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PREVENTING ALCOHOL-RELATED HARM

RESEARCH AND NEWS SUMMARY
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ESTIMATED EFFECTS OF DIFFERENT ALCOHOL TAXATION AND PRICE POLICIES ON HEALTH INEQUALITIES: A MATHEMATICAL MODELLING STUDY

February 2016

Introduction: While evidence that alcohol pricing policies reduce alcohol-related health harm is robust, and alcohol taxation increases are a WHO "best buy" intervention, there is a lack of research comparing the scale and distribution across society of health impacts arising from alternative tax and price policy options. The aim of this study is to test whether four common alcohol taxation and pricing strategies differ in their impact on health inequalities.

Methods and Findings: An econometric epidemiological model was built with England 2014/2015 as the setting. Four pricing strategies implemented on top of the current tax were equalised to give the same 4.3% population-wide reduction in total alcohol-related mortality: current tax increase, a 13.4% all-product duty increase under the current UK system; a value-based tax, a 4.0% ad valorem tax based on product price; a strength-based tax, a volumetric tax of £0.22 per UK alcohol unit (= 8 g of ethanol); and minimum unit pricing, a minimum price threshold of £0.50 per unit, below which alcohol cannot be sold. Model inputs were calculated by combining data from representative household surveys on alcohol purchasing and consumption, administrative and healthcare data on 43 alcohol-attributable diseases, and published price elasticities and relative risk functions. Outcomes were annual per capita consumption, consumer spending, and alcohol-related deaths. Uncertainty was assessed via partial probabilistic sensitivity analysis (PSA) and scenario analysis.

The pricing strategies differ as to how effects are distributed across the population, and, from a public health perspective, heavy drinkers in routine/manual occupations are a key group as they are at greatest risk of health harm from their drinking. Strength-based taxation and minimum unit pricing would have greater effects on mortality among drinkers in routine/manual occupations (particularly for heavy drinkers, where the estimated policy effects on mortality rates are as follows: current tax increase, −3.2%; value-based tax, −2.9%; strength-based tax, −6.1%; minimum unit pricing, −7.8%) and lesser impacts among drinkers in professional/managerial occupations (for heavy drinkers: current tax increase, −1.3%; value-based tax, −1.4%; strength-based tax, +0.2%; minimum unit pricing, +0.8%). Results from the PSA give slightly greater mean effects for both the routine/manual (current tax increase, −3.6% [95% uncertainty interval (UI) −6.1%, −0.6%]; value-based tax, −3.3% [UI −5.1%, −1.7%]; strength-based tax, −7.5% [UI −13.7%, −3.9%]; minimum unit pricing, −10.3% [UI −10.3%, −7.0%]) and professional/managerial occupation groups (current tax increase, −1.8% [UI −4.7%, +1.6%]; value-based tax, −1.9% [UI −3.6%, +0.4%]; strength-based tax, −0.8% [UI −6.9%, +4.0%]; minimum unit pricing, −0.7% [UI −5.6%, +3.6%]). Impacts of price changes on moderate drinkers were small regardless of income or socioeconomic group. Analysis of uncertainty shows that the relative effectiveness of the four policies is fairly stable, although uncertainty in the absolute scale of effects exists. Volumetric taxation and minimum unit pricing consistently outperform increasing the current tax or adding an ad valorem tax in terms of reducing mortality among the heaviest drinkers and reducing alcohol-related health inequalities (e.g., in the routine/manual occupation group, volumetric taxation reduces deaths more than increasing the current tax in 26 out of 30 probabilistic runs, minimum unit pricing reduces deaths more than volumetric tax in 21 out of 30 runs, and minimum unit pricing reduces deaths more than increasing the current tax in 30 out of 30 runs). Study limitations include reducing model complexity by not considering a largely ineffective ban on below-tax alcohol sales, special duty rates covering only small shares of the market, and the impact of tax fraud or retailer non-compliance with minimum unit prices.

Conclusions: Our model estimates that, compared to tax increases under the current system or introducing taxation based on product value, alcohol-content-based taxation or minimum unit pricing would lead to larger reductions in health inequalities across income groups. We also estimate that alcohol-content-based taxation and minimum unit pricing would have the largest impact on harmful drinking, with minimal effects on those drinking in moderation.

Full study: http://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1001963

ASSOCIATION BETWEEN ALCOHOL SPORTS SPONSORSHIP AND CONSUMPTION: A SYSTEMATIC REVIEW

February 2016

Aim: Concerns have been raised about the impact of alcohol sports sponsorship on harmful consumption, with some countries banning this practice or considering a ban. We review evidence on the relationship between exposure to alcohol sports sponsorship and alcohol consumption.

Methods: Search of electronic databases (PubMed, Cochrane Library, Google Scholar and International Alcohol Information Database) supplemented by hand searches of references and conference proceedings to locate studies providing data on the impact of exposure to alcohol sports sponsorship and outcomes relating to alcohol consumption.

Results: Seven studies met inclusion criteria, presenting data on 12,760 participants from Australia, New Zealand, the UK, Germany, Italy, Netherlands and Poland. All studies report positive associations between exposure to alcohol sports sponsorship and self-reported alcohol consumption, but the statistical significance of results varies. Two studies found indirect exposure to alcohol sports sponsorship was associated with increased levels of drinking amongst schoolchildren, and five studies found a positive association between direct alcohol sports sponsorship and hazardous drinking amongst adult sportspeople.

Conclusion: These findings corroborate the results of previous systematic reviews that reported a positive association between exposure to alcohol marketing and alcohol consumption. The relationship between alcohol sports sponsorship and increased drinking amongst schoolchildren will concern policymakers. Further research into the effectiveness of restrictions on alcohol sports sponsorship in reducing harmful drinking is required.

Full study: http://alcalc.oxfordjournals.org/content/alcalc/early/2016/02/23/alcalc.agw006.full.pdf

GOVERNMENT POLICIES LEAD TO FALL IN ALCOHOL CONSUMPTION

March 1, 2016
BBC News

A new report has found that government policies have had a positive impact on alcohol consumption in Scotland.

NHS Health Scotland found that a ban on multi-buy drinks promotions was among a number of successful initiatives.

However, it warned that more needed to be done to ensure the improvements continued, including the introduction of a minimum price for alcohol.

The report is the final review of the Scottish government's alcohol strategy, which was introduced in 2009.

Before then, high and increasing levels of alcohol consumption were closely linked to increasing alcohol harm.

Studies had shown that alcohol may have caused the deaths of one in 20 of the Scots who died in 2003.

And half of Scotland's prisoners said they were drunk when they committed their offence.

The government's "framework for action" outlined 41 steps to reduce alcohol consumption, and support families and communities.

To read the full article, click here: http://www.bbc.com/news/uk-scotland-35691234

Full report: http://www.healthscotland.com/uploads/documents/26884-MESAS__Final%20annual%20report.pdf

PREVENTING VIOLENCE AMONG HIGH-RISK YOUTH AND COMMUNITIES WITH ECONOMIC, POLICY, AND STRUCTURAL STRATEGIES

February 2016

Youth violence is preventable, and the reduction of health disparities is possible with evidence-based approaches. Achieving community-wide reductions in youth violence and health disparities has been limited in part because of the lack of prevention strategies to address community risk factors. CDC-supported research has resulted in three promising community-level approaches: Business Improvement Districts (BIDs) in Los Angeles, California; alcohol policy to reduce youth access in Richmond, Virginia; and the Safe Streets program in Baltimore, Maryland. Evaluation findings indicated that BIDs in Los Angeles were associated with a 12% reduction in robberies (one type of violent crime) and an 8% reduction in violent crime overall. In Richmond's alcohol policy program, investigators found that the monthly average of ambulance pickups for violent injuries among youth aged 15–24 years had a significantly greater decrease in the intervention (19.6 to 0 per 1,000) than comparison communities (7.4 to 3.3 per 1,000). Investigators of Safe Streets found that some intervention communities experienced reductions in homicide and/or nonfatal shootings, but results were not consistent across communities. Communitywide rates of violence can be changed in communities with disproportionately high rates of youth violence associated with entrenched health disparities and socioeconomic disadvantage. Community-level strategies are a critical part of comprehensive approaches necessary to achieve broad reductions in violence and health disparities.

Full study: http://www.cdc.gov/mmwr/volumes/65/su/su6501a9.htm

IS CANNABIS USE ASSOCIATED WITH AN INCREASED RISK OF ONSET AND PERSISTENCE OF ALCOHOL USE DISORDERS? A THREE-YEAR PROSPECTIVE STUDY AMONG ADULTS IN THE UNITED STATES

February 2016

Background: The relationship between cannabis use and alcohol use disorders (AUDs) over time remains unclear. The current study used longitudinal data from adults in the United States (U.S.) to investigate the association between cannabis use and risk of onset and persistence of AUDs three years later.

Methods: The study used data from respondents who completed both waves of the National Epidemiological Study of Alcohol Use and Related Disorders (NESARC; Wave 1, 2001–2001; Wave 2, 2004–2005) and for whom the age of first cannabis use preceded the age of any AUD. Incident AUDs were examined among respondents with no lifetime AUD diagnosis at Wave 1 (n = 27,461). Persistent AUDs were examined among respondents with a lifetime AUD diagnosis at Wave 1 (n = 2,121).

Results: Among adults with no history of AUD, cannabis use at Wave 1 was associated with increased incidence of an AUD three years later relative to no cannabis use (Odds Ratio (OR) = 5.43; 95% Confidence Interval (CI) = 4.54–6.49). Among adults with a history of AUD, cannabis use at Wave 1 was associated with increased likelihood of AUD persistence three years later relative to no cannabis use (OR = 1.74; 95% CI = 1.56–1.95). These relationships remained significant after controlling for demographics, psychiatric disorders, and other substance use disorders.

Conclusions: Cannabis use is associated with increased risk of AUD onset and persistence over the course of three years among U.S. adults. Community-based and clinical programs aimed at preventing or treating problematic alcohol use may benefit from integrating information about cannabis use in order to improve outcomes.

Source: http://www.sciencedirect.com/science/article/pii/S0376871616000429

LONG-TERM EFFECTS OF LOWERING THE ALCOHOL MINIMUM PURCHASING AGE ON TRAFFIC CRASH INJURY RATES IN NEW ZEALAND

February 2016

Introduction and Aims: In December 1999, New Zealand lowered the alcohol minimum purchasing age from 20 to 18 years. We tested hypotheses that this change was associated with long-term increases in traffic injury attributable to alcohol-impaired driving among 18- to 19-year-olds (target age group) and 15- to 17-year-olds (affected by 'trickle-down').

Design and Methods: We undertook a controlled before-and-after comparison of rates of fatal and non-fatal traffic injury to persons of any age attributable to impaired drivers aged 18–19 years and 15–17 years, versus 20- to 21-year-olds. Crash data including assessment of driver alcohol impairment were recorded by New Zealand Police. The pre-change period was 1996–1999. Post-change periods were 2000–2003, 2004–2007 and 2008–2010. Outcomes were population-based and vehicle travel-based rates.

Results: Compared with the change in injury rates attributable to alcohol-impaired 20- to 21-year-old male drivers, injuries attributable to 18- to 19-year-old male drivers increased in all post-change periods and significantly so in the second post-change period (incidence rate ratio [IRR] 1.3, 95% confidence interval [CI] 1.1 to 1.5). For 15- to 17-year-old male drivers, rates increased in all post-change periods compared with 20- to 21-year-olds, and more so in the second (IRR 1.2, 95% CI 1.1 to 1.4) and third (IRR 1.2, 95% CI 1.1 to 1.4) periods. There was a short-term relative increase in harm attributable to 18- to 19-year-old female drivers (IRR 1.5; 1.1 to 2.0). Results were similar for vehicle travel-based rates.

Discussion and Conclusions: Reducing the alcohol minimum purchasing age was followed by long-term increases in the incidence of traffic injury attributable to male 15- to 19-year-old alcohol-impaired drivers.

Source:
http://onlinelibrary.wiley.com/doi/10.1111/dar.12378/abstract?userIsAuthenticated=false&deniedAccessCustomisedMessage=

ALCOHOL USE AMONG NATIVE AMERICANS COMPARED TO WHITES: EXAMINING THE VERACITY OF THE 'NATIVE AMERICAN ELEVATED ALCOHOL CONSUMPTION' BELIEF

March 2016

Background: This study uses national survey data to examine the veracity of the longstanding belief that, compared to whites, Native Americans (NA) have elevated alcohol consumption.

Methods: The primary data source was the National Survey on Drug Use and Health (NSDUH) from 2009 to 2013: whites (*n* = 171,858) and NA (*n* = 4,201). Analyses using logistic regression with demographic covariate adjustment were conducted to assess differences in the odds of NA and whites being alcohol abstinent, light/moderate drinkers (no binge/heavy consumption), binge drinkers (5+ drinks on an occasion 1–4 days), or heavy drinkers (5+ drinks on an occasion 5+ days) in the past month. Complementary alcohol abstinence, light/moderate drinking and excessive drinking analyses were conducted using Behavioral Risk Factor Surveillance System (BRFSS) data from 2011 to 2013: whites (*n* = 1,130,658) and NA (*n* = 21,589).

Results: In the NSDUH analyses, the majority of NA, 59.9% (95% CI: 56.7–63.1), abstained, whereas a minority of whites, 43.1% (CI: 42.6–43.6), abstained—adjusted odds ratio (AOR): 0.64 (CI: 0.56–0.73). Approximately 14.5% (CI: 12.0–17.4) of NA were light/moderate-only drinkers, versus 32.7% (CI: 32.2–33.2) of whites (AOR: 1.90; CI: 1.51–2.39). NA and white binge drinking estimates were similar—17.3% (CI: 15.0-19.8) and 16.7% (CI: 16.4–17.0), respectively (AOR: 1.00; CI: 0.83–1.20). The two populations' heavy drinking estimates were also similar—8.3% (CI: 6.7–10.2) and 7.5% (CI: 7.3–7.7), respectively (AOR: 1.06; CI: 0.85–1.32). Results from the BRFSS analyses generally corroborated those from NSDUH.

Conclusions: In contrast to the 'Native American elevated alcohol consumption' belief, Native Americans compared to whites had lower or comparable rates across the range of alcohol measures examined.

Source: http://www.sciencedirect.com/science/article/pii/S037687161501830X?np=y

BINGE DRINKING IS ASSOCIATED WITH DIFFERENCES IN WEEKDAY AND WEEKEND ADHERENCE IN HIV-INFECTED INDIVIDUALS

February 2016

Background: Understanding patterns of antiretroviral adherence and its predictors is important for designing tailored interventions. Alcohol use is associated with non-adherence. This study aimed to evaluate: (1) if there was a difference in weekday compared with weekend adherence in HIV-infected individuals from low and middle income countries (LMIC), and (2) whether binge drinking was associated with this difference.

Methods: Data from a randomized trial conducted at 9 sites in 8 LMIC were analyzed. Microelectronic monitors were used to measure adherence. Differences between weekday and weekend adherence in each quarter (successive 12-week periods) were compared using Wilcoxon signed rank tests and predictors of adherence, including baseline binge drinking, were evaluated using Generalized Estimating Equations.

Results: Data from 255 participants were analyzed: 49.8% were male, median age was 37 years and 28.6% enrolled in Haiti. At study entry, only 2.7% reported illicit substance use, but 22.3% reported binge drinking at least once in the 30 days prior to enrollment. Adherence was higher on weekdays than weekends (median percent doses taken: 96.0% vs 94.4%; 93.7% vs 91.7%; 92.6% vs 89.7% and 93.7% vs 89.7% in quarters 1–4 respectively, all $p < 0.001$). Binge drinking at baseline and time on study were both associated with greater differences between weekday and weekend adherence.

Conclusions: Adherence was worse on weekends compared to weekdays: difference was small at treatment initiation, increased over time and was associated with binge drinking. Screening and new interventions to address binge drinking, a potentially modifiable behavior, may improve adherence in HIV-infected individuals in LMIC.

Source: http://www.sciencedirect.com/science/article/pii/S0376871615018281

ACUTE EFFECTS OF ALCOHOL ON ENCODING AND CONSOLIDATION OF MEMORY FOR EMOTIONAL STIMULI

January 2016

Objective: Acute doses of alcohol impair memory when administered before encoding of emotionally neutral stimuli but enhance memory when administered immediately after encoding, potentially by affecting memory consolidation. Here, we examined whether alcohol produces similar biphasic effects on memory for positive or negative emotional stimuli.

Method: The current study examined memory for emotional stimuli after alcohol (0.8 g/kg) was administered either before stimulus viewing (encoding group; $n = 20$) or immediately following stimulus viewing (consolidation group; $n = 20$). A third group received placebo both before and after stimulus viewing (control group; $n = 19$). Participants viewed the stimuli on one day, and their retrieval was assessed exactly 48 hours later, when they performed a surprise cued recollection and recognition test of the stimuli in a drug-free state.

Results: As in previous studies, alcohol administered before encoding impaired memory accuracy, whereas alcohol administered after encoding enhanced memory accuracy. Critically, alcohol effects on cued recollection depended on the valence of the emotional stimuli: Its memory-impairing effects during encoding were greatest for emotional stimuli, whereas its memory-enhancing effects during consolidation were greatest for emotionally neutral stimuli. Effects of alcohol on recognition were not related to stimulus valence.

Conclusions: This study extends previous findings with memory for neutral stimuli, showing that alcohol differentially affects the encoding and consolidation of memory for emotional stimuli. These effects of alcohol on memory for emotionally salient material may contribute to the development of alcohol-related problems, perhaps by dampening memory for adverse consequences of alcohol consumption.

Source: http://www.jsad.com/doi/abs/10.15288/jsad.2016.77.86