOTIVATIONAL AND CONTEXTUAL CORRELATES AMONG SEXUAL MINORITY WOMEN AND GENDER DIVERSE INDIVIDUALS
January 2025

Background: Unplanned alcohol use has been theorized to contribute to experiencing more consequences at the daily level, and several risk factors have been identified in the general population. However, it remains unclear whether these risk factors apply to sexual and gender minorities (SGM); if unique risk factors for substance use among SGM (e.g., microaggressions) are associated with elevated risk for unplanned alcohol or cannabis use; and if risk factors for unplanned drinking also apply to unplanned cannabis use.

Methods: We aimed to address these gaps by examining differences between planned and unplanned alcohol and cannabis use in motives, contexts of use, and SGM-specific factors at the daily level among 380 sexual minority women and gender diverse individuals assigned female at birth using daily diary data.

Results: Although unplanned alcohol and cannabis use were associated with lighter use, unplanned cannabis use was associated with more consequences. Social and enhancement motives and drinking with other SGM were linked to a lower likelihood of unplanned alcohol use, while conformity motives were associated with a higher likelihood of unplanned alcohol use. Microaggressions and coping motives were not associated with unplanned alcohol or cannabis use.

Conclusions: Results demonstrated differences in motivational and contextual factors associated with unplanned alcohol compared to cannabis use and identified one SGM-specific correlate. Future research should continue to explore factors that contribute to unplanned cannabis use days being associated with more consequences even in the absence of heavier use on unplanned days.

Source: Dyar, C., Curtis, J., & Fairlie, A. M. (2025). Planned versus unplanned alcohol and cannabis use: Motivational and contextual correlates among sexual minority women and gender diverse individuals. *Alcohol: Clinical and Experimental Research*. https://doi.org/10.1111/acer.70000

CHANGES IN POPULATION-LEVEL ALCOHOL SALES AFTER NON-MEDICAL CANNABIS LEGALISATION IN CANADA
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Introduction: There is considerable interest in whether individuals substitute cannabis for alcohol and in legalisation's potential to reduce or increase alcohol-attributable harms. This study aimed to determine whether non-medical cannabis legalisation in Canada was associated with initial changes in population-level alcohol consumption.

Methods: This observational population-based study described changes in alcohol sales in Canada between 2004 and 2022. We calculated annual changes in the per capita volume of pure ethanol sold in Canada. We used an interrupted time series approach to examine immediate and gradual changes in per capita price-adjusted alcohol retailer sales value (CAD$) and beer producer sales volume (litres of product) after legalisation.

Results: During 2004–2022, Canadians aged 15+ spent on average CAD $751 per year on alcoholic beverages containing 8.18 L of ethanol. Annual ethanol sales volumes decreased by 0.06 (95% confidence interval [CI] −0.08 to −0.04; p = 0.001) litres per capita annually for beer but increased by 0.05 (95% CI 0.04 to 0.07; p = 0.001) litres per capita annually for other beverages, leaving no significant trend for ethanol sales overall. Following non-medical legalisation in October 2018, there were no immediate (−0.1%, 95% CI −1.3 to 1.1; p = 0.82) or gradual changes (−0.1% monthly, 95% CI −0.3 to 0.0; p = 0.12) in alcohol retailer sales.

Discussion and Conclusion: Canada's non-medical cannabis legalisation was not associated with significant changes in population-level alcohol sales. These findings do not support the idea that cannabis legalisation may result in declining alcohol use and harms through the substitution of cannabis for alcohol.

Source: Armstrong, M., MacDonald-Spracklin, R., Xiao, J., Talarico, R., & Myran., D. (2025). Changes in population-level alcohol sales after non-medical cannabis legalisation in Canada. *Drug and Alcohol Review*. https://doi.org/10.1111/dar.14010

ASSOCIATIONS BETWEEN NEIGHBORHOOD ENVIRONMENT AND PRENATAL ALCOHOL AND TOBACCO EXPOSURE
January 2025

Objective: Prenatal alcohol and tobacco exposure continue to impact a significant portion of the US population every year. Differences in neighborhood environment may be a contributing factor. The current study examines whether prenatal alcohol and tobacco exposure differ by neighborhood environment.

Methods: We utilized neighborhood environment data linked to a US based, nationally representative cohort of adolescents (N = 8731 (47.2% female); Age: M = 118.6 months, SD = 7.4 months).

Results: Lower neighborhood deprivation, less air pollution, higher lead risk and perceived neighborhood safety were associated with prenatal alcohol exposure, while higher neighborhood deprivation and lower perceived neighborhood safety were associated with prenatal tobacco exposure.

Conclusions: Neighborhood environments differ between prenatal alcohol exposed children and unexposed children, as well as between prenatal tobacco exposed children and unexposed children. Future research should consider the cumulative and interactive effects of prenatal exposure to alcohol and tobacco and neighborhood environment.

Source: Xia, Y., & Vieira, V. (2025). Associations between Neighborhood Environment and Prenatal Alcohol and Tobacco Exposure. *Journal of Studies on Alcohol and Drugs*, jsad-24. https://doi.org/10.15288/jsad.24-00083