

Global alcohol policy and the alcohol industry

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Purpose of review

The WHO is preparing its global strategy on alcohol, and, in so doing, has been asked to consult with the alcohol industry on ways it could contribute in reducing the harm done by alcohol. This review asks which is more effective in reducing harm: the regulatory approaches that the industry does not favour; or the educational approaches that it does favour.

Recent findings

The current literature overwhelmingly finds that regulatory approaches (including those that manage the price, availability, and marketing of alcohol) reduce the risk of and the experience of alcohol-related harm, whereas educational approaches (including school-based education and public education campaigns) do not, with industry-funded education actually increasing the risk of harm.

Summary

The alcohol industry should not be involved in making alcohol policy. Its involvement in implementing policy should be restricted to its role as a producer, distributor, and marketer of alcohol. In particular, the alcohol industry should not be involved in educational programmes, as such involvement could actually lead to an increase in harm.

Keywords

alcohol industry, alcohol policy, effectiveness

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Introduction

Alcohol policies have been defined as sets of measures aimed at minimizing the health and social harms from the use of alcohol [1]. At the time of the preparation of a report for the European Commission on alcohol in Europe, a public health perspective [2], stakeholders of the European Commission's alcohol and health working group (23 government officials, 22 nongovernmental organization representatives, and 30 representatives of the alcohol beverage industry) were invited to express their views on the potential impact of 35 interventions across 12 alcohol policy domains in reducing the harm done by alcohol [3]. Factor analysis of the responses (which were indicated on a 10-point interval scale) resulted in three factors: regulatory factors, for which the alcohol industry stated there was evidence for limited impact in reducing the harm done by alcohol; educational approaches, for which the industry stated there was evidence for a large impact in reducing the harm done by alcohol; and, a factor that included enforcement of legislation and provision of treatment. This review summarizes the recent evidence for the effectiveness of the competing policy approaches and concludes with answering the question of whether the alcohol industry

should be involved in developing alcohol policies and programmes.

Regulatory factor

The regulatory factor included managing the availability, marketing, and the price of alcohol, and related cross border issues and smuggling, reducing blood alcohol concentration (BAC) levels for drinking and driving, and mandatory warning labels on alcoholic beverages.

Managing the availability of alcohol

Government retail monopolies for the sale of alcohol can reduce alcohol-related harm [4]. This is largely due to the fact that such monopolies tend to have fewer stores, which are open for shorter hours than systems of private sellers. In general, the number of alcohol outlets is related to the level of alcohol-related harm, with the association being strongest when there are major changes in the number or types of such outlets. An increased density of alcohol outlets is associated with increased levels of alcohol consumption, with increased levels of assault and with other harms such as homicide, child abuse and neglect, self-inflicted injury, and, depending on the distribution of outlets, road traffic accidents [5]. Although

extending the times of sale can redistribute the times when many alcohol-related incidents occur, such extensions do not reduce rates of violence and often lead to an overall increase in alcohol-related harm [2]. Reducing the hours of sale of alcoholic beverages in Brazil was followed by fewer homicides and assaults [6].

Managing the marketing of alcohol

Econometric studies look for correlations between the amount of alcohol advertising and the amount of drinking taking place in a particular jurisdiction using econometric methods. Establishing such a link, however, is problematic for a number of methodological reasons, including accuracy and inclusiveness of expenditure amounts, inclusiveness of models taking into account all confounders (price, income, etc.), and the ability to detect consequences of only minor variations in expenditure [7]. Thus, econometric studies have yielded mixed results, although a recent meta-analysis found effects of alcohol advertising on drinking behaviour [8]. The strongest evidence for the impact of marketing comes from longitudinal studies that measure exposure at initial time A and how this relates to drinking at future time B, controlling for potential confounders (such as peer and parental drinking). A systematic review of 13 such studies has shown an impact of various forms of alcohol marketing, including exposure to alcohol advertising in traditional media as well as promotion in the form of movie content and of alcohol-branded merchandise, on initiation of youth drinking and on riskier patterns of youth drinking [7]. The effects of exposure are dose related and seem cumulative over time. The results were all the more significant, given that a full marketing strategy also includes product development, pricing and physical availability which were outside the scope of the individual studies. In some jurisdictions, alcohol marketing relies on self-regulation implemented by economic operators, including advertising, media, and alcohol producers. However, evidence from a number of studies shows that these voluntary systems do not prevent the kind of marketing that impacts on younger people [9•].

Managing the price of alcohol

Drinkers respond to changes in the price of alcohol as they do to changes in the price of other consumer products. When other factors are held constant in analyses, such as income and the price of other goods, a rise in alcohol prices leads to less alcohol-related harm and vice versa. Demand for alcohol is relatively inelastic to price, such that an increase in price results in a drop in consumption that is relatively smaller than the price increase. For example, a meta-analysis of 132 studies found a median price elasticity for all beverage types of -0.52 in the short-term and -0.82 in the long-term, elasticities being lower for beer than for wine or spirits [10•]. An elasticity of -0.52 means that for every 10%

increase in price, consumption would fall by 5.2%. Another meta-analysis of 112 studies found mean price elasticities for beer, -0.46 , for wine, -0.69 , and for spirits, -0.80 [8]. These reviews have shown that beverage elasticities are generally lower for the preferred beverage (beer, spirits or wine) in a particular market than for the less preferred beverages and that the impact of an increase in alcohol price tends to be stronger in the longer rather than the shorter term, which, from a public health perspective, is more important. Other reviews have shown that price elasticities tend to decrease with higher levels of consumption in the population, and, when controlling for overall consumption, beverage preferences and time period, consumer responses to changes in the price of alcoholic beverages vary little by country [11]. If prices are raised, consumers reduce overall consumption and tend to shift to cheaper beverages, with heavier drinkers tending to buy the cheaper products within their preferred beverage category. Policies that increase alcohol prices delay initiation of drinking, slow young people's progression towards drinking larger amounts, and reduce young people's heavy drinking and the volume of per occasion drinking. Price increases reduce the harms caused by alcohol, also indicating that heavier drinking has been reduced [12]. Studies in Alaska found statistically significant reductions in the number and rates of deaths caused by alcohol-related disease beginning immediately after alcohol tax increases in 1983 and 2002 [13••].

Natural experiments in Europe consequent on economic treaties have shown that as alcohol taxes and prices have lowered, so alcohol consumption and alcohol-related harm have usually increased, particularly among lower socioeconomic groups [14••]. Overall, it can be shown that increasing alcohol taxes not only reduces alcohol consumption and related harm, but also increases government revenue at the same time. In general, alcohol taxes are well below their maximum revenue producing potential and that collected revenue is usually well below the social costs of alcohol [2].

Illegally traded alcohol can bring a health risk either due to contamination during the trading process or due to a lower cost than legal alcohol, and thus higher consumption. Widespread introduction of tax stamps to track the trade of alcohol could reduce illegal trade [12].

Blood alcohol concentration levels

It is well established that setting a maximum legal BAC level for driving and also subsequently lowering it is effective in reducing drink-driving casualties [15]. For example, a meta-analysis of nine studies in the United States found implementation of 0.8 g/l BAC laws resulted in 7% decrease in alcohol-related motor vehicle fatalities [16].

Mandated health warnings

Mandated health warnings on alcohol product containers have been introduced in the United States. Evaluation of their impact does not demonstrate that exposure produces a change in drinking behaviour, although some intervening variables are affected, such as intention to change drinking patterns [17]. These results contrast with evidence from tobacco, where there is evidence of impact, but this may reflect the nature of the warning labels, as it seems that the introduction of more graphic and larger warnings for cigarettes, with rotating messages, has affected behaviour. Nevertheless, warning labels are important in helping to establish a social understanding that alcohol is a special and hazardous commodity.

Educational factor

The educational factor included public education campaigns, school-based education, public access to information on the alcohol industry, education to those who work in the industry to reduce harm, including server training, and designated driver campaigns.

Public education campaigns

In general, public information campaigns are found to be ineffective in reducing alcohol-related harm [1]. An exception to this are mass media campaigns to reduce drinking and driving, which, when implemented in the presence of strong drinking and driving countermeasures, can have an impact [18]. Counteradvertising, a variant of public information campaigns that provides information about a product, its effects, and the industry that promotes it, in order to decrease its appeal and use, has inconclusive effects [1]. There have been no rigorous evaluations of whether or not publicizing drinking guidelines have any impact on alcohol-related harm. Certainly, in a liberalizing policy environment as in the UK, drinking guidelines have failed to deter increases in alcohol consumption [19].

School-based education

Many systematic reviews have evaluated school-based education and concluded that classroom-based education is not an effective intervention to reduce alcohol-related harm. Although there is evidence of positive effects on increased knowledge about alcohol and on improved alcohol-related attitudes, there is no evidence for a sustained effect on behaviour. For example, a systematic review of 14 systematic reviews identified 59 high-quality programmes, of which only six were able to demonstrate any evidence of effectiveness [20]. One series of reviews that did find a positive outcome was based on inappropriate analyses, and which, on proper analysis, found no effect [21]. Two areas that might have a potential for greater impact are parenting, in which a systematic review of 14 parenting programmes found reductions

in alcohol use in six [22], and social marketing programmes, in which a systematic review of 13 programmes found some evidence for effect for reducing alcohol consumption in eight [23].

Alcohol industry education

There is evidence that tobacco industry-funded education is more likely to lead to increased smoking [24]. Although there is limited research on the impact of alcohol industry-funded education, it seems that industry-funded TV spots are ambiguous, often interpreted as advertising, and lead a favourable perception of the messenger, the alcohol industry [25].

Server training

The relationship between drinking and alcohol-related harm can be both affected and mediated by the physical and social context of drinking and by the succeeding contexts while the drinker is intoxicated. Although there is some evidence that employment of security staff, in part to reduce potential violence can reduce alcohol-related harm, a systematic review has shown that interventions modifying the behaviour of those serving alcohol and of door and security staff were ineffective on their own [26]. However, there is some evidence for effectiveness when backed up by enforcement by police or liquor licence inspectors.

Designated driver campaigns

Designated driver campaigns require that the designated driver be assigned before alcohol consumption, abstains from all alcohol, and drives other group members to their homes. A systematic review of nine studies found no evidence for effectiveness [27].

Implementation and treatment

The implementation and treatment factor included two different groups of policy measures, which were strong components of the factor analysis [3]. The first group included those policy measures that focused on implementation, random breath testing for drinking and driving, restrictions on alcohol products to avoid promoting erroneous impressions about their characteristics or health effects and to avoid direct or indirect appeal to minors, and prohibition of sales to underage drinkers. The second group included treatment programmes for alcohol use disorders and alcohol dependence.

Random breath testing

Intensive random breath testing, in which police regularly stop drivers on a random basis to check their BAC level, and checkpoints, where all cars are stopped and drivers suspected of drink-driving are breath-tested, reduce alcohol-related injuries and fatalities. A meta-analysis of 23 studies found that alcohol-related fatal

crashes reduced by 22% following introduction of random breath testing and by 23% following introduction of sobriety checkpoints [16].

Restrictions on alcohol products

There is evidence that alcohol products such as 'alcopops' and 'ready-to-drink' alcoholic energy drinks are marketed to appeal to young people, often giving erroneous impressions about their characteristics [28], and there is evidence that such products are associated with heavier alcohol intake and alcohol-related harm among young people [29].

Prohibition of sales to underage drinkers

Implementation of laws that set a minimum age for the purchase of alcohol is effective. A review of 132 studies published between 1960 and 1999 found that changes in minimum drinking age laws impact on youth drinking and alcohol-related harm, including road traffic accidents, with lower ages leading to an increase in harm and higher ages leading to a reduction in harm [30].

Treatment

Brief advice heads the list of effective evidence-based treatment methods. There is extensive evidence from a variety of healthcare settings in different countries for the effectiveness of early identification and brief advice for persons with hazardous and harmful alcohol use in the absence of severe dependence. A meta-analysis of 21 trials on the impact of brief interventions in primary care populations noted a mean reduction in consumption from 320 to 280 g alcohol/week, with no evidence of increased gain from longer interventions [31]. A systematic review of 12 studies found that a combination of educational and office support programmes increased screening and advice giving rates of primary healthcare providers from 32 to 45% [32]. For individuals with more severe alcohol dependence and related problems, a wide variety of specialized treatment approaches have been evaluated. A systematic review of 17 studies of behavioural therapies found a combined effect size of 0.33 (SE = 0.08) for reduced alcohol consumption and alcohol-related difficulties [33]. A systematic review of 17 randomized controlled trials (RCTs) for glutamate inhibitors found a relative risk of point prevalence abstinence of 1.40 [95% confidence interval (CI) 1.24, 1.59] at 6 months and 1.62 (95% CI 1.37, 1.92) at 12 months [34]. A systematic review of 29 RCTs for opiate antagonists found a significant reduction in relapse, at least in the short-term (3 months): relative risk (95% CI) = 0.64 (0.51, 0.82) [35]. There is evidence that matching individuals with alcohol use disorders to specified treatment does not improve outcome [36]. Finally, there is also evidence for treatments that lack evidence of effect. For example, a systematic review of eight studies found no studies that unequivocally demonstrated the effectiveness of

Alcoholics Anonymous or Twelve-Step Facilitation approaches for reducing alcohol dependence or alcohol-related problems [37].

Conclusion

The present review has shown that regulatory approaches, for which the alcohol industry stated there was evidence for limited impact in reducing the harm done by alcohol, are, in fact, those policy options that are the most clearly effective in reducing the harm done by alcohol. In contrast, educational approaches, for which the alcohol industry stated there was evidence for a large impact in reducing the harm done by alcohol, are, in fact, those policy options that are almost entirely ineffective. The approaches that included enforcement of legislation (such as minimum age of purchase) and provision of treatment are found to be effective, whereas self-regulation by the industry not to produce products with erroneous impressions or appeal to young people is ineffective. An important conclusion from this review is that, as recommended by the WHO Expert Committee on problems related to alcohol consumption [38], the alcohol industry should not be involved in making alcohol policy. Its involvement in implementing policy should be restricted to evidence-based price, availability and marketing approaches that reduce alcohol-related harm that can be implemented by the industry in its role as a producer, distributor, and marketer of alcohol. In particular, the alcohol industry should not be involved in educational programmes, because such involvement could actually lead to an increase in harm.

References and recommended reading

Papers of particular interest, published within the annual period of review, have been highlighted as:

- of special interest
- of outstanding interest

Additional references related to this topic can also be found in the Current World Literature section in this issue (p. 331).

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