MEDPAGE TODAY®

Public Health & Policy
06.01.2015

Kids Drink Less With More Restrictive Alcohol Policies

- Lower odds of youth drinking and binge drinking associated with stronger alcohol policies

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Action Points

- Lower levels of youth drinking and binge drinking were associated with more stringent policies on alcohol.
- Note that that alcohol contributes to three of the four leading causes of death among adolescents, and that while people tend to think of ways to reduce youth drinking, they tend to think about educational interventions as opposed to shifts in policy.

Lower levels of youth drinking and binge drinking were associated with more stringent policies on alcohol, according to a longitudinal study that combined data from Youth Risk Behavior Surveys with an independent examination of state-level alcohol policies.

An increase of 10 points in these Alcohol Policy Scale (APS) scores was associated with 8% lower odds of youth drinking (adjusted odds ratio: 0.92, 95% CI: 0.90-0.95) and 7% lower odds of youth binge drinking (AOR: 0.93, CI: 0.91-0.96) reported Ziming Xuan, ScD, Department of Community Health Sciences at the Boston University School of Public Health, and colleagues.

Even after adjusting for policies specifically targeted to youth, stronger overall ("population-oriented") policies on alcohol were associated with lower odds of youth drinking (AOR: 0.94, 95% CI: 0.92-0.97) and youth binge drinking (AOR: 0.96, CI: 0.94-0.99), they wrote in *Pediatrics*.
Similar effects were observed by gender, grade level, and among Hispanic white and Hispanic youth, though the policies appeared to have no impact on non-Hispanic black youth and non-Hispanic other races.

Researchers examined state-level alcohol policies from 1999 to 2011, and found a total of 238 state-level policies. These were divided into mutually exclusive population-oriented policies (n=19) and youth-oriented policies (n=10) and each group of policies

was given an APS score. Overall, the study found a correlation between population-oriented and youth-oriented APS scores (r=0.51, *P*<0.01).

Not surprisingly, the authors found an overall inverse association between population-oriented policies and state adult per capita alcohol consumption (r=0.46, *P*<0.01) and prevalence of binge drinking (r=0.49, *P*<0.01). But after adjusting for those factors, the association between population-oriented policies and youth drinking was partially mediated (AOR: 0.96, 95% CI: 0.93-0.98; Sobel test statistic = -5.93, *P*< 0.001) and the association with youth binge drinking was fully mediated (AOR: 0.97, CI: 0.95-1.00; Sobel test statistic= -4.80, *P*<0.001), they wrote.

In a separate interview with *MedPage Today*, co-author Timothy Naimi MD, MPH, a physician and alcohol epidemiologist at Boston Medical Center, pointed out that alcohol contributes to three of the four leading causes of death among adolescents (unintentional injuries, homicides, and suicides), and that while people tend to think of ways to reduce youth drinking, they tend to think about educational interventions as opposed to shifts in policy.
"There's never been a comprehensive study on the effects of alcohol policies across the 50 states and what kind of impact alcohol policies have as a group," he said. "And because our research team developed the first sort of scale of the strength of alcohol policies based on the 50 states, we wanted to see how that related to underaged drinking."

David Jernigan, PhD, associate professor at the Johns Hopkins Bloomberg School of Public Health, who was not affiliated with the study, agreed that more restrictive overall drinking policies have an impact on teen drinking.

"What this study adds is to demonstrate that the policies that influence adult drinking – such as higher alcohol taxes and greater restrictions on alcohol outlets – also affect underage drinking," he said. "Although the authors could not incorporate a measure of the level of enforcement of these policies, the findings underscore the importance of taking steps to reduce excessive drinking overall if we are to continue to make headway in reducing underage drinking."

The APS score was determined by a panel of 10 alcohol policy experts who selected the policies and gave them efficacy ratings (ER) and implementation ratings (IR) that comprised the APS score. Data from Youth Risk Behavior Surveys (YRBS) were from students in 9th through 12th grade during the study period.

Limitations include a concern about reverse causation, due to many of the policies in the APS having evidence of effectiveness that was based on longitudinal studies, and the fact that the ER and IR scores were based on the subjective opinion of a panel. The authors also note they did not include federal policies, policies that did not vary

between states, and policies with insufficient data in the APS scores, which could underestimate the impact of some policies on youth drinking levels.

The authors recommended research into further, discrete policies on youth drinking levels. Naimi specifically mentioned tightening up some of the more lax alcohol policies, such as alcohol taxation and strict enforcement of the under 21 drinking laws. He suggested clinicians might play an active role in recognizing the importance of stricter alcohol policies on the youth population.

"A lot of pediatricians and family physicians have been very active, for example, in advocating for stricter tobacco control policies to help reduce youth smoking, so I think sort of a comparable approach is warranted when it comes to alcohol and underaged drinking," Naimi concluded.

The study was funded by the National Institutes of Health.

The authors have indicated they have no potential conflicts of interest to disclose.

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Pediatrics
Source Reference: Xuan Z, et al "Youth drinking in the United States: Relationships with alcohol policies and adult drinking" *Pediatrics* 2015; DOI: 10.1542/peds.2015-0537.