Clinical review

Young people's access to tobacco, alcohol, and other drugs

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Young people's use of tobacco, alcohol, and other drugs causes concern. Early use of psychoactive substances can be harmful to health in the short term—for example, through injuries sustained or inflicted while intoxicated—and can lead to lasting patterns of consumption that increase the risk of many chronic diseases and social problems.[1 2] Recent concern in the United Kingdom has focused on issues such as continued high levels of smoking by young women, binge drinking and associated antisocial behaviour by young people in general, and higher levels of cannabis use in adolescents than in most European countries.[w1]

One potential approach to reducing the use of psychoactive substances in young people is to control their availability, but public policy in this area has tended to tackle tobacco, alcohol, or illicit drugs in isolation and is not necessarily based on evidence about what works.[3] We review the research evidence on availability and answer two key questions. Firstly, how easy is it for young people in the UK to obtain tobacco, alcohol, and other drugs? Secondly, do measures to control availability affect young people's patterns of use? We concentrate on measures affecting price, tax, importation, licensing, sales practices, illicit markets, and enforcement in all of these areas. We do not deal with production, prohibition, rationing, marketing, or controls on possession or use (see bmj.com for rationale).

Summary points

- Young people in the United Kingdom can easily obtain cigarettes and alcoholic drinks from a range of social and illicit commercial sources before they reach the legal minimum age for such purchases; many also report having access to illicit drugs
- Prices of alcoholic drinks and most illicit drugs, but not cigarettes, have been falling in real terms
- Increasing the price of tobacco and alcohol is likely to reduce young people's demand for them
- Enforcing the minimum age for purchase of tobacco can reduce sales to people under the legal age limit, and raising the minimum age for purchase of alcohol has been shown to reduce young people's consumption
- Unenforced voluntary agreements with retailers and intervening in illicit distribution systems have not been shown to influence young people's use of tobacco, alcohol, or other drugs

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Sources of evidence

This article is based on evidence about availability synthesised from nine population surveys of people aged under 25 in various parts of the UK and on evidence synthesised from 30 reviews (including seven systematic reviews) of the effects of measures to control availability on patterns of use (specifically hazardous use by young people, where available) and health outcomes. Where review level evidence was insufficient, we included relevant primary research and data from official reports. A list of the surveys included and the 21 databases and websites searched is on bmj.com.

Tobacco

Availability

Tobacco is widely and legally available for sale in Britain from age 16. Cigarette prices are high by international standards and have risen in real terms as a result of tax policy, although cheaper tobacco may be imported for personal use.[4 w2 w3]

Underage smokers can acquire cigarettes easily. Most regular smokers aged 12-15 buy cigarettes from shops, although they are increasingly likely to be refused service. Younger smokers, in particular, also buy cigarettes from relatives. School pupils exchange cigarettes with their peers, sometimes for money. Regular smokers are also given cigarettes by friends and relatives; for occasional smokers, this is by far the most common source.[5 6 7 w4 w5 w6 w7 w8]

Effects of controls on availability

Price

Demand for tobacco is price sensitive. A 10% increase in price is associated with an estimated 4% reduction in demand in higher income countries. Young people are at least as sensitive (perhaps two to three times more

P+ *The rationale for this review, sources of evidence and additional references (w1-w63) are on bmj.com*

sensitive) to price as older adults. A recent systematic review of cross sectional studies from the United States found strong evidence for an association between cigarette prices and both the number of smokers aged 13 to 24 and the quantity each consumes.[8 9w9 w10 w11 w12 w13 w1w15]

Sales

Young people living in areas of the US with more stringent sales policies for underage customers are less likely to smoke. Enforcing the minimum legal age for purchases can reduce illegal cigarette sales, but the evidence from controlled intervention studies that this affects actual smoking behaviour is weaker, presumably because underage smokers can acquire cigarettes from other sources. Unenforced voluntary agreements and educational interventions with retailers are less effective in reducing sales.[9 10 w16 w17 w18]

Smuggling

Smuggled cigarettes account for an estimated one fifth of current UK market share. Increased customs enforcement may reduce this share, but there is little evidence that this affects overall consumption. Some have argued that lower tobacco taxes would reduce the incentive for smuggling, but when several Canadian provinces cut taxes, the downward trend in teenage smoking prevalence was reversed.[11 w19 w20 w21]

Alcohol

Availability

Alcohol is widely and legally available for sale. The real price of alcohol in the UK has halved since the 1960s; consumption by adults has risen in parallel with increasing affordability and increasing density and opening hours of sales outlets. Large quantities of cheaper alcohol may also be imported for "personal" use.[12 w2 w3 w22]

Young people's early drinking is often done at home with their parents. Later, they may drink with friends at parties or outdoors before gravitating towards pubs and clubs from age 14-15 onwards. Around 80% of 15 year olds in the UK perceive alcoholic drinks to be very or fairly easy to obtain.[6 13 w23 w24]

People younger than 18 may not legally buy alcohol in most circumstances. Up to half of 12 to 15 year olds who have consumed alcohol never buy it. Younger drinkers are most likely to acquire alcohol from friends or relatives, but by age 15 a substantial minority buy from pubs, off licences or shops; this is easier for girls. By the age of 16-17, most drinkers usually buy alcohol themselves.[6 7 w6 w7 w24]

Effects of controls on availability

Price

Demand for alcohol is also price sensitive. In the UK, a 10% increase in price is estimated to reduce demand for beer by about 5% (for drinking on the premises) or about 10% (in off licences), for wine by about 8%, and for spirits by about 13%. Some, but not all, reviews have concluded that young people may be more sensitive to price than older adults.[12 14 15 16 w22 w25 w26 w27 w28]

The price of alcohol is also inversely associated with harmful outcomes, including drink-driving and fatal road crashes among young people (mostly in US studies) and the prevalence of problem drinkers and mortality from liver cirrhosis in the general population. There is little evidence to date about the specific influence of price on binge drinking.[15 w25 w26 w27 w28]

Licensing

Several controlled and uncontrolled studies in Nordic countries with state alcohol monopolies have shown that major relaxations in controls on beer strength or sales outlets were followed by increases in alcohol consumption (and, in one study, drunkenness and alcohol related hospital admissions), or conversely that consumption fell after controls were reintroduced. US studies have also shown an association between outlet density, alcohol consumption, and fatal road crashes.[15 17 w25 w26 w28]

The effects of marginal changes in availability when alcohol is already widely available are much less clear; specifically, the overall evidence that changes in licensing hours affect overall consumption is mixed and very limited for young people.[14 15 17 w25]

Sales

Two systematic reviews of controlled before and after studies have concluded that raising the minimum purchase age reduces consumption and alcohol related road crashes among young people. As with tobacco sales, enforcement substantially increases the effectiveness of the law.[14 15 16 18 19 w26 w29]

Most evidence comes from US studies of varying the minimum purchase age within the range 18 to 21, but a recent Danish study has also shown a decrease in

Studies of the effects of intervening in drug markets

Australia: The heroin "drought" of 2000-1 (which may or may not have been due to enforcement activities) was associated with an increase in price, and with decreases in injecting and heroin related ambulance calls and overdoses. However, some users substituted other drugs, notably cocaine[w51 w53 w54 w55 w56]

Canada: A recent 100 kg heroin seizure had no discernible effect on drug use among established injecting users[w57]

Netherlands: Cannabis is legally available for sale from age 18. The evidence about the effects of this *de facto* legalisation is mixed. A recent study found no difference between experienced cannabis users in Amsterdam and San Francisco in terms of average age of onset or pattern of use, but users in Amsterdam were much less likely to have used other illicit drugs [w47 w58 w59]

Northern Ireland: It has been proposed that the scaling down of police and army activity in Northern Ireland in the late 1990s favoured the development of the illicit drug trade. This is somewhat supported by new evidence that drug use among young people increased after the ceasefires, contrary to trends in other parts of the UK[w35 w60]

United Kingdom: It is now illegal to sell solvents and cigarette lighter refills to young people under 18. The introduction of these two pieces of legislation in 1985 and 1999, respectively, may have led to short term reductions in deaths attributable to certain types of product, but the effects of these control measures on overall volatile substance abuse is not clear [w61 w62]

Current availability of tobacco, alcohol, and illicit drugs to young people in the UK

Availability	Tobacco	Alcohol	Illicit drugs
Legal to buy and sell	From age 16	From age 18	No
Controls on distribution of sales outlets	No	Must be licensed	Illegal
Legitimate commercial sources	Wide range of shops including newsagents, supermarkets, petrol stations, and mobile shops Vending machines Cross border shopping	Off licences and other licensed shops Bars, pubs, clubs, and restaurants Cross border shopping	None
Examples of average UK prices[w2 w63]	Cigarettes, 20 king size: £4.37 (€6.29; $8.13)	Lager, pint (568 ml): £2.34 (€3.37; $4.35)	Cannabis, eighth of an ounce (3.5 g): £10 (€14, $19) Ecstasy, tablet: £4 (€6, $7) Heroin, gram: £35 (€50, $65) Cocaine powder, gram: £50 (€72, $93)
Recent trends in real prices	Rising	Falling	Falling
Other sources	Social exchange Smuggled cigarettes	Social exchange Smuggled alcohol	Social exchange Dealers operating in open, semi-open or closed markets Internet distribution?
Availability reported at age 15[6 13 w39]	Around three quarters of 15 year old smokers identify a newsagent as a usual source of their cigarettes Almost all report having purchased from a shop at some time	Around four fifths perceive alcohol to be fairly or very easy to obtain Although friends and relatives are the most common source, a substantial minority report purchasing from pubs, off licences or shops	Two thirds have been offered illicit drugs Two thirds know where they can easily buy cannabis, most commonly the house of a dealer About a quarter say cannabis can easily be bought at school
Average weekly expenditure reported by regular users at age 15[w39]	£9 (€13; $17)	£9 (€13; $17)	£11 (€16, $20)

consumption and drunkenness following the introduction of a minimum purchase age of 15 for beer where previously there had been none. Intensive staff training coupled with rigorous enforcement can reduce underage sales and intoxication among customers. Unenforced voluntary codes of practice have not been shown to be effective.[15 17 w25 w30]

Other drugs

Availability

Ease of access

Around one third of 13 year olds and two thirds of 15 year olds perceive illicit drugs—particularly cannabis—to be very or fairly easy to obtain; these proportions are higher than in many other European countries. Street prices of most illicit drugs in the UK are falling in real terms.[6 13 20 21 w31 w32 w33 w34 w35 w36 w37]

Between 10% and 20% of 10-12 year olds, rising to about two thirds of 15 year olds, say they have been offered illicit drugs (boys slightly more than girls); by age 15, at least 10% claim to have been offered heroin, cocaine, or crack cocaine.[6 22 w38]

Means of access

Friends or relatives usually give or share drugs for initial experimental use, whereas regular users usually buy their drugs. Two thirds of 15 year olds say they know where they can easily buy cannabis; a quarter say it can easily be bought at school.[6 13 w7 w39]

Drugs are sold in both open and closed markets, meaning those in which dealers will, or will not, sell to buyers they do not know personally. Semi-open markets in pubs and clubs and informal dealing among friends are also important. Deals in closed markets are typically made using mobile phones, to which most teenagers have access. Most also have access to the internet. Drugs are increasingly available online, although it is not yet clear what effect this is having on patterns of use.[23 w36 w40 w41 w42 w43 w44 w45 w46 w47]

Effects of controls on availability

Various cross sectional studies have found an association between drug prices and demand for, or harm resulting from, drugs—including young people's demand for cannabis, the probability of arrestees testing positive for cocaine, and heroin and cocaine related attendances at accident and emergency departments.[24 w48 w49 w50]

Short term fluctuations in availability are a normal feature of some drug markets, particularly for heroin, but recent reviews (including one systematic review) of enforcement activities at various levels have found little or no evidence of any effect on street prices, let alone drug use.[23 25 w34 w36 w37 w51] Other, limited, primary research evidence available in this area is summarised in the box.

Conclusions

Young people in the UK report little difficulty in obtaining cigarettes and alcoholic drinks from early secondary school age upwards through a range of social and illicit commercial sources (table). They also report widespread availability of illicit drugs, particularly cannabis. Younger and more experimental users of all substances tend to be given these by friends and relatives; as they become older and more frequent users, they increasingly buy their own supplies.

The balance of available evidence supports the view that there are particular control measures that are likely to reduce hazardous substance use among young people. It is not clear to what extent state intervention can influence the street prices of illicit drugs, but the retail prices of tobacco and alcohol are largely determined by tax policy and are likely to affect young people's demand for these products.

There is also good evidence that restricting the sale of tobacco and alcohol by enforcing (or, in the case of alcohol, raising) the minimum purchase age can reduce sales. However, the evidence that this affects

Additional educational resources

Guide to Community Preventive Services (www.thecommunityguide.org)—Systematic reviews and evidence based recommendations on the effectiveness of interventions, organised by topic. See particularly "motor vehicle" (drink driving) and "tobacco"

Stead LF, Lancaster T. Interventions for preventing tobacco sales to minors. *Cochrane Library*, Issue 2, 2005. (www.cochrane.org/cochrane/revabstr/AB001497.htm)—Cochrane review of effectiveness

Academy of Medical Sciences. Calling time: the nation's drinking as a major health issue (www.acmedsci.ac.uk/p_callingtime.pdf)—Report that argues for measures to reduce overall population consumption of alcohol

European Monitoring Centre for Drugs and Drug Addiction (www.emcdda.eu.int)—Annual reports of the state of the drug problem in the European Union

Home Office research on drug use and drug markets (www.homeoffice.gov.uk/rds/drugs1.html#publications)—List of online research publications

consumption or hazardous use is stronger for alcohol than for tobacco and depends on compliance by retailers. Young people's use of alcohol may also be influenced by policies on where and when alcohol is permitted to be sold, but evidence for this is weaker.

State control of commercial markets is clearly only part of the picture. For all types of substance, younger and more experimental users mostly obtain their supplies from social (non-commercial) sources, which implies that controls on price and sales to people under the legal age limit might be expected to have a greater effect on patterns of consumption once a habit is established than on deterring experimental use. If controls on sales to underage customers were strengthened social markets might expand to meet the demand, but it is also possible that higher taxation and more rigorous controls on retailers would reduce the supply of cigarettes and alcohol to those social markets.

We clearly have more to learn about the role of availability as one of the many factors that may influence the development of hazardous substance use. Globalisation and technological development may be contributing to increased availability through personal travel, licit and illicit international trade and the internet; surveillance of these trends is important in order to develop appropriate public health responses. More generally, research on the effects of policy interventions in this area is difficult because control measures may be multifaceted, are rarely amenable to randomisation, and often require imaginative quasi-experimental designs for their evaluation. However, our review highlights some inconsistencies between current policy and the available scientific evidence. For example, the UK government has kept cigarette prices high but has rejected the use of price controls to influence demand for alcohol. At the same time, little evidence exists that voluntary agreements with legitimate retailers, or intervening in illicit distribution systems—both of which feature prominently in current UK policy—have had any effect on young people's patterns of use of tobacco, alcohol or any other drug.[12 w22] Draft legislation in Scotland to outlaw the irresponsible discounting of alcoholic drinks represents an alternative approach,[w52] the effects of such changes in policy should continue to be evaluated. Further research is also needed to improve our understanding of social markets for licit substances, illicit drug markets, and the effects of intervening in these markets on young people's patterns of consumption and their health consequences.

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