



RESEARCH SUMMARY
Date Compiled: August 2017

THE NEIGHBORHOOD-LEVEL ASSOCIATION BETWEEN ALCOHOL OUTLET DENSITY AND FEMALE CRIMINAL VICTIMIZATION RATES

July 2017

ABSTRACT: The aim of this study was to explore the neighborhood-level association between alcohol outlet density and non-intimate partner violent victimization rates among females. Violent offending and victimization are more prevalent for males than females, and most research on alcohol outlets and violence emphasizes males. Studies that do focus on alcohol outlets and female violent victimization tend to focus on intimate partner violence (IPV), yet non-IPV events are over three quarters of all female violent victimization incidents in the United States. We collected data on violent victimization rates, on- and off-premise alcohol outlet density, and neighborhood-level covariates of violence rates for Milwaukee block groups. We used spatially lagged regression models to test this association, to compare non-IPV results with those for overall female violent victimization rates, and to compare results for females with those for males. Our findings showed density of both on- and off-premise alcohol outlets was positively associated with non-IPV female violent victimization rates, which is an important finding given lack of research on this topic. We also found results for females (both overall and non-IPV violent victimization) were generally the same as for males, but the effect of off-premise outlets on non-IPV female violent victimization rates was weaker than the same association for males. Our findings have clear policy implications for local jurisdictions. Alcohol outlet density is important for both female and male violent victimization. **Limiting the licensing of alcohol-selling establishments, especially those that engage in irresponsible retail practices, may be a suitable approach to address violent victimization.** [emphasis added]

Source: *Journal of Interpersonal Violence*

ALCOHOL POLICY RESEARCH: WHERE DO I FIND IT?

July 2017

Every year, we learn more about what works to reduce problems with alcohol. Research helps us focus our scarce resources on policies that are most likely to be effective. But, sometimes it's hard to know where to look for the most credible research.

Let me suggest some excellent sources. Below is a picture of my dog-eared copy of a favorite: "Alcohol: No Ordinary Commodity."

It was authored by 15 of the world's most renowned alcohol researchers. Of particular help is a chart on pp. 243- 248 which rates a large number of "policy-relevant strategies and interventions." These policies are rated on "effectiveness, breadth of research support and cross national testing." It's a practical way to review your community's policy's to see what you have and what you might be lacking.

Full article: <http://healthyalcoholmarket.com/wordpress/>

Source: *Healthy Alcohol Marketplace*

ALCOHOL INTAKE AND RISK OF NONMELANOMA SKIN CANCER: A SYSTEMATIC REVIEW AND DOSE-RESPONSE META-ANALYSIS

July 2017

Summary: Nonmelanoma skin cancer (NMSC) comprises mainly basal cell carcinoma (BCC) and cutaneous squamous cell carcinoma (cSCC). The association between alcohol intake and NMSC has been inconclusive; therefore the objective of this study is to quantify the relationship between alcohol intake and NMSC using meta-analyses. A systematic literature search of PubMed and Embase was performed on 30 October 2016. Eligible articles were case-control or cohort studies that examined alcohol intake and risk of BCC or cSCC and reported relative risks (RRs) with 95% confidence intervals (CIs). Of the 307 articles identified, 13 case-control and cohort studies were included in the systematic review, including 95 241 NMSC cases (91 942 BCC and 3299 cSCC cases). A random-effects model was used to obtain summary RRs and 95% CIs for dose-response meta-analyses. For every 10-gram increase in ethanol intake per day, a positive association was found for both BCC (summary RR of 1.07; 95% CI 1.04–1.09) and cSCC (summary RR of 1.11; 95% CI 1.06–1.16). While there was evidence suggesting a nonlinear association for BCC, it may be due to the sparse data at higher alcohol intake levels. **This meta-analysis found evidence that alcohol drinking is positively associated with both BCC and cSCC risk in a dose-dependent manner.** These results should be interpreted with caution due to potential residual confounding. Nonetheless, because alcohol drinking is a prevalent and modifiable behaviour, it could serve as an important public health target to reduce the global health burden of NMSC.

Source: *British Journal of Dermatology*

Related Media Coverage:

Medical News Today: “Every 10 grams of alcohol per day may raise skin cancer risk”
<http://www.medicalnewstoday.com/articles/318766.php>

Men’s Health: “How drinking too much can up your odds of skin cancer”
<http://www.menshealth.com/health/alcohol-and-skin-cancer>

UNDERAGE BINGE DRINKING VARIES WITHIN AND ACROSS STATES

June 2017

... Research suggest that between 2008 and 2014, underage binge drinking by people aged 12 to 20 declined in the United States from 19.3 percent in 2002 to 13.8 percent in 2014.⁵ This represents more than a 20 percent decline in underage drinking from a 2008 baseline to 2014. Although the national trend in underage drinking is encouraging, underage drinking remains a concern in the United States, especially because its consequences are experienced in states and local communities every year. Excessive drinking still results in more than 4,300 deaths per year among underage youths. In 2010, underage youths made almost 190,000 emergency department visits for alcohol-related injuries, and the economic cost of underage drinking was \$24 billion....

In Brief

- Combined 2012–2014 National Survey on Drug Use and Health state- and substate data can advance the understanding of underage binge drinking in U.S. communities.
- Nationally, 14.44 percent of people aged 12 to 20 binge drank in the past month.
 - ➔ **Nebraska 15.73% underage (12-20) binge drinking rate (fourth quintile – with fifth being the worst)**

- Among states, estimates of underage binge drinking ranged from 10.98 percent in Utah to 21.42 percent in North Dakota.
 - Among the substate regions, estimates of underage binge drinking ranged from 8.37 percent in Shelby County (Tennessee) to 42.39 percent in Ward 2 (District of Columbia).
 - Of the 16 substate regions with the lowest estimates of underage binge drinking, 12 were in the South and 4 were in the West.
 - Of the 16 substate regions with the highest rates of underage binge drinking, 9 were in the Northeast, 4 were in the South, 4 were in the Midwest, and 1 was in the West.
 - Compared with the estimate from 2010–2012, the estimate of past month underage binge drinking in 2012–2014 was lower in the nation as a whole (15.87 percent in 2010–2012 vs. 14.44 percent in 2012–2014).
 - Between 2010–2012 and 2012–2014, 18 states plus the District of Columbia experienced a statistically significant decrease in estimates of past month underage binge drinking, while the remaining 32 states experienced no change.
- ➔ **The Nebraska rate dropped from 17.11% to 15.73%. This was NOT deemed to be statistically significant.**

Full report: https://www.samhsa.gov/data/sites/default/files/report_3185/ShortReport-3185.html

Source: SAMHSA, National Survey on Drug Use and Health, The CBHSQ Report

BINGE DRINKING AND TOTAL ALCOHOL CONSUMPTION FROM 16 TO 43 YEARS OF AGE ARE ASSOCIATED WITH ELEVATED FASTING PLASMA GLUCOSE IN WOMEN: RESULTS FROM THE NORTHERN SWEDISH COHORT STUDY

July 2017

Background: Studies have indicated that moderate alcohol consumption is associated with lower incidence of diabetes in women. However, not only the amount but also the drinking pattern could be of importance when assessing the longitudinal relation between alcohol and glucose. Also, there is a lack of studies on alcohol use beginning in adolescence on adult glucose levels. The aim was to examine the association between total alcohol consumption and binge drinking between ages 16 and 43 and fasting plasma glucose at age 43. **Methods:** Data were retrieved from a 27-year prospective cohort study, the Northern Swedish Cohort. In 1981, all 9th grade students (n = 1083) within a municipality in Sweden were invited to participate. There were re-assessments at ages 18, 21, 30 and 43. This particular study sample consisted of 897 participants (82.8%). Fasting plasma glucose (mmol/L) was measured at a health examination at age 43. Total alcohol consumption (in grams) and binge drinking were calculated from alcohol consumption data obtained from questionnaires.

Results: Descriptive analyses showed that men had higher levels of fasting plasma glucose as compared to women. Men also reported higher levels of alcohol consumption and binge drinking behavior. Linear regressions showed that total alcohol consumption in combination with binge drinking between ages 16 and 43 was associated with elevated fasting plasma glucose at age 43 in women (beta = 0.14, p = 0.003) but not in men after adjustment for BMI, hypertension and smoking at age 43.

Conclusions: Our findings indicate that reducing binge drinking and alcohol consumption

among young and middle-aged women with the highest consumption might be metabolically favorable for their future glucose metabolism. [emphasis added]

Full report: <https://bmcpublihealth.biomedcentral.com/articles/10.1186/s12889-017-4437-y>

Source: *BMC Public Health*

Related Media Coverage:

BMC Series Blog: “Life-long binge-drinking and high alcohol consumption increase diabetes risk for women”
<http://bmcscriesblog/2017/06/15/alcohol-and-diabetes-in-women>

UNDERSTANDING THE RELATIONSHIP BETWEEN BINGE DRINKING, PHYSICAL ACTIVITY, AND DIABETES

Abstract: Metabolic syndrome is becoming a commonly talked term these days. Due to poor lifestyle habits, humans are falling prey to debilitating diseases. One of the diseases in the metabolic syndrome is diabetes. The world is witnessing a global epidemic of diabetes. Research has shown that a sedentary lifestyle combined with poor food habits is the main cause behind this disease. In this paper, we intend to observe the effect of binge drinking on diabetes in human population and also observe how the risk associated with diabetes changes with the physical activity intervention. **We observe that higher degree of binge drinking is a risk factor for diabetes** and exercise lowers the risk of developing diabetes considerably. All data analysis is performed in STATA. We have used BRFSS (Behavioral Risk Factor Surveillance System) data of CDC (Centre for Disease Control and Prevention), USA. [emphasis added]

Source: *International Journal of Health, Wellness & Society*

FACTORS ASSOCIATED WITH YOUNGER ADOLESCENTS' EXPOSURE TO ONLINE ALCOHOL ADVERTISING

July 2017

Abstract: Little is known about the extent and nature of youth exposure to online alcohol advertising, or factors that may be associated with exposure. The current study recruited middle school students who completed a paper survey and then logged each alcohol advertisement that they encountered over a 2-week period using cell phones as part of an ecological momentary assessment design. We examined the percentage of youth who reported exposure to online alcohol advertising in the past 2 weeks, average weekly rate of exposure, types of online alcohol advertisements youth reported seeing, and factors that increased youths' risk of exposure to online alcohol advertising. Analyses are based on 485 participants (47% female; 25% Hispanic, 25% White, 27% Black; 6% Asian, 16% other). Youth logged exposures to a total of 3,966 (16,018 weighted for underreporting) alcohol advertisements across the monitoring period; 154 (568 weighted) or 3.6% were online ads. Seventeen percent of youth reported seeing any online alcohol ad; the majority of online ads seen were video commercials (44.8%) and banner/side ads (26.6%). Factors associated with greater ad exposure were being older, rebellious, and Black race; greater parental monitoring and more hours spent on social media were associated with less exposure. Findings provide important information about adolescents' exposure to online alcohol advertising and what might contribute to a greater likelihood of exposure. Given that online ad exposure is linked to drinking behavior, prevention programming for younger adolescents should continue to address this issue to help youth make healthy choices regarding alcohol use.

Source: *Psychology of Addictive Behaviors*

THE BURDEN OF BINGE AND HEAVY DRINKING ON THE BRAIN: EFFECTS ON ADOLESCENT AND YOUNG ADULT NEURAL STRUCTURE AND FUNCTION

Introduction: Adolescence and young adulthood are periods of continued biological and psychosocial maturation. Thus, there may be deleterious effects of consuming large quantities of alcohol on neural development and associated cognition during this time. The purpose of this mini review is to highlight neuroimaging research that has specifically examined the effects of binge and heavy drinking on adolescent and young adult brain structure and function. **Methods:** We review cross-sectional and longitudinal studies of young binge and heavy drinkers that have examined brain structure (e.g., gray and white matter volume, cortical thickness, white matter microstructure) and investigated brain response using functional magnetic resonance imaging (fMRI). **Results:** Binge and heavy-drinking adolescents and young adults have systematically thinner and lower volume in prefrontal cortex and cerebellar regions, and attenuated white matter development. They also show elevated brain activity in fronto-parietal regions during working memory, verbal learning, and inhibitory control tasks. In response to alcohol cues, relative to controls or light-drinking individuals, binge and heavy drinkers show increased neural response mainly in mesocorticolimbic regions, including the striatum, anterior cingulate cortex (ACC), hippocampus, and amygdala. Mixed findings are present in risky decision-making tasks, which could be due to large variation in task design and analysis. **Conclusions:** These findings suggest altered neural structure and activity in binge and heavy-drinking youth may be related to the neurotoxic effects of consuming alcohol in large quantities during a highly plastic neurodevelopmental period, which could result in neural reorganization, and increased risk for developing an alcohol use disorder (AUD).

Free full text: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5491846/>

Source: *Frontiers in Psychology*

Related Media Coverage:

Life Sciences Medical News: "New review reveals dire effects of heavy alcohol use during adolescence on the brain"

<http://www.news-medical.net/news/20170718/New-review-reveals-dire-effects-of-heavy-alcohol-use-during-adolescence-on-the-brain.aspx>