



RESEARCH SUMMARY
Date Compiled: August 2019

Key Takeaways from Included Research

- An evaluation of government-funded 24-hour public transport service in Melbourne meant to spur nightlife and also reduce alcohol-related harms found that it did not reduce alcohol-related violence or alcohol-related vehicle crashes. This outcome provides further evidence that comprehensive alcohol control policies are more effective at reducing harms than narrowly targeted initiatives which take excessive alcohol consumption as a given.
- An analysis of alcohol-related driving crash rates in Indiana found that the density of on-premise alcohol outlets – but not off-premise outlets – was positively associated with crash rates, even when geographic confounders were controlled for.
- A national survey of about 11,000 adults aged 65 or older found one out of every ten to be a current binge drinker. Given the special physiological vulnerabilities of older adults to alcohol-related harms, expanded screening practices and targeted policies are warranted.
- State-based alcohol control systems were put into place to protect the public, and the erosion of those systems – and the resulting domination of the alcohol market by large retailers – threatens public health and public safety. The American public needs to be more informed about the value of these comprehensive systems and policies.
- The raising of the minimum legal drinking age from 16 to 18 in the Netherlands led to an apparent drop in Chlamydia infection rates in that age group. This adds to the body of research finding that alcohol control policies can be effective in preventing and controlling sexually transmitted infections.
- A sleep study of a large cohort of African American adults found that nicotine and alcohol consumption within 4 hours of bedtime negatively impacted sleep quality - even more so than caffeine consumption. Given the growing research about the impact of sleep deprivation and sleep quality on a number of health outcomes, this study further demonstrates the need for effective alcohol (and nicotine) control policies.

THE IMPACT OF TWENTY FOUR-HOUR PUBLIC TRANSPORT IN MELBOURNE, AUSTRALIA: AN EVALUATION OF ALCOHOL-RELATED HARMS

June 2019

Abstract

Objective: Transporting people out of nightlife districts is often cited as a major issue associated with alcohol-related harm. The Victorian Government introduced 24-hour public transport (24hr PT) in Melbourne, Australia, on Friday and Saturday nights in January 2016. After the 1-year trial period, funding was extended for a further 4 years, at a cost of more than AU\$300 million to date. The current

study aimed to determine whether 24hr PT reduced harms associated with the nightlife of Melbourne and whether there has been an increased number of people using the transport and visiting Melbourne city on Friday and Saturday nights.

Method: Police assault data, ambulance attendance data, crash data, public transport use data, and pedestrian counting data were analyzed to determine the impact of 24hr PT on harms in the nightlife of Melbourne, as well as changes in the number of people using public transport and attending the city.

Results: There was no change from 2015 to 2016 in the number of police-recorded assaults, ambulance attendances, or crashes for the entirety of the night. There were significantly more people out in the city later in the evening, and more people using trains and trams during the 24hr PT time (i.e., 1 a.m.–5 a.m.).

Conclusions: The initiative did not decrease harm in Melbourne nightlife, in contrast to industry, government, and expert predictions. With expenditures of more than AU\$300 million, the costs and benefits of this initiative require further consideration and research, especially when it is proposed in opposition to evidence-based solutions, such as closing venues earlier.

Additional media coverage:

[All-night public transport hasn't reduced alcohol-related harm in Melbourne](#) (The Conversation)

STATISTICAL ANALYSIS OF AREA-WIDE ALCOHOL-RELATED DRIVING CRASHES: A SPATIAL ECONOMETRIC APPROACH

July 2019

Abstract

The article analyzes area-wide alcohol-related driving crash rates, with an emphasis on neighborhood effects, edge effects, and spatial effects arising from shared roadways that traverse area boundaries. Using township data for the state of Indiana, spatial Durbin models of alcohol-related driving crash rates are presented. The results suggest that a township's population composition and its abundance of alcohol-related businesses impact the alcohol-related driving crash rates. Moreover, positive spatial dependence is found to be highly significant, cautioning against the reliance on possibly biased OLS estimators. Due to restrictions in access to the crash and alcohol-related businesses data of the neighboring states, an alternative approach is adopted to address the spatial edge effects that may arise from alcohol consumption of residents from the edge areas of the neighboring states (possibly leading to crashes inside the border townships). Given the variation in alcohol laws and regulations across states, an empirical assessment of the edge effects is particularly relevant where some border crossing may be deliberate so as to avoid more stringent alcohol restrictions.

Source:

Saeed, T. U., Nateghi, R., Hall, T., & Waldorf, B. S. (2019). Statistical analysis of area-wide alcohol-related driving crashes: A spatial econometric approach. *Geographical Analysis*.

BINGE DRINKING AMONG OLDER ADULTS IN THE UNITED STATES, 2015 TO 2017

July 2019

Abstract

Objectives: Binge drinking is a risk factor for a range of harms. This study estimates the national prevalence of binge drinking and adds to our understanding of correlates of binge drinking among older adults in the United States.

Design: Cross-sectional analysis.

Setting/participants: A total of 10 927 adults, aged 65 years or older, from the 2015 to 2017 administrations of the US National Survey on Drug Use and Health.

Measurements: We estimated the prevalence of past-month binge alcohol use (five or more drinks on the same occasion for men and four or more drinks on the same occasion for women). Characteristics of past-month binge drinkers, including demographics, substance use, serious mental illness, mental health treatment utilization, chronic disease, and emergency department (ED) use, were compared to participants who reported past-month alcohol use without binge drinking. Comparisons were made using χ^2 tests. We then used multivariable generalized linear models using Poisson and log link to examine the association between covariates and binge drinking among all past-month alcohol users aged 65 years or older.

Results: Of 10 927 respondents, 10.6% (95% CI = 9.9%-11.2%) were estimated to be current binge drinkers. Binge drinkers were more likely to be male, have a higher prevalence of current tobacco and/or cannabis use, and have a lower prevalence of two or more chronic diseases compared to nonbinge drinkers. In multivariable analysis, among past-month alcohol users, the prevalence of binge drinking was higher among non-Hispanic African Americans than whites (adjusted prevalence ratio [aPR] = 1.44; 95% CI = 1.16-1.80), tobacco users (aPR = 1.52; 95% CI = 1.33-1.74), cannabis users (aPR = 1.41; 95% CI = 1.11-1.80), and those who visited the ED in the past year (aPR = 1.16; 95% CI = 1.00-1.33).

Conclusion: Over a tenth of older adults in the United States are estimated to be current binge drinkers. Results confirm the importance of screening for binge drinking behaviors among older adults to minimize harms.

Source:

Han, B. H., Moore, A. A., Ferris, R., & Palamar, J. J. (2019). Binge drinking among older adults in the United States, 2015 to 2017. *Journal of the American Geriatrics Society*.

Additional media coverage:

[One in 10 Older Adults Binge Drinks, Study Says](#) (NY Times)

[More and More Seniors Are Binge Drinking](#) (WebMD)

[Senior citizens have a binge-drinking problem, according to a new study](#) (Pacific Standard)

HOW ALCOHOL MARKETPLACE DOMINATION CREATES PROBLEMS FOR PUBLIC HEALTH AND SAFETY

July 2019

Extract

... Over the past decade, the UK has tried many ways to curtail what is considered to be an alcohol epidemic. The market is dominated by four large grocery chains. There is a widespread belief that the selling and promotion practices of these large chains have been the major contributor to the alcohol epidemic.

To avoid this scenario in the U.S. we need to have a better understanding of the value of our current system and how it works to protect the public. This includes:

- Our regulations operate as a system with multiple means to curtail problems.
- Entrepreneurs are often very creative and sometimes find ways to skirt around regulations. This may mean that new regulations must be adopted to address loopholes. This creates additional, but necessary complexity.
- It is difficult to extract a single regulation out of a complex system and prove that it alone promotes public health and safety. And, some regulations curb practices that lead to market domination which, in turn, lead to public health and safety issues.
- Public support is crucial to the staying power of alcohol regulation. Fortunately, surveys indicate a high degree of public support.

Source: Healthy Alcohol Marketplace

Free full text: <http://healthyalcoholmarket.com/wordpress/>

EVALUATING THE IMPACT OF HEALTH REFORMS IN THE NETHERLANDS: ASSESSING THE IMPACT OF AN ALCOHOL BAN ON SEXUALLY TRANSMITTED INFECTIONS IN NATIONAL SURVEILLANCE DATA

July 2019

Abstract:

Background: On 1 January 2014, the minimum age to buy alcohol increased (16–18 years), accompanied by a public awareness campaign (NIX18). Decreases in alcohol consumption are associated with less risky sexual behaviour. This study analyzed the association between the health reforms and Chlamydia trachomatis infections (chlamydia) among young heterosexual people.

Methods: Chlamydia positivity rates, age, and gender from all STI-clinic attendees between 16 and 19 years old in the Netherlands of 2010 to 2016 were obtained. Interrupted time-series assessed immediate and gradual trends in chlamydia rates.

Results: Among the control group (18–19 year olds) chlamydia rates increased 0.5% each post-ban month (95% Confidence Interval [CI] 1.002–1.008, $p = .001$). Among 16–17 year olds there was no monthly increase post-ban (Rate Ratio 1.000, 95% CI 0.993–1.007, $p = .948$). In terms of confounders, only controlling for partner notification dissolved these time trends.

Conclusions: We found that chlamydia rates after the alcohol ban differed between 16–17 year olds and 18–19 year olds. This demonstrates that the health reforms might have affected this secondary outcome, but obtaining certainty using national surveillance data is difficult. Specific studies should be designed, as now changes in chlamydia over time could be explained by STI-clinic policy changes, by changes on an individual level including reduced alcohol consumption or most likely by the combination of these factors.

Source:

Den Daas, C., Van Aar, F., & Van Benthem, B. H. B. (2019). Evaluating the impact of health reforms in the Netherlands: Assessing the impact of an alcohol ban on sexually transmitted infections in national surveillance data. *Health Policy*.

EVENING INTAKE OF ALCOHOL, CAFFEINE, AND NICOTINE: NIGHT-TO-NIGHT ASSOCIATIONS WITH SLEEP DURATION AND CONTINUITY AMONG AFRICAN AMERICANS IN THE JACKSON HEART SLEEP STUDY

August 2019

Abstract

Study Objectives: We examined the night-to-night associations of evening use of alcohol, caffeine, and nicotine with actigraphically estimated sleep duration, sleep efficiency, and wake after sleep onset (WASO) among a large cohort of African American adults.

Methods: Participants in the Jackson Heart Sleep Study underwent wrist actigraphy for an average of 6.7 nights and completed concurrent daily sleep diary assessments to record any consumption of alcohol, caffeine, and nicotine within 4 hours of bedtime. Linear mixed-effect models were fit and adjusted for age, sex, educational attainment, body mass index, depression, anxiety, stress, and having work/school the next day.

Results: Eligible participants (n = 785) were an average of 63.7 years (SD: 10.6), and were predominantly female (67.9%). There were 5164 days of concurrent actigraphy and sleep diary data. Evening alcohol use was associated with that night's lower sleep efficiency (−0.98% [95% CI: −1.67% to −0.29%], p = 0.005), but not with WASO or sleep duration. Evening nicotine use was associated with that night's lower sleep efficiency [1.74% (95% CI: −2.79 to −0.68), p = 0.001] and 6.09 minutes higher WASO ([95% CI: 0.82 to 11.35], p = 0.02), but was not associated with sleep duration. Evening caffeine use was not associated with any of the sleep parameters.

Conclusion: Nicotine and alcohol use within 4 hours of bedtime were associated with increased sleep fragmentation in the associated night, even after controlling for multiple potential confounders. These findings support the importance of sleep health recommendations that promote the restriction of evening alcohol and nicotine use to improve sleep continuity.

Source:

Spadola, C.E., Guo, N., Johnson, D.A., Sofer, T., Bertisch, S.M., Jackson, C.L., et al. (2019). Evening intake of alcohol, caffeine, and nicotine: Night-to-night associations with sleep duration and continuity among African Americans in the Jackson Heart Sleep Study, *Sleep*.

Additional media coverage:

[Why Alcohol, Nicotine Disrupt Your Sleep More Than Coffee](#) (Healthline)