Is it time to ban alcohol advertising?

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ABSTRACT - Children and adolescents are particularly vulnerable to the harmful effects of alcohol, with heavy drinking risking impaired brain development and future alcohol dependence. Advertisements increase expectancies about alcohol, leading to a greater likelihood of drinking. A systematic review of 13 longitudinal studies of over 38,000 young people found convincing evidence of an impact of media exposure and alcohol advertising on subsequent alcohol use, including initiation of drinking and heavier drinking among existing drinkers. All European countries, with the exception of the UK, have a ban on one or more types of advertising. Since self-regulation is reported as failing to prevent marketing which has an impact on younger people, and since advertising commonly crosses country borders, there is an argument to approximate advertising rules across Europe banning alcohol advertising targeted at young people, a highly cost-effective measure to reduce harmful alcohol use, and one supported by European citizens and case law.

KEY WORDS: advertising, alcohol, young people

Introduction

Children and adolescents have greater vulnerability to the harmful effects of alcohol than adults. As well as usually being physically smaller, they lack experience of drinking and its effects. They have no context or reference point for assessing or regulating their drinking and, furthermore, they have built up no tolerance. From mid-adolescence to early adulthood there are major increases in the amount and frequency of alcohol consumption and alcohol-related problems. Those with heavier consumption in their midteens tend to be those with heavier consumption, alcohol dependence and alcohol-related harm, including poorer mental health and education outcome, and increased risk of crime, in early adulthood.1 During adolescence, alcohol can lead to structural changes in the hippocampus (a part of the brain involved in the learning process) and at high levels can permanently impair brain development.² Drinking by adolescents and young adults is associated with road traffic injury and death, suicide and depression, missed classes and decreased academic performance, loss of memory, blackouts, fighting, property damage,

peer criticism and broken friendships, date rape, and unprotected sexual intercourse that increases the risk of sexually transmitted diseases, HIV infection and unplanned pregnancy.³

In 2006, over one in five of 11–15 year olds in England reported drinking alcohol in the week prior to the interview. Although this proportion has been slowly declining in recent years, among those who drank alcohol the average weekly consumption has almost doubled from 5.3 units (42 g alcohol) in 1990 to 10.4 units (83 g alcohol) in 2000.⁴ An independent review of the effects of alcohol pricing and promotion concluded that:

Regardless of their explicit intention there is evidence for an effect of alcohol advertisements on underage drinkers. Consistent with this, evidence suggests that exposure to such interventions as TV, music videos and billboards, which contain alcohol advertisements, predicts onset of youth drinking and increased drinking. As a consequence one may conclude that restricting the volume of advertisements and merchandising is likely to reduce consumption and subsequent harm.⁵

This paper, based on a lecture given at the Royal College of Physicians in 2007, gives nine arguments to inform whether or not it is time to ban the advertising of alcohol.

Advertising of tobacco products is banned

Based on quite limited evidence the advertising of tobacco products is effectively banned throughout the European Union (EU).^{6,7} Two arguments are often put forward that alcohol is not the same as tobacco, and therefore, policy should be different:

- there is far greater harm associated with the use of tobacco than alcohol
- any level of tobacco consumption poses health risks, whereas for alcohol it is only excessive consumption that poses risks.

However, these arguments do not stand scrutiny. First, the World Health Organization's Global Burden of Disease study, which developed a measure of the extent to which different health risk behaviours reduced life expectancy and quality of life, Disability Adjusted Life Years, found that in the year 2000 tobacco contributed 4.1% of the total burden of premature death or disability, and alcohol 4.0%. Since then, alcohol's share has increased to 4.6%. Second, when examining alcohol's contribution to

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premature death, the risk that lifetime death is caused by an alcohol-related illness increases linearly with the volume of alcohol consumed from a zero level of consumption.⁹

Alcohol cheats the brain

The pharmacological effects of alcohol on behavioural decisionmaking show that alcohol has a predictable unfair advantage over other products. 10 Like all addictive drugs, alcohol specifically disrupts calculations made by the brain's reward circuitry. To determine the value of naturally rewarding substances, the brain conducts an in-depth calculation of the impact of consumption of the substance on the consumer within the current and historical environment. Alcohol short circuits this assessment by pharmacologically augmenting a signal indicating the difference between the predicted value of the reward and the observed reward, such that the circuit mistakenly calculates that it underestimated the value of consuming alcohol, regardless of whether the drinker was helped or hurt as a result of drinking. As the brain corrects its 'underestimates', it increases expectations about the value of alcohol consumption. This leads the drinker to overvalue alcohol and thus favour working harder to obtain it, even if it provides no objective or subjective benefit to the user. Thus, alcoholic products include a chemical that directly distorts the brain's decisions about how much work to devote to consuming them, thus ensuring that people will pay more to get an alcoholic drink than it is worth.

Alcohol advertisements increase the desire to drink alcohol

Alcohol advertising is one of the many factors that have the potential to encourage adolescent drinking.¹¹ For young people who have not started to drink, expectancies are influenced by normative assumptions about teenage drinking as well as through the observation of drinking by parents, peers, and role models in the mass media. Research has linked exposure to portrayals of alcohol use in the mass media with the development of positive drinking expectancies by children and adolescents. 11 Young people with more positive affective responses to alcohol advertising hold more favourable drinking expectancies, perceive greater social approval for drinking, believe drinking is more common among peers and adults, and intend to drink more as adults. All these beliefs interact to produce a greater likelihood of drinking, or intention to drink within the near future. Adolescents aged 14 to 17 years with alcohol use disorders also show substantially greater brain activation to pictures of alcoholic beverages than control youths, predominantly in brain areas linked to reward, desire, and positive affect. 12 The degree of brain response to the alcohol pictures is highest in those who consume more drinks per month and report greater desires to drink.

Alcohol advertisements increase young people's drinking

A recent systematic review to assess the impact of alcohol advertising and media exposure on future adolescent alcohol use iden-

tified 13 longitudinal studies of a total of over 38,000 young people. Twelve of the 13 studies concluded an impact of exposure on subsequent alcohol use, including initiation of drinking and heavier drinking among existing drinkers, with a dose–response relationship in all studies that reported such exposure and analysis. The 13th study, which tested the impact of outdoor advertising placed near schools, failed to detect an impact on alcohol use, but found an impact on intentions to use.

For example, Ellickson et al examined the relationship between a range of advertisement exposures, over the course of one year, and subsequent drinking among US adolescents age 12 to 13 years followed-up for at least two years, and assessed whether exposure to a prevention programme mitigated any such relationship.¹⁴ Of the 1,206 grade 7 non-drinkers, 48% consumed alcohol during the previous year at grade 9. Bivariate relationships found a significant impact of all types of alcohol advertisement exposure on initiation of drinking. Controlling for exposure to all different types of advertising as well as the impact of the prevention programme, exposure to beer concession stands at sports or music events predicted drinking onset for non-drinkers in the previous 12 months (OR=1.42, p<0.05). Of the 1,905 grade 7 drinkers, 77% consumed alcohol in the previous year at grade 9. Again, controlling for exposure to all different types of advertising as well as the impact of the prevention programme, exposure to beer concession stands at sports or music events predicted frequency of drinking among existing drinkers in the previous 12 months (coefficient=0.09, p<0.05), as did exposure to magazines with alcohol advertisements (coefficient=0.10, p<0.05). Similarly, Collins et al carried out a school-based longitudinal survey which evaluated the impact of exposure of alcohol marketing on beer use among 1,786 grade 6 students (11-12 year olds) one year later.¹⁵ The joint effect of exposure to advertisements from all sources (F (8, 28)=8.36, p<0.0001), and from three television sources (F (3, 33)=3.35, p<0.05), were significant. Of youth in the 75th percentile of alcohol marketing exposure at grade 6, 20% reported past year beer drinking at grade 7, compared with 13% in the 25th percentile.

The results of the longitudinal studies are consistent with the findings of econometric studies, in which, for example, a meta-analysis of 132 studies which provided 322 estimated advertising elasticities, found a positive impact of advertising on consumption (coefficient=0.029), when controlling for alcohol price and income.¹⁶

Alcohol advertising rules require approximation across Europe, allowing for the opportunity of stronger restrictions

A study of 24 European countries found that all had at least one regulation that covers alcohol marketing and advertising, with 49 statutory and 27 non-statutory regulations overall.¹⁷ All countries, with the exception of the UK, had a ban of one or more types of advertising. Statutory regulations were more likely to cover volume restrictions than non-statutory regulations. There were clear differences between European countries' laws, regulations and administrative provisions on the adver-

tising of alcohol products. Such advertising commonly crosses country borders or involves events organised on an international level. As has been the case with tobacco products, the differences in national legislation are likely to give rise to increasing barriers to the free movement between countries of the products or services that serve as the support for such advertising. Thus, there is a strong argument that these barriers should be eliminated and, to this end, the rules relating to the advertising of alcoholic products should, in specific cases, be approximated across Europe. As was the case with tobacco, and given the extent of existing bans for certain products and media, there is a need to specify the extent to which alcohol advertising in certain categories of media and publications is allowed.¹⁸

Self-regulation is not the answer

In several European countries, there is a reliance on 'selfregulation' - voluntary systems 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 which has an impact on younger people. Self-regulation seems to work only to the extent that there is a current and credible threat of government regulation. For example, in Australia, following a formal review in 2003, the Ministerial Council on Drug Strategy proposed a revised Alcoholic Beverages Advertising Code (ABAC), which came into operation in 2004. From May 2004 until March 2005 television and magazine advertising campaigns were monitored for alcohol products. 19 Over this period, 14 complaints against alcohol advertisements were lodged with the selfregulatory board, and the study authors recruited an independent expert panel to assess the advertisements and complaints. In eight of the 14 cases a majority of the judges perceived the advertisement to be in breach of the code, and in no cases did a majority perceive no breach. Conversely, however, none of the complaints were upheld by the Advertising Standards Board (ASB).

The public supports stricter regulations

A 2006 Euorbarometer survey found that 76% of the EU population would approve the banning of alcohol advertising targeting young people in all member states.²⁰ Every second respondent (50%) said that they 'agree totally' with this idea. A country-by-country analysis shows that in all polled countries the majority of respondents would favour such a ban, with 71% of the UK population agreeing.

European case law supports stricter regulations

In 2002, the French government was taken to court, alleging that its advertising law, by prohibiting alcohol advertising on boardings visible during the retransmission of bi-national sporting events on TV, entailed restrictions on the freedom to provide advertising and television broadcasting services. In other words, it was not possible to re-broadcast British football matches in France. However, the European Court of Justice ruled in favour

of the French law, noting that it is in fact undeniable that advertising acts as an encouragement to consumption; the French rules on television advertising are appropriate to ensure their aim of protecting public health; and that they do not go beyond what is necessary to achieve such an objective.²¹

Health impact assessment predicts the health impact and cost

Using data from international time-series analyses, the World Health Organization's CHOICE project modelled the impact of an advertising ban in the EU.²² The model estimated that a ban on advertising implemented throughout the EU could prevent 5% of all alcohol-related ill-health, at an overall cost of \in 95 million each year. With a cost-effectiveness ratio of \in 500 per year of ill-health and premature mortality prevented in western Europe, an advertising ban would be about half as cost-effective as a tax increase (\in 241), but nearly four times as cost-effective as an early identification and brief advice programme in primary care (\in 1,959).

Conclusion

Young people are particularly vulnerable to alcohol, and to alcohol advertising which is commonly targeted at them. Alcohol advertisements are related to young people's expectancies about alcohol and their desire to consume it, and a recent systematic review has found evidence that alcohol advertisements increase the likelihood of young people starting to drink, the amount they drink, and the amount consumed on any one occasion. Experience demonstrates that it is possible to regulate commercial communications in traditional and non-traditional media, with, for example, the EU 2003 tobacco directive banning the advertising of tobacco products in the broadcast and print media, and relevant sport sponsorship. Thus, it is feasible to ban alcohol advertising, which, for advertising targeting young people, would be supported by three quarters of European citizens.

References

- 1 Englund MM, Egeland B, Oliva EM, Collins A. Childhood and adolescent predictors of heavy drinking and alcohol use disorders in early adulthood: a longitudinal developmental analysis. *Addiction* 2008;103(Suppl 1):23–35.
- 2 De Bellis MD, Clark DB, Beers SR et al. Hippocampal volume in adolescent-onset alcohol use disorders. Am J Psychiatry 2000;157: 737–44
- 3 Bonomo Y, Coffey C, Wolfe R *et al.* Adverse outcomes of alcohol use in adolescents. *Addiction* 2001;96:1485–96.
- 4 The Information Centre. Statistics on alcohol: England, 2007. www.ic.nhs.uk/pubs/alcohol07
- 5 Meier P. Independent review of the effects of alcohol pricing and promotion. Sheffield: University of Sheffield, School of Health and Related Research, 2008. www.dh.gov.uk/en/Publichealth/Health improvement/Alcoholmisuse/DH_4001740
- 6 Lovato C, Linn G, Stead LF, Best A. Impact of tobacco advertising and promotion on increasing adolescent smoking behaviours. *Cochrane Database Syst Rev* 2003;(3):CD003439.

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- 7 European Union. Directive 2003/33/EC of the European Parliament and of the Council of 26 May 2003 on the approximation of the laws, regulations and administrative provisions of the Member States relating to the advertising and sponsorship of tobacco products. http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri= OJ:L:2003:152:0016:0019:EN:PDF
- 8 Rehm J, Mathers C, Patra J *et al.* Global burden of disease and injury and economic cost attributable to alcohol use and alcohol use disorders. *Lancet* 2009;in press.
- 9 National Health and Medical Research Council. Australian alcohol guidelines for low-risk drinking 2007. www.nhmrc.gov.au/consult/ _files/draft_australian_alcohol_guidelines.pdf
- 10 Redish AD. Addiction as a computational process gone awry. Science 2004;306:1944–7.
- 11 Anderson P. Commercial communications and alcohol. Utrecht: National Foundation for Alcohol Prevention, 2007. www.stap.nl/content/bestanden/elsa_4_report_on_impact.pdf
- 12 Tapert SF, Cheung EH, Brown GG et al. Neural response to alcohol stimuli in adolescents with alcohol use disorder. Arch Gen Psychiatry 2003;60:727–35.
- 13 Anderson P, de Bruijn A, Angus K, Gordon R, Hastings G. Impact of alcohol advertising and media exposure on adolescent alcohol use: a systematic review of longitudinal studies. *Alcohol Alcohol* 2009;doi: 10.1093/alcalc/agn115.
- 14 Ellickson PL, Collins RL, Hambarsoomians K, McCaffrey DF. Does alcohol advertising promote adolescent drinking? Results from a longitudinal assessment. *Addiction* 2005;100:235–46.

- 15 Collins RC, Ellickson PL, McCaffrey D, Hambarsoomians K. Early adolescent exposure to alcohol advertising and its relationship to underage drinking. J Adolesc Health 2007;40:527–34.
- 16 Gallet CA. The demand for alcohol: a meta-analysis of elasticities. *Aust J Agric Resour Econ* 2007;51:121–35.
- 17 STAP. Regulation of alcohol marketing in Europe. Utrecht: National Foundation for Alcohol Prevention, 2007. www.stap.nl/content/ bestanden/elsa_2_r_on_regulation.pdf
- 18 Boessen S. The politics of European Union health policy-making. Maastricht: Maastricht University, 2008.
- 19 Jones SC, Hall D, Munro G. How effective is the revised regulatory code for alcohol advertising in Australia? *Drug Alcohol Rev* 2008;27: 29–38.
- 20 Eurobarometer attitudes towards alcohol. http://ec.europa.eu/health/ ph_determinants/life_style/alcohol/documents/ebs272_en.pdf
- 21 European Court of Justice 2004. C-262/02 and C-429/02. http://curia.europa.eu/jurisp/cgi-bin/form.pl?lang=en&Submit= Submit&docrequire=alldocs&numaff=C-262%2F02&datefs=&datefe= &nomusuel=&domaine=&mots=&resmax=100
- 22 Anderson P, Baumberg B. Alcohol in Europe: a public health perspective. http://ec.europa.eu/health/ph_determinants/life_style/alcohol/docume nts/alcohol_europe.pdf