The Persistent Effects of Minimum Legal Drinking Age Laws on Drinking Patterns Later in Life
Andrew D. Plunk, Patricia Cavazaos-Rehg, Laura J. Bierut, Richard A. Grucza

Background
Exposure to permissive minimum legal drinking age (MLDA) laws not only affects young adults in the short term, but also later in life; for example, individuals who could legally purchase alcohol before the age of 21 are more likely to suffer from drinking problems as older adults, long after the laws had been changed. However, it is not known how permissive MLDA exposure affects specific drinking behavior. This present study uses changes in MLDA laws during the 1970s and 1980s as a natural experiment to investigate the potential impact of permissive MLDA exposure on average alcohol consumption, frequency of drinking, and patterns of binging and more moderate, nonheavy drinking.

Methods
Policy exposure data were paired with alcohol use data from the 1991 to 1992 National Longitudinal Alcohol Epidemiologic Survey and the 2001 to 2002 National Epidemiologic Survey on Alcohol and Related Conditions. Past-year drinkers born between 1949 and 1972 (n = 24,088) were included. Average daily intake, overall drinking frequency, and frequency of both binge episodes (5+ drinks) and days without a binge episode (nonheavy drinking) for the previous year at the time of interview were tracked for each respondent.

Results
Exposure to permissive MLDAs was associated with higher odds to report frequent binging and lower odds to report any moderate drinking; these associations were largely driven by men and those who did not attend college. Overall drinking frequency and average alcohol consumption were not affected by MLDA exposure.

Conclusions
The ability to legally purchase alcohol before the age of 21 does not seem to increase overall drinking frequency, but our findings suggest that it is associated with certain types of problematic drinking behaviors that persist into later adulthood: more frequent binge episodes and less frequent nonheavy drinking. We also propose that policymakers and critics should not focus on college drinking when evaluating the effectiveness of MLDAs.
Temptation to Drink as a Predictor of Drinking Outcomes Following Psychosocial Treatment for Alcohol Dependence
Katie Witkiewitz
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Background
Alcohol craving, defined as the subjective experience of an urge or desire to use alcohol, has been identified in numerous settings as a significant predictor of alcohol use and alcohol relapse following treatment for alcohol use disorders. Yet, numerous limitations to the conceptualization and measurement of drinking temptation have led many researchers to question whether self-reported drinking temptation is a useful construct for evaluating treatments for alcohol use disorders.

Methods
Secondary analyses of data from Project MATCH, a multisite randomized clinical trial, were conducted to examine the association between a single-item measure of self-reported “temptation to drink” and drinking outcomes. The first goal was to determine whether temptation to drink changed during the course of treatment for alcohol dependence. The second goal was to assess the predictive validity of temptation to drink, assessed during the fourth session of treatment, as a predictor of past 30-day drinking rates and past 90-day drinking-related consequences at 1 and 3 years following treatment.

Results
The temptation to drink decreased significantly during treatment, and self-reported temptation to drink during the fourth session of treatment was significantly associated with numerous drinking outcomes (including quantity, frequency, and consequences) at 1 year posttreatment ($R^2 = 0.04$ to 0.11) and number of drinks per drinking day at 3 years following treatment ($R^2 = 0.02$). A dichotomous measure of temptation to drink (not at all tempted vs. all other levels of temptation) had greater sensitivity as a predictor of drinking outcomes at 1 and 3 years posttreatment than alternative drinking measures (e.g., any drinking, any heavy drinking days) assessed during treatment.

Conclusions
A single-item measure of temptation to drink was a reasonable predictor of short- and long-term drinking outcomes following treatment and comparable to commonly used measures of drinking outcomes for alcohol clinical trials.

Commentary on Marczinski and Colleagues: Mixing an Energy Drink with an Alcoholic Beverage Increases Motivation for More Alcohol in College Students
William C. Griffin III

Background
While several researchers have proposed a causal relationship between alcohol mixed with energy drink (AmED) consumption and subsequent alcohol intake, there is a dearth of research exploring the potential mechanisms underpinning this association.

**Methods**
Marczinski and colleagues (in press) report the results of a double-blind, placebo-controlled, between-groups study assessing whether an initial AmED dose primes an increased motivation to drink relative to alcohol alone. Participants \( n = 80 \) received either alcohol (0.91 ml/kg vodka), energy drink (ED; 1.82 ml/kg Red Bull\textsuperscript{®}), AmED, or a placebo beverage and then self-reported their motivation to drink via the Desire-for-Drug scale.

**Results**
Subjective ratings of “desire more alcohol” were significantly higher than predrink in the placebo, alcohol, and AmED conditions, with this effect apparent at more time points in the AmED condition. While it was concluded that EDs may increase alcohol priming, between-condition analyses revealed that ratings did not differ significantly in AmED and alcohol conditions, with moderate magnitude treatment effects at most, and ratings of desire generally closer to 0 (absence of desire) than 100 (very much desire).

**Conclusions**
While the study by Marczinski and colleagues fills an important gap in the literature, direct measurement of AmED priming’s effect on subsequent alcohol consumption using a within-subjects design and appropriate statistical comparison is required to (i) establish the practical implications of these results for AmED consumers and (ii) discount any individual differences in such priming effects.

**Drinking Before Going to Licensed Premises: An Event-Level Analysis of Predrinking, Alcohol Consumption, and Adverse Outcomes**
Florian Labhart, Kathryn Graham, Samantha Wells, Emmanuel Kuntsche

**Background**
Research in the United States and the United Kingdom indicates that drinking before going out (commonly called “predrinking”) is common among young people and associated with increased harm. On the basis of Swiss data, this study investigates differences in alcohol consumption and adverse or risky outcomes for evenings when persons consumed alcohol before going to a licensed premise (i.e., predrinking), drank on-premise only, or drank off-premise only.

**Methods**
Using the recently developed Internet-based cell phone-optimized assessment technique (ICAT), alcohol consumption and drinking location were assessed at 6 time points (5 PM to the next morning) on Thursdays, Fridays, and Saturdays over 5 consecutive weeks by means of participants’ cell phones. Overall, 7,828 assessments
provided by 183 young adults (53.0% women, mean age [SD] = 23.1 [3.1]) on 1,441
evenings were analyzed by means of cluster-adjusted means and proportion tests and
of multilevel structural equation models. The extent to which alcohol consumption
mediated the association between predrinking and adverse outcomes was also
examined.

Results
Higher alcohol consumption occurred on evenings with predrinking (7.1 drinks on
average) compared with on-premise only (4.2 drinks) and off-premise only (4.3 drinks)
evenings. Adverse outcomes occurred more often on evenings with predrinking (with
23.8% of predrinking nights involving at least 1 outcome) than on evenings with on-
premise drinking only (13.9%) and off-premise drinking only (12.0%). Predrinking was
indirectly associated with adverse outcomes, mediated by larger amounts of alcohol
consumed in the evening.

Conclusions
Because of its association with heavier consumption and related adverse outcomes,
predrinking, especially combined with on-premise drinking, represents a major target for
prevention. Educational interventions as well as structural measures, such as reduction
in late-night off-sale opening hours, and staff training in responsible beverage service,
are needed to prevent high total consumption and related adverse consequences
among young people.

Treatment Utilization and Unmet Treatment Need Among Hispanics Following
Brief Intervention
Craig A. Field, Gerald Cochran and Raul Caetano

Background
In a large randomized trial examining ethnic differences in response to a brief alcohol
intervention following an alcohol-related injury, we showed that Hispanics, but not non-
Hispanics, were more likely to reduce alcohol intake in comparison with treatment as
usual (Addiction 105:62, 2010). The current study evaluates whether the observed
improvements in drinking outcomes previously reported among Hispanics following brief
intervention might be related to prior or subsequent treatment utilization.

Methods
This study is a secondary analysis of data collected in a randomized clinical trial that
evaluated ethnic differences in the effect of a brief motivational intervention (BMI) on
alcohol use among medical inpatients admitted for alcohol-related injury. For this study,
statistical analyses were carried out to compare alcohol use, alcohol problems,
treatment utilization, and unmet treatment need between Hispanic (n = 537) and non-
Hispanic White (n = 668) inpatients. In addition, we examined the relationship between
prior treatment utilization and unmet treatment need and alcohol use outcomes
following brief intervention and the impact of brief intervention on subsequent treatment
utilization and unmet treatment need.
Results
In comparison with non-Hispanic Whites, Hispanics at baseline reported heavier drinking, more alcohol problems, greater unmet treatment need, and lower rates of treatment utilization. Among Hispanics, multilevel analyses showed that prior treatment utilization or unmet treatment need did not moderate the effect of BMI on alcohol outcomes. Furthermore, BMI did not significantly impact subsequent treatment utilization or unmet treatment need among Hispanics. Finally, treatment utilization and unmet treatment need at 6 months were not significant mediators between BMI and alcohol use outcomes at follow-up.

Conclusions
The benefits of brief intervention among Hispanics do not appear to be better explained by subsequent engagement in mutual help groups or formal substance abuse treatment. Prior history of treatment, regardless of the severity of alcohol problems, does not appear to influence the impact of brief intervention on alcohol use among Hispanics. These findings support prior results reporting the benefits of brief intervention among Hispanics and demonstrate that these improvements are not related to prior or subsequent treatment utilization.

Marijuana Use in College May Increase Risk of Leaving School, Study Suggests

Using marijuana in college may increase the risk of leaving school, a new study suggests. Researchers found even students who only used marijuana occasionally were more likely to leave than their peers who did not use drugs.

The study included 1,133 college students, who were followed over four years. The researchers found students who used marijuana more than 17 days a month were twice as likely as those who used marijuana less than a day per month to have an enrollment gap while in college, HealthDay reports. Even students who used marijuana three to 12 days a month were more likely to have an enrollment gap, compared with those who did not use marijuana.

Drugs other than marijuana also were significantly associated with leaving college, the study found.

Continuous enrollment was defined as being enrolled in college for at least one credit during each fall and spring semester for the first four years, the article notes. “We wanted to look at whether or not drug use interferes with goals students had set for themselves. Our results show that marijuana use is not a benign thing,” said lead researcher Dr. Amelia Arria, Director of the Center on Young Adult Health and Development at the University of Maryland School of Public Health. The findings appear in the Journal of Studies on Alcohol and Drugs.
In a second study, published in the journal *Psychiatric Services*, Dr. Arria found students who experience depression symptoms and seek treatment in college may be at risk for an enrollment gap, particularly if they use marijuana or other illegal drugs. If students’ depression was identified and treated before they went to college, they were not at risk for enrollment gaps, the study found.

**Study: Energy Drinks May Disturb Heart’s Natural Rhythm**

Energy drinks may increase blood pressure, and lead to changes in the heart’s natural rhythm, according to a study presented at a meeting of the American Heart Association. The drinks may make the heart more prone to electrical short circuits, *HealthDay* reports. The researchers noted it is not clear how much of the drinks’ effect is due to the caffeine in the drinks.

Researchers reviewed seven studies. They included 93 people who consumed energy drinks and had their QT interval measured. This interval indicates how the heart resets itself electronically while it beats. A longer interval increases the risk that the heart will develop a “short circuit,” a potentially deadly problem.

An additional 132 people consumed energy drinks and had their blood pressure measured. Most of the participants had one to three cans of Red Bull, the article notes. The study found participants’ QT intervals were longer after they consumed energy drinks. Their systolic blood pressure (the top number in a blood pressure reading) increased 3.5 points after participants had the drinks, noted co-author Dr. Ian Riddock. “QT prolongation is associated with life-threatening arrhythmias [heart rhythm problems]. The finding that energy drinks could prolong the QT, in light of the reports of sudden cardiac death, warrants further investigation.” Dr. Riddock said “the correlation between energy drinks and increased systolic blood pressure is convincing and concerning, and more studies are needed to assess the impact on the heart rhythm,” noted lead researcher Sachin A. Shah, Pharm.D. “Patients with high blood pressures or long QT syndrome should use caution and judgment before consuming an energy drink. Since energy drinks also contain caffeine, people who do not normally drink much caffeine might have an exaggerated increase in blood pressure.”

**New Legislation to Prevent Cough Medicine Abuse Re-Introduced in Senate**

U.S. Senator Bob Casey (D-PA) this week re-introduced new bipartisan legislation to prevent the abuse of cough syrup to get high, a particularly worrisome trend among American teens.

Dextromethorphan (DXM) is the active ingredient in many over-the-counter cough and cold medicines and is safe when taken as recommended, but five percent of teenagers report having intentionally taken large doses of DXM for effects that include hallucinations, confusion, blurred vision and loss of motor control.
Senator Casey’s *Prevent Abuse of Cough Treatments (PACT) Act* will make it harder for teens to purchase the drug for this dangerous use, while still keeping cough medications accessible to those who use them for their intended purpose.

Our President and CEO Steve Pasierb had this to say about the new initiative: “This legislation is vital for families as it will help ensure that medicines are less available to kids who are tempted to experiment. It will help protect them, as it limits a key form of ready access that teens have to cough medicine and to abusing the active ingredient DXM. We are working closely with the Consumer Health Products Association on a digital and social media-based prevention effort targeting those teens who actively search online for information on how to abuse DXM. By embracing an integrated approach, one that underscores the importance of parent-to-teen communication about the risks of medicine abuse, stresses the need to safeguard medicines at home, limits children’s access at retail points and employs innovative teen intervention strategies online, we can help curb teen abuse of over-the-counter cough medicine.”

**Monster Agrees to Include Energy Drinks’ Caffeine Content on Label**

Monster Energy has agreed to market its drinks as beverages, instead of dietary supplements, *CNN* reports. The company’s decision comes after 18 public health experts asked the Food and Drug Administration (FDA) to restrict caffeine content in energy drinks.

The company’s products will not change, but their label will soon include the amount of caffeine in each can, the article notes.

Monster Energy has been implicated in the deaths of five people, while the possible involvement of 5-Hour Energy has been cited in 13 deaths. In one case, a 14-year-old girl reportedly died of cardiac arrhythmia after consuming two 24-ounce Monster Energy drinks. The FDA also received 21 claims of adverse reactions, some which required hospitalization, associated with Red Bull.

Energy drink manufacturers say their products are safe, and the amount of caffeine in them is on a par with coffee and other commonly consumed drinks.

Under federal law, manufacturers of dietary supplements are required to notify the FDA of any adverse events linked to their products. Manufacturers of food or beverages are not required to do so.

*Consumer Reports* analyzed Monster Energy’s contents last year, and found there was about 90 milligrams of caffeine in an 8-ounce can. The drink is available in sizes up to 24 ounces. In contrast, a 16-ounce Starbucks Grande contains 330 milligrams of caffeine.
In January, a government report found the number of emergency room visits involving energy drinks doubled from 2007 to 2011, reaching more than 20,000. The report, from the Substance Abuse and Mental Health Services Administration (SAMHSA), found most cases involved teens or young adults. SAMHSA calls consumption of energy drinks a “rising public health problem.” The drinks can cause insomnia, headaches, seizures, fast heartbeat and nervousness, the report notes.

**Evidence of Harmful Effects of Alcohol Stronger Than Data on Benefits: Experts**

The evidence of the harmful effects of alcohol outweighs data on the benefits of drinking, a physician writes in the current issue of the journal *Addiction*. While moderate drinking has been associated with several health benefits, there is not enough proof of alcohol’s beneficial effects to recommend it, wrote Hans Olav Fekjaer, a Norwegian psychiatrist.

“People have several motives for drinking alcohol, but most evidence today indicates that health is not a valid argument,” Fekjaer told Reuters.

Having one or two drinks daily has been associated with reducing the risk of health problems including heart disease, type 2 diabetes, rheumatoid arthritis and the common cold, he noted.

Most of the studies that link moderate drinking and health benefits are observational. This research finds associations between lifestyle choices and health outcomes, but does not prove cause and effect, explains Dr. Richard Saitz of Boston University School of Medicine and Public Health, and the editor of the journal Evidence-Based Medicine. Dr. Saitz added people who drink moderately might live generally healthier lives. “People who drink low risk amounts are much more likely to get mammograms and have their teeth checked by a dentist, to go see a physician for a physical, to exercise,” he said.

**Study Finds Underage Drinkers Prefer Top Alcohol Brands**

The first national study to identify alcohol brands consumed by underage youth finds the top 25 brands accounted for almost half of youth alcohol consumption. Nearly 28 percent of underage drinkers consumed Bud Light in the past month, while 17 percent drank Smirnoff malt beverages and 15 percent drank Budweiser.

Underage drinkers consume far fewer brands than adults tend to drink, according to study co-author David Jernigan, PhD, Director of the Center on Alcohol Marketing and Youth (CAMY) at the Johns Hopkins Bloomberg School of Public Health. The study found that other brands popular among underage youth include Smirnoff Vodkas, Coors Light, Jack Daniel’s Bourbons, Corona Extra, Mike’s, Captain Morgan Rums and Absolut Vodkas.
“We monitor what brands of cigarettes kids are smoking, which was how we knew about the popularity of Joe Camel,” Dr. Jernigan says. “But until now, no one has been monitoring what brands of alcohol they are drinking. We’ve shown that this kind of study can be done, and now it should be done on a regular basis.”

Dr. Jernigan says this report paves the way for future studies to examine the link between exposure to alcohol advertising and marketing efforts, and drinking in young people.

By age 15, half of teens have had at least one drink, and by age 18, more than 70 percent of teens have done so, according to the National Institute on Alcohol Abuse and Alcoholism. Dr. Jernigan notes many studies have found the more young people are exposed to alcohol advertising and marketing, the more likely they are to drink. If they are already drinking, such exposure leads them to drink more.

In the new study, researchers at CAMY and the Boston University School of Public Health conducted an online survey of 1,032 youth ages 13 to 20. Participants were asked about their past 30-day consumption of 898 brands of alcohol among 16 alcoholic beverage types. They answered questions about how often and how much of each brand they consumed. The study appears in Alcoholism: Clinical & Experimental Research.

Dr. Jernigan plans to look at how much the price of alcohol influences which brands underage youth drink, and to what degree they are mimicking adult consumption by choosing the same brands as adults. He will also be examining the relationship between youth exposure to alcohol ads by brand and the brands they choose to drink. “This research will lead to insights that will inform public policy,” he says. “Everybody has gut sense that some brands are appealing to kids more than others. Now we know for which brands that is working.”

New Mexico Considers Banning Alcohol Purchases for Many Convicted Drunk Drivers

New Mexico, which has one of the highest rates of alcohol-related traffic deaths in the country, is considering a bill that would bar many convicted drunk drivers from purchasing alcohol anywhere.

The bill would prevent these drivers from buying alcohol in stores, restaurants or bars. If passed, it would be among the most restrictive drunk-driving laws in the country, according to The New York Times.

Currently, people convicted of drunk driving in New Mexico must install an ignition interlock device in their vehicle, usually for one year for their first offense. An ignition interlock device requires a driver to take a breath test before starting the car, and will prevent the car from starting if the operator has a blood alcohol level above a certain level.
Under the current bill, the measure would be expanded so that drivers with interlock devices would be issued a specially marked driver license that states they are prohibited from purchasing alcohol.

The bill passed in the state House of Representatives, and cleared a Senate committee late last week.

“We have a terrible problem in New Mexico, and what we are trying to do is come at it from the other side, not just the punitive, incarceration and interlock side,” said State Representative Brian Egolf, who introduced the measure.

A legislator who opposes the measure, Representative Antonio Maestas, said he is concerned it will criminalize addiction. “What this bill does, in my opinion, is essentially micromanage alcoholism without providing a treatment option,” he said. About half of states monitor drunk drivers’ alcohol consumption, generally through an ankle bracelet. Alaska has a similar law to the one being proposed in New Mexico.

Study Examines New Treatment for Marijuana Dependence

A new potential treatment for marijuana dependence, and the success of network therapy, which engages family and friends in a patient’s substance abuse treatment, were two of the topics discussed at the recent annual meeting of the New York Society of Addiction Medicine. This is the second of a two-part report on the meeting, “Addiction Medicine 2013: Emerging Problems, Current Treatment.”

Researchers at Columbia University in New York are studying a new treatment for marijuana dependence. Margaret Haney, PhD, led a study of 11 people, which has not yet been published, of a synthetic version of THC—the active ingredient in marijuana—called nabilone. Marijuana-dependent patients received either a placebo or one of two doses of nabilone.

Nabilone decreased marijuana withdrawal symptoms, such as increasing sleep and appetite, and decreased marijuana self-administration, in a laboratory model of relapse. Patients did not experience a “high” from nabilone, indicating it does not have a high abuse potential. The study was funded by the National Institute on Drug Abuse.

Dr. Haney’s colleague, Ziva Cooper, PhD, of Columbia University, Department of Psychiatry, New York State Psychiatric Institute, noted that while many people do not regard marijuana dependence as a major problem, it can lead to significant impairment or distress. “Marijuana dependence is likely to become more common as marijuana becomes legal in more states,” she said at the recent New York Society of Addiction Medicine meeting.

Marijuana potency has been increasing over the last 40 to 50 years, Dr. Cooper said. There is currently no medication approved by the U.S. Food and Drug Administration for treatment of marijuana dependence. Of people who do seek treatment for marijuana
dependence, many are unable to stay abstinent, Dr. Cooper observed. In one study, 71 percent returned to marijuana use within six months.

Another treatment that has shown potential for marijuana dependence is a combination of oral THC and lofexidine, a drug used in the United Kingdom for opiate withdrawal, which is not approved in the United States. In a small study, patients who took the combination treatment had decreased cravings for marijuana and cigarettes, decreased relapse rate and improved sleep compared with either THC or lofexidine alone.

**Network Therapy: Involving Family and Friends in Substance Abuse Treatment**

Engaging close family and friends in substance abuse counseling—a process called network therapy—can help improve abstinence rates while providing much-needed support, according to an expert at New York University School of Medicine. Marc Galanter, MD, a psychiatrist who originated network therapy, says including family and friends provides a valuable resource for patients if they relapse, while keeping them accountable. The therapy also provides support to those affected by patients’ substance use disorders.

Dr. Galanter conducted a study, published in 2004, that found substance abuse patients who engaged in network therapy were twice as likely to be abstinent compared with those who did not engage in the treatment.

“Participants in network therapy should have a close, ongoing relationship with the patient, and should not have a substance use disorder, so they don’t undermine the course of treatment,” Dr. Galanter said at the recent annual meeting of the New York Society of Addiction Medicine.

He continues treating patients separately in addition to seeing them as part of network therapy. The friends and family members who agree to be part of network therapy must agree to be available if the patient needs help. “They secure compliance—such as making sure the patient doesn’t go to a bar,” says Dr. Galanter. They also can suggest solutions to help the patient achieve and maintain abstinence.

Patients who know their drug test results will be shared with their network will be more motivated to pass the test, because they won’t want to let their family and friends down, Dr. Galanter observed.

Network therapy can help enforce patient agreements for future behavior, he added. “For instance, a patient may agree that if he can’t become abstinent within a few weeks, he will go into residential treatment. If he backs down, it’s harder for him to dismiss what he initially agreed to if he did so in front of his network.”

**Multiple Sex Partners Increase Risk of Alcohol or Marijuana Dependence**
A new study links the number of sex partners young adults have with their subsequent risk of developing alcohol or marijuana dependence disorders. The study found young women who had more than two or three sex partners when they were 18 to 20 years old were nearly 10 times more likely than those with one or no sexual partner to develop a substance dependence problem at age 21.

Time.com reports researchers at the University of Otago in New Zealand found the risk of developing substance dependence disorders increased, the more sexual partners a person had. Having more than two or three partners from age 21 to 25 raised the risk of addiction at age 26 sevenfold. At age 32, women had a nearly 18 times greater risk if they had two or three partners when they were 26 to 31, compared with their peers with one or no sexual partner during that period.

Men’s risk also increased, but not as dramatically. Men who had one sex partner from age 18 to 20 had nearly three times the risk of a serious substance use disorder at age 21. Having more than two or three partners increased their risk fourfold. The findings appear in the Archives of Sexual Behavior.

The researchers said multiple sex partners and later substance abuse could be linked because they are part of a cluster of risk-taking behaviors that happens in adolescence and young adulthood. Alcohol and marijuana use may encourage sexual behavior, they added.

Study lead author Dr. Sandhya Ramrakha noted in a news release that pubs and bars are places where one can easily meet partners. “The role of the alcohol industry in encouraging the view that alcohol is entertainment, targeting young women in particular, is disturbing. Young women are also encouraged to ‘keep up’ with young men in relation to their drinking,” Dr. Ramrakha noted.