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Reducing Harms from Youth Drinking

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Abstract: American alcohol education and prevention efforts for youth emphasize abstinence. In support of this approach, epidemiologists conclude that early drinking by adolescents increases the lifetime likelihood of alcohol dependence and that overall drinking levels in a society are directly linked to drinking problems. At the same time, cultural, ethnic, and social differences in drinking indicate that drinking styles are socialized and that those groups that encourage regular but controlled drinking yield lower rates of binge drinking and alcohol-related problems. Recent international epidemiologic research has found that societies in which men and women consume their alcohol in bursts have more drinking problems. The same cultures with high binge drinking rates for adults have high rates of adolescent drunkenness. It has, however, proven difficult to impose a moderate-drinking template on cultures, including notably American adolescent and college cultures. Nonetheless, approaches that focus on preventing problems rather than on abstinence per se – called harm reduction – may have value in reversing problems created by youthful drinking. The question is whether the socialization of moderate drinking can be incorporated as a harm reduction technique for young people, at least for college students.

Index terms: adolescents, alcohol abuse, harm reduction, binge drinking, moderate drinking

Introduction

Youthful drinking is of tremendous concern in the United States and elsewhere. Alcohol is the psychoactive substance used the most often by adolescents and college students and is associated with more youthful dysfunction and morbidity than any other drug.[1,2,3,4] Alcohol use by youth contributes significantly to academic and social problems, risky sexual behavior, and traffic and other accidents, and is a risk factor for the development of alcohol-related problems during adulthood. As a result, youthful drinking – and particularly binge drinking – has been a target for public health interventions. It is thus highly troubling that these efforts have produced few benefits; high-risk drinking by both adolescents[5] and college students[6,7] has not declined over the past decade. According to the Monitoring the Future (MTF) survey, the percentage of high seniors who have been drunk in the past month has gone below 30 percent one year in the last decade and a half (in 1993 the figure was 29%; in 2005 it was 30%; Table 1). Some data show startling increases in binge drinking by young people: the National Survey on Drug Use and Health (NSDUH) reported for 1997 that 27 percent of Americans aged 18 to 25 had consumed five or more drinks at one time in the prior month (Table 7.7)[8]; in 2004, the figure was 41 percent (Table 2.3B).[9]

Although research has found that American adolescents who begin drinking earlier in life are more likely to display adult alcohol dependence[10], another body of research has found that drinking varies tremendously among religious, ethnic, and national groups.[11,12,13] In particular, those groups that are less proscriptive towards alcohol and in fact permit and even teach drinking in childhood, and in which drinking is a regular integrated part of social life, display fewer alcohol problems. This work has usually been the province of sociology and anthropology. As such, it has not had a firm status in epidemiology and public health. The thrust in the public health field has been towards labeling alcohol an addictive drug and towards reducing and even eliminating youthful drinking. [14,15]

Recently, however, several large international epidemiologic surveys have supported principal components of the sociocultural model of drinking patterns and alcohol problems. Among these studies are the European Comparative Alcohol Study (ECAS)[12]; the World Health Organization's ongoing Health Behaviour in School-aged Children (HBSC) survey tracking drinking and other behavior by young adolescents in 35 nations in Europe and (in the survey completed in 2001-2002) the U.S., Canada, and Israel)[13]; and the European School Survey Project on Alcohol and Other Drugs (ESPAD) surveying 15-16 year olds in 35 European countries (but not the United States and Canada), last completed in 2003.[16]

Religious/Ethnic Differences in Drinking Styles and Problems

Differences in drinking have frequently been noted among religious groups in the U.S. and elsewhere, including among youth and college students. Drinking by Jews has been one special object of attention due to their apparently low level of drinking problems. Weiss indicated that, although drinking problems in Israel have increased in recent decades, absolute rates of problem drinking and alcoholism in Israel remain low compared with Western and Eastern European countries, North America, and Australia.[17] The HBSC study found that Israel, among 35 Western nations, had the second lowest rates of drunkenness among 15-year-olds: 5% of girls and 10% of boys have been drunk two or more times, compared with 23% and 30% for the U.S. (Figure 3.12).[13]

Studies of drinking by Jews compared with other groups have included a study of male Jewish and Christian students at an American university by Monteiro and Schuckit, in which Jewish students were less likely to have 2 or more alcohol problems (13% v. 22%), or to have more than five drinks on a single occasion (36% v. 47%).[18] Weiss compared drinking by Jewish and Arab youths, and found Arab drinking is far more frequently excessive, despite the Moslem prohibition on drinking.[19] Weiss explained such differences as follows: "The early socialization of Jewish children to a ritual, ceremonial and family use of alcoholic beverages provides a comprehensive orientation to the when, where, and how of drinking" (p111).[17]

The nonproscriptive approach to alcohol characterizes not only Jewish drinking. Some American Protestant sects are highly proscriptive towards alcohol (e.g., Baptists); others (e.g., Unitarians) not at all. Kutter and McDermott studied drinking by adolescents of various Protestant affiliations.[20] More proscriptive denominations were more likely to produce abstinent youth, but at the same time to produce youth who binged, and who binged frequently. That is, while 90 percent of youth in nonproscriptive sects had consumed alcohol, only 7 percent overall (or 8% of drinkers) had binged 5 or more times in their lives, compared with 66 percent of those in proscriptive sects who had ever consumed alcohol, while 22 percent overall in these sects (33% of drinkers) had binged 5 or more times.

At the same time that youth in proscriptive groups have less exposure to controlled drinking, these groups set up a "forbidden fruit" scenario. According to Weiss, "Forbidding drinking and conveying negative attitudes toward alcohol may prevent some members from experimenting with alcohol, but when members violate that prohibition by using alcohol, they have no guidelines by which to control their behavior and are at increased risk of heavy use"(p116).[17]

NSDUH presents abstinence and binge-drinking rates (defined as 5 or more drinks at a single sitting in the past month) for racial-ethnic groups.[9] Examining drinkers 18 and older, ethnic-racial groups with higher abstinence rates are more prone to binge. Among whites, the only group among whom a majority drink, 42 percent of drinkers binge. Fewer than half of all other racial/ethnic groups listed have drunk in the past month, but more of these binge. Among African Americans, 49 percent of drinkers binge; Hispanics, 55 percent; and Native Americans, 71 percent. See Table 1. The exception to this pattern is Asians, among whom a low percentage drink and a low percentage of these (33 percent) binge. This is true as well for collegiate Asian-American and Pacific Islanders (APIs): "rates of drinking and heavy drinking have been found to be lower among API college students than among other ethnic groups."[21] (p270)

Table 1

Percentage of past-month drinkers 18 and older who binge drink by ethnic/racial group

Racial/ethnic Group	% Currently Drink	Binge Drinkers/Drinkers*
White	59	42
African American	41	49
Hispanic	44	59
Native American	39	71
Asian	41	33

* Binge is defined as five or more drinks on a single occasion

Source: 2004 National Survey on Drug Use and Health (Table 2.56B)[9]

National Differences in Binge Drinking and Alcohol Problems

Although differences in cross-cultural drinking have long been noted, such differences have not been quantified. Recent international epidemiological research has filled in this gap. For example, Ramstedt and Hope compared Irish drinking with drinking in six European nations measured in the ECAS[22]:

Table 2

Percentage males drinking daily, binge drinking, and experiencing adverse consequences in selected countries

	Drink Daily	Binge Drinking per Drinking Occasion	Experience Adverse Consequences
Ireland	2	58	39
Finland	4	29	47
Sweden	3	33	36
UK	9	40	45
Germany	12	14	34
France	21	9	27
Italy	42	13	18

Source: Ramstedt and Hope[22]

These European data show regular drinking is inversely related to binge drinking. Countries in which people are unlikely to drink daily (Ireland, UK, Sweden, and Finland) have high binge drinking rates, while countries with higher rates of daily drinking (e.g., France, Italy) have lower levels of binge drinking. Germany is intermediate. Ireland combines the highest level of abstinence, the lowest level of daily drinking, and by far the highest rate of binge drinking. Furthermore, according to the ECAS study, the countries with greater binge-drinking occasions tend to have more negative consequences (including fights, accidents, problems on the job or at home, etc.), while those countries with the highest frequency of drinking have fewer adverse consequences. (Table 2)

Boback et al. compared Russian, Polish, and Czech rates of problem drinking and of negative consequences of drinking.[23] Both were much higher in Russian men (35% and 18%, respectively) than in Czechs (19% and 10%) or Poles (14% and 8%). Although the Russian men had a substantially lower average annual intake (4.6 liters) than Czech men (8.5 liters) and drank far less frequently (67 drinking sessions per year, compared with 179 sessions among Czech men), they consumed the highest dose of alcohol per drinking session (means = 71 g for Russians, 46 g for Czechs, and 45 g for Poles) and had the highest prevalence of binge drinking.

Adolescent Drinking Cross-Culturally

The claim is frequently made now that adolescent intoxication is becoming homogenized across cultures – that is, traditional differences are diminishing, or have in fact already disappeared. "Increased binge drinking and intoxication in young people – the pattern of consumption associated with Northern Europe – is now reported even in countries such as France and Spain in which drunkenness was traditionally alien to the drinking cultures . . . ."[24] (p 16)

The WHO's Health Behavior in School-Aged Children (HBSC)[13], which measures drinking and drunkenness among 15-year olds, and the European School Survey Project on Alcohol and Other Drugs (ESPAD) includes data about 15-16 year-olds from 35 countries[16], do not support these contentions. The results of these studies show large, continuing discrepancies between Northern and Southern European countries, differences that in some regards are increasing.

Table 3

Intoxicated 3+ occasions past 30 days, 15-16-year-olds, selected countries: 2003 ESPAD

Nation	Percentage
Denmark	26
Ireland	26
United Kingdom	23
Norway	12
Russia	11
Netherlands	7
France	3
Turkey	1

Source: 2003 ESPAD[16]

The HBSC were summarized by the authors of the alcohol chapter as follows:

> Countries and regions can be clustered according to their traditions in alcohol use. One cluster comprises countries on the Mediterranean sea. . . . (such as France, Greece, Italy, and Spain). Here, 15-year-olds have a relatively late onset and a low proportion of drunkenness.
>
> Another cluster of countries (such as Denmark, Finland, Norway and Sweden) may be defined as representative of the Nordic drinking tradition. . . On some of these, drunkenness has a rather early onset (Denmark, Finland and Sweden) and is widespread in young people (Denmark in particular).[25] (pp79, 82)

Thus, we see that cross-cultural differences in drinking patterns persist with remarkable vitality among the young. These cultural drinking styles express underlying views of alcohol that are passed across generations. As expressed by one ECAS scientist:

> In the northern countries, alcohol is described as a psychotropic agent. It helps one to perform, maintains a Bacchic and heroic approach, and elates the self. It is used as an instrument to overcome obstacles, or to prove one's manliness. It has to do with the issue of control and with its opposite – "discontrol" or transgression.
>
> In the southern countries, alcoholic beverages – mainly wine – are drunk for their taste and smell, and are perceived as intimately related to food, thus as an integral part of meals and family life. . . . It is traditionally consumed daily, at meals, in the family and other social contexts. . . .[26] (p197)

Abstinence Versus Reality – Are Our Current Policies Counterproductive?

Alcohol education programs are prevalent in secondary schools and earlier in the United States. Their emphasis is typically abstinence. Indeed, since drinking is illegal for virtually every American high school student, as well as most college students (which is not true in Europe), it might seem abstinence is the only possible alcohol education goal for minors. In 2006, the U.S. Surgeon General issued a "call to action on *preventing* underage drinking" (emphasis added).[27]

There are nonetheless obvious deficiencies in a solely, or primarily, abstinence approach. According to NSDUH, in 2004 a majority (51%) of 15-year-olds, three quarters (76%) of 18-year-olds, and 85 percent of 20-year-olds have consumed alcohol – 56 percent of 20-year-olds have done so – and 40 percent overall have binged – in the past month (Table 2.24B).[9] According to the 2005 MTF, three quarters of high school seniors have consumed alcohol, and well over half (58%) have been drunk (Table 1).[1] What would be a realist goal of a program to eliminate underage drinking, particularly considering this age group has been bombarded with no-drinking messages already? Seemingly, large numbers of underage drinkers will remain given even the most optimistic scenario.

Moreover, at age 21, young Americans are legally able to drink alcohol, and 90 percent have done so – 70 percent in the last month. They have not drunk well. More than 40 percent of those in every age group between 20 and 25 have binge drunk in the past month (Table H.20).[9] The highest figure is for 21-year-olds, 48 percent of whom have binge drunk in the past month, or nearly 7 in 10 drinkers (69%). Although alcohol is not separately calculated, 21 percent of those ages 18 to 25 are classified as abusing or being dependent on alcohol or a drug. (Table H.38). How exactly are young people to be prepared for what will shortly be their legal introduction to drinking? The danger from failing to learn the value of moderation is that underage drinkers will continue to binge drink, even after they achieve legal drinking age.

Although there is a strong tendency for alcohol problems to diminish with age, recent American epidemiological research has found this maturation pattern to have slowed – that is, youthful binge and excessive drinking is continuing until later ages than previously noted.[28] NSDUH indicates binge drinking is frequent for adults – while 54 percent of Americans over 21 have consumed alcohol in the past month, 23 percent (43% of drinkers) have binged in the past month (Table 2.114B). Among college students, binge drinking is extremely frequent, as revealed by the College Alcohol Study (CAS), which found the overall rate for such drinking over the past two weeks to be 44 percent of all college students.[6]

Moreover, the collegiate binge-drinking figure remained the same from 1993 to 2001, despite a host of efforts to cut the rate.[6] A funded program to reduce such intensive drinking did show higher rates of abstainers (19 percent in 1999 compared with 15 percent in 1993), but also an increase in frequent bingers (from 19 percent in 1993 to 23 percent in 1999).[29] Other research combining several data bases has shown that collegiate risk-drinking persists; indeed, driving under the influence of alcohol increased from 26 to 31 percent between 1998 and 2001.[7]

Data also show that recent age cohorts are more likely to become and remain alcohol dependent. Examining the National Longitudinal Alcohol Epidemiologic Survey (NLAES) conducted in 1992, Grant found the youngest cohort (those born between 1968 and 1974) was most likely to become, and persist in, alcohol dependence, even though this cohort overall was less likely as a group to drink than the cohort just before it.[30] The follow-up National Epidemiologic Survey on Alcohol and Related Conditions (NESARC), conducted in 2001-2002, found that alcohol dependence (median age of incidence = 21) was slower to show remission than in the 1992 NLAES study.[31]

Finally, "medical epidemiology has generally accepted as established . . . . the protective effects of light drinking for general mortality."[32] These results have been acknowledged in the Dietary Guidelines for Americans.[33] And binge drinking, as this paper has shown, is associated with more adverse consequences. Yet young people do not believe regular moderate drinking is better than binge drinking. MTF finds that more high school seniors disapprove of people 18 and older having "one or two drinks nearly every day" (78%) than disapprove of having "five or more drink once or twice each weekend" (69%) (Table 10).[1]

Is a Reorientation of American Alcohol Policy and Education Advisable?

The data we have reviewed show that the current (and, in terms of the Surgeon General's initiative, intensifying) efforts to encourage abstinence have not reduced binge drinking and alcohol dependence. Indeed, major American surveys have shown clinical problems from drinking, for young people and beyond, to be increasing, even though overall drinking rates have declined. The combination of high abstinence and high binge drinking is typical in many contexts, as this paper has shown.

Comparisons of two primary cultural patterns of drinking – one in which alcohol is consumed regularly and moderately versus one in which alcohol is consumed sporadically but drinking occasions often involve high levels of consumption – show that the regular, moderate style leads to fewer adverse social consequences. Cultures where moderate drinking is socially accepted and supported also have less youthful binge drinking and drunkenness.

Conveying the advantages of one cultural style to those in other cultures, however, remains problematic. It is possible that drinking styles are so rooted in a given cultural upbringing that it is impossible to extirpate the binge drinking style in cultures where it is indigenous in order to teach moderate drinking on a broad cultural level. Nonetheless, there may still be benefits to educating youth to drink moderately in cultures where binge drinking is commonplace.

The approach propagated by many international policy groups (and many epidemiologists and other researchers) favors reducing overall drinking in a society and zero-tolerance (no-drinking) policies for the young. Yet, as indicated by variations in legal drinking ages, most Western nations continue to follow a different model. For example, the United States is the only Western country that restricts drinking to those 21 years of age or older. The typical age of majority for drinking in Europe is 18; but some Southern countries have lower age limits. Age limits may also be lower (for example, in the UK) when drinking occurs in a restaurant when a youth is accompanied by adults.

The United States, by restricting drinking to those 21 years of age and older, has adopted a model of alcohol problems that assumes drinking per se raises the risk of problems. Evidence supports that raising the drinking age lowers drinking rates and accidents among the young – primarily in precollegiate populations.[34] Nonetheless, most Western nations continue to accept the concept that encouraging youthful drinking in socially governed public environments is a positive societal goal. By learning to drink in such settings, it is hoped, youth will develop moderate drinking patterns from an early age.

Indeed, the policy of the National Institute on Alcohol Abuse and Alcoholism (NIAAA) when it was initially created in 1970 under its first director, Morris Chafetz, included the creation of moderate drinking contexts for young people.[35] But this approach was never widely adopted in the United States and declined in popularity when youthful drinking accelerated in the late 1970s. One contemporary alternative to a zero-tolerance or decreased-overall-consumption model is the "social norms" model. The social norms approach informs students that many more students abstain, or drink moderately, than they are aware, assuming this will lead students to drink less themselves. However, CAS investigators found that colleges adopting the social norms approach showed no reduction in drinking levels and harms.[36]

A New Paradigm – Harm Reduction

At this point, it is obviously easier to point to failures in alcohol education and prevention programs for youths than to identify successes. As a result, leading researchers continue to uncover a growth in risk drinking among college students and to advocate stricter enforcement of zero-tolerance:

> Among college students ages 18–24 from 1998 to 2001, alcohol-related unintentional injury deaths increased from nearly 1600 to more than 1700, an increase of 6% per college population. The proportion of 1824-year-old college students who reported driving under the influence of alcohol increased from 26.5% to 31.4%, an increase from 2.3 million students to 2.8 million. During both years more than 500,000 students were unintentionally injured because of drinking and more than 600,000 were hit/assaulted by another drinking student. *Greater enforcement of the legal drinking age of 21 and zero tolerance laws*, increases in alcohol taxes, and wider implementation of screening and counseling programs and comprehensive community interventions can reduce college drinking and associated harm to students and others.[7] (p259) [emphasis added]

However, Hingson et al. in their recommendations also adumbrate a newer approach to youthful alcohol-related problems (and other substance abuse). Called "harm reduction," this approach does not insist on abstinence and instead focuses on reducing identifiable harms that result from overimbibing. Two examples of harm reduction in the substance abuse field are clean needle programs for injecting drug users and safe driver programs for drinking youths (like those encouraged by MADD). Teaching moderate drinking is another example of harm reduction. Any policy that recognizes drug use and underage drinking occur, while seeking to reduce their negative consequences, represents harm reduction.

CAS has tested a program that focuses on reducing harms rather than on abstinence per se.[37] The program, "A Matter of Degree" (AMOD), is funded by the Robert Wood Johnson Foundation and supported by the American Medical Association. AMOD entails a wide panoply of techniques, including advertising restrictions, enforcement of underage drinking violations, opening hours for alcohol sales, community norms against excessive drinking, and other environmental and local cultural factors. Many of these techniques, for instance enforcement of age restrictions on drinking, are part of existing zero-tolerance programs. Nonetheless, AMOD explicitly aims to forestall "heavy alcohol consumption" (p188) and acknowledges youthful drinking while attempting to reduce binge drinking. A test of AMOD at ten sites found no significant changes in actual drinking or harm associated with drinking. Nonetheless, the investigators conducted an internal analysis – based on those schools that implemented the most specific elements of AMOD – and found reduction of both alcohol consumption and alcohol-related harm due to adoption of AMOD policies.

Is Harm Reduction a Viable Policy for American Collegiate Drinking?

The AMOD goal of "reducing drinking" (like the phrase "reducing underage drinking") is actually ambiguous, in a significant way. It can mean either (a) reducing the number of people under 21 who drink at all with a goal of having few or no underage drinkers, or (b) reducing the amount of alcohol that underage age drinkers typically consume. Both would reduce the overall levels of alcohol consumed by young people. The first is a zero-tolerance approach, the second is harm reduction. Of course, the goal could be to increase both phenomena. An important question is whether it is possible to combine these policies – the question involves both political and technical, programmatic considerations.

AMOD does not explicitly endorse teaching students how to drink moderately, at the same time that the program aims to reduce excessive drinking. AMOD thus incorporates harm reduction without accepting underage drinking as a natural passage into adulthood, as is customary in cultures which inculcate moderate drinking patterns. Socializing children into drinking remains outside the pale of harm reduction programs like those represented by AMOD. It may be that exclusion of moderate-drinking concepts is necessary in the mixed cultural environment presented in the United States, at least in terms of gaining popular acceptance for harm reduction ideas.

Hope and Byrne, ECAS researchers working in the Irish context, analyzed the policy implications of ECAS results. These investigators recommend importing into Irish and other binge-drinking cultures what might be called the Mediterranean approach to youthful drinking:

> The experience of the southern countries suggests that it is important to avoid both demonizing alcohol and promoting abstinence as key elements of alcohol control. In order to emulate the success of the alcohol control policies of the southern countries, the EU should consider a strategy that includes the following elements:
>
> · Encourage moderate drinking among those who choose to drink with moderate drinking and abstinence being presented as equally acceptable choices.
>
> · Clarify and promote the distinction between acceptable and unacceptable drinking.
>
> · Firmly penalize unacceptable drinking, both legally and socially. Intoxication must never be humoured or accepted as an excuse for bad behavior. *Avoid stigmatising alcohol as inherently harmful, as such stigmatization can create emotionalism and ambivalence.*[38] (pp211-212, emphasis added)

In fact, Hope and Byrne themselves fall short of fully adopting harm reduction approaches, just as AMOD does, by understanding that a certain amount of drunkenness will inevitably occur, and that even intoxicated young people should also be protected from irreversible harmful consequences of their own actions – like accidents or medical harms.

Finally, the goal of achieving moderate drinking is most controversial in the United States in the case of alcoholism treatment. Although research continues to point to the value of such approaches[39], Alcoholics Anonymous and virtually all American treatment programs emphasize abstinence as the only way to resolve an alcohol problem. Moderation training for problem drinkers is one form of harm reduction. Research on training heavy or problematic collegiate drinkers to moderate their usage has proven highly successful, although this approach is still extremely limited in its utilization across the United States.[40]

There is no single optimal policy for youth drinking – there are dangers and drawbacks to both zero-tolerance and moderate-drinking approaches. Nonetheless, especially given the current policy imbalance that strongly favors the former, collegiate officials and health professionals should consider the following in developing harm reduction policies:

- Epidemiologic research has established advantages to moderate drinking, particularly when compared with binge drinking, advantages that should be acknowledged and encouraged as a model for alcohol use on campuses.

- Insisting on abstinence does not guarantee the absence of drinking on campus, and harm-reduction techniques for reducing the extent and impact of binge or other excessive collegiate drinking should be developed and implemented (e.g., safe rides, providing protected settings for intoxicated students).

- Alternative treatment/prevention approaches – approaches that recognize and encourage moderation – are particularly appropriate for younger drinkers for whom moderation is more achievable than it is for long-term alcoholics and for whom lifelong abstinence is very unlikely.

Unhealthy (or at least less than optimal) American attitudes towards alcohol are regularly promoted by governmental and public health officials, researchers, clinicians, and college administrators. Indeed, even when such individuals adopt moderate drinking practices in their personal lives, they are reluctant to consider them in formulating public policy. This disconnect between sensible drinking practices, identified both individually and epidemiologically, and policy implementation is not a healthy state of affairs for American alcohol policy towards young people.

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