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A new minimum legal drinking age (MLDA)?: Some findings to inform the debate

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Abstract

Despite support that the minimum legal drinking age (MLDA) of 21 is an important public health provision in the United States, a group of college presidents are petitioning for the MLDA to be lowered. To inform this debate, we examined whether heavy and risky drinking was associated with a stance to lower the MLDA in 865 college students under the age of 21. Results showed that, in comparison to other students, heavy/risky drinkers more often had a stance to lower the MLDA. Thus, for students, the MLDA debate seems to be less a philosophical issue about prohibition and harm reduction, and appears to be more a political stance that reflects students' concurrent behaviors. We discuss how drinking and MLDA laws in Europe might compare with the United States, and how future policy work might benefit from empirical and cross-cultural study.

Keywords

Minimum legal drinking age; reactance; policy

1. Introduction

Although there has been a preponderance of evidence to support the minimum legal drinking age (MLDA) of 21 as an important public health provision in the United States (American Medical Association, 2004), a large number of college presidents are petitioning to rethink and possibly lower the MLDA to 18 years of age (Amethyst Initiative, 2008). One rationale for this petition is that, even though college heavy drinking is highly prevalent (Johnston, O'Malley, Bachman & Schulenberg, 2007) and poses an injury and mortality risk to all students (Hingson, Heeren, Winter & Wechsler, 2005), the risk is presumably exacerbated when one subgroup within a population is legally allowed alcohol (typically third- and fourth- year college students), and the other subgroup is prohibited from it (typically first- and second- year college students). Some evidence to support this claim is the finding that underage students are even more likely to drink heavily than their of-age peers (Wechsler, Lee, Nelson & Kuo,

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Of the $n=228$ that reported not having binged in the past year, $n=99$ also reported that they never drank alcohol in their lives (i.e., they were “abstainers”). All the results in this report were largely unaffected by removal of these abstainers in ancillary analyses.

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2002a; Wechsler, Lee, Nelson & Kuo, 2002b), possibly to make up for their otherwise limited access to alcohol.

If the question of lowering the MLDA is a purely philosophical one in which underage students themselves feel that the current MLDA is too prohibitive and has the unfortunate unintended consequences of exacerbating problems, we would expect that the overwhelming majority of underage college students would oppose the current MLDA regardless of how they drink. If, however, we see that heavy and risky drinkers typically promote a lower MLDA but other students do not (or are less interested in change), then this would imply that heavy and risky drinkers are simply looking to drink legally and with less inconvenience. Such a pattern of findings would suggest that lowering the MLDA would not necessarily reduce the problem of heavy drinking in underage college students but simply make it less legally risky and more convenient. It would certainly suggest that the desire to lower the MLDA is motivated by drinkers' self interests. Despite the public health relevance of this issue, there is almost no empirical work on students' opinions on the MLDA and whether and how it relates with heavy and risky drinking. Thus, to inform the debate, we surveyed 865 underage college students for their opinions of the MLDA and the extent of their heavy and risky drinking.

2. Methods

2.1 Participants and procedure

Following approval from the Institutional Review Board, 865 underage students enrolled in introductory psychology at a large Midwestern university were offered research participation credit for participating in an online survey. Of note, the introductory psychology class has the highest enrollment rate of all classes for the university; consequently, the students in this class are quite representative of the university as a whole (University Registrar, 2007). All participants were under the age of 21 and averaged 18.49 ($SD=.63$; range=18–20) years of age. The sample was 61.1% female and 88.8% White/non-Hispanic.

2.2 Measures and data analyses

We estimated the prevalence rates of several measures of students' opinions about MLDA laws. Students were asked if they thought about how drinking customs and laws in countries in Europe might differ from those in the United States, if they thought it unfair of the U.S. government to make the MLDA 21, if they thought people would drink less if the MLDA were younger than 21, if they thought people would get drunk less often if the MLDA were younger than 21, and if they thought there would be fewer cases of drinking problems (e.g., alcoholism) if the MLDA were younger than 21 (0=No, 1=Yes). They were also asked what age they thought the MLDA should be (0=15 or lower, 1=16 years, 2=17 years, 3=18 years, 4=19 years, 5=20 years, 6=21 years, 7=22 years or higher).

We estimated whether these opinion variables correlated individually with four indices of heavy and risky drinking. The four indices of heavy drinking included self-reports of binge drinking, getting drunk, drinking a maximum amount of drinks in one's lifetime and vomiting and then immediately continuing to drink ("boot and rally"). The binge drinking variable assessed how often students had 5 or more (males) or 4 or more (females) drinks containing alcohol in within a two-hour period during the last 12 months (0=never, 1=1 or 2 days in the past year, 2=3 to 11 days in the past year, 3=one day a month, 4=2 to 3 days a month, 5=one day a week, 6=two days a week, 7=3 to 4 days a week, 8=5 to 6 days a week, 9=every day). The getting drunk variable assessed how often students got drunk on alcohol in the past 12 months, using the same scale as the binge drinking item. The maximum lifetime drinks variable assessed the largest number of drinks containing alcohol that students drank within a 24-hour period during their lifetime (0=I never drank alcohol, 1=one drink, 2=two drinks, 3=three

drinks, 4=four drinks, 5=5 to 7 drinks, 6=8 to 11 drinks, 7=12 to 17 drinks, 8=18 to 23 drinks, 9=24 to 35 drinks, 10=36 drinks or more). The “boot and rally” variable assessed the number of times that students vomited after drinking alcohol and immediately started drinking again in their lifetime (0=no times, 1=one time, 2=two times, 3=three times, 4=four or more times). Of note, sex (0=female, 1=male) and race (0=White/non-Hispanic, 1=other) were used as control variables in analyses, as they are also correlated with heavy drinking such that men and white/non-Hispanics are most likely to drink heavily (Wechsler, Dowdall, Davenport & Castillo, 1995).

3. Results

Just as on other college campuses, heavy drinking rates were high in this underage sample. For example, 52.8% reported binge drinking once a month or more in the past year (frequent binge drinkers), and an additional 20.5% reported binge drinking 1 to 11 days in the past year (infrequent binge drinkers). Also, 20.4% reported getting drunk at least two days each week or more, 20.0% reported having 18 or more drinks as their lifetime maximum, and 35.5% reported “booting and rallying” at least once in their lifetimes.

Figure 1 shows endorsement patterns of the MLDA opinion variables, stratified by whether individuals were frequent binge drinkers, infrequent binge drinkers, or had not binged in the past year¹. Results show that the overwhelming majority of underage students thought about MLDA laws and how they differ from laws in Europe, and thought that the current MLDA is unfair and that the MLDA should be 18 or 19. A majority (though not an overwhelming majority) of students thought that a lower MLDA would result in lower drinking rates, getting drunk less often, and less drinking problems. The figure shows that most of the students who would like to see the MLDA lowered were frequent binge drinkers and that frequent binge drinkers are more likely than their lighter drinking peers to hold such an opinion.

Table 1 shows raw and partial correlations between reports of heavier and riskier drinking and a stance to lower the MLDA (the partial correlations represent the association between heavy/risky drinking and a stance to lower the MLDA, after controlling for the effects of sex and race). Note that merely giving thought to differences in laws in Europe vs. the United States was not related to most of the indices of heavy drinking after controlling for sex and race. However, there was a moderately strong association between thinking about the fairness of the MLDA of 21, and heavy drinking, such that those who thought the MLDA of 21 was unfair were more likely to be heavy/risky drinkers, and those who thought it was fair were less likely to be heavy/risky drinkers. Of most relevance perhaps, is the finding in which, the younger that students reported thinking the MLDA should be, the heavier and riskier drinkers those students themselves tended to be, implying that for students, the MLDA debate is less a philosophical issue about prohibition and harm reduction, and appears to be more consistent with the students’ concurrent behaviors.

4. Discussion

Our finding of a systematic association between heavy and risky drinking and a stance to lower the MLDA implies that students do not wish to lower the MLDA on purely philosophical grounds; more likely, students who already drink (including those who drink dangerously) seem to be looking to do so legally. Also possible, these heavy-drinking students, in a well-intentioned attempt at objectivity, formulated their particular stances about the MLDA from their own self-referenced and therefore biased beliefs about underage drinking, a premise which is referred to as motivated reasoning (Kunda, 1990). That is, even though individuals attempt to reach objective conclusions (in this case, about the MLDA), they often utilize their own behaviors or beliefs as evidence, to the exclusion of others that might behave and believe

differently. So, for example, an underage student who drinks heavily might be more likely to refer to his or her own drinking behavior and conclude that not only is drinking acceptable at younger ages, but it should be legal to drink at younger ages.

An additional concern raised by our finding is that, of those students who currently respect the MLDA of 21 (that is, they report thinking it fair, and also do not currently drink heavily), there is most certainly an unidentified number who plan to drink heavily upon becoming 21. For example, Rutledge, Park and Sher (2008) found that 6.7% of college students made their drinking debuts on the occasion of turning 21 and that while many of these initial drinking experiences among these “virgin” drinkers was moderate, a number showed heavy drinking on the occasion of becoming “legal.” Presumably, many of these more conventional individuals would similarly initiate at least some heavy drinking at an earlier date, if the MLDA were lowered. This would be unfortunate, given the relation between heavy drinking in adolescence and compromised neuro-cognitive functioning (Ziegler, et al., 2005).

Thus, it is difficult for us to concede that lowering the MLDA would necessarily decrease heavy drinking on college campuses. However, we should note that the cross-sectional and correlational nature of our findings also make it difficult to irrefutably counter the idea that underage individuals are not drinking heavily out of sheer psychological reactance to what they feel is an unfair MLDA and that they would not do so if the MLDA were lower (Allen, Sprenkel & Vitale, 1994). With this in mind, we recognize an additional argument for lowering the MLDA; specifically, there is a poorly-documented idea that many Southern European countries, which have younger MLDAs, subsequently seem to enjoy lower drinking rates and fewer problems (Grube, 2005). Thus, it would seem that Southern Europeans, being free to drink alcohol at younger ages, are not as subject to psychological reactance, as are those from the United States.

However, there is some empirical support to suggest that this argument might not be as tenable as assumed. For example, although the past-month prevalence of self-reported intoxication in adolescents (approximately 15 to 16 years of age) was 18% in the United States, it was comparable in Southern Europe, being 23% in Spain (MLDA=18), 19% in Italy (MLDA=16) and 15% in France (MLDA=18); and incidentally, in Northern Europe, it was much higher, being 46% in the United Kingdom (MLDA=18) and 27% in the Netherlands (MLDA=18; Grube, 2005). Complicating matters is the fact that European countries with younger MLDAs often have much more restrictive advertising laws and driving and blood alcohol concentration (BAC) laws than the United States (Rehn, Room & Edwards, 2001). But it is unclear whether and how advertising and driving and BAC laws relate to reactance on an individual level, as is thought with MLDA laws.

Thus, the question of what MLDA is best for the United States is a complex one. Cross-cultural research might be the first step, with regard to understanding how MLDA laws and other health policy laws might work in tandem to impart the lowest negative health impact. In this vain, we suggest further empirical work investigating the best direction for future public health policy in the United States.

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Figure 1.
Prevalence rates of underage students' opinions about MLDA laws ($n=714-850$)

Table 1
Association between drinking and opinions about MLDA laws

	Binge drinking ($n=707-850$)		Getting drunk ($n=710-855$)		Max Drinks ($n=711-859$)		Boot and Rally ($n=711-855$)	
	Raw r	Partial r	Raw r	Partial r	Raw r	Partial r	Raw r	Partial r
Think about how drinking customs and laws in countries in Europe might differ from USA	.07*	.03	.04	.00	.11**	.07*	-.00	-.03
Think it unfair of the US government to make the MLDA 21	.32**	.30**	.35**	.33**	.38**	.36**	.19**	.18**
Think people would drink less if the MLDA were younger than 21	.13**	.12**	.12**	.11**	.17**	.16**	.07	.06
Think people would get drunk less if the MLDA were younger than 21	.19**	.17**	.21**	.19**	.22**	.20**	.12**	.12**
Think there would be fewer cases of drinking problems (e.g., alcoholism) if MLDA were younger than 21	.21**	.19**	.20**	.18**	.20**	.18**	.07	.05
What age do you think the MLDA should be?	-.26**	-.23**	-.27**	-.24**	-.31**	-.27**	-.18**	-.15**

Note. Sex and Race are the control variables in partial r columns. Correlations are point-biserial, where endorsement questions are dichotomous.

* $p < .05$

** $p < .01$