

## Underage drinking



Prevalence of underage drinking • Drinking behaviours of underage drinkers • Why has underage drinking declined? • The health and social impacts of underage drinking

In the UK, a significant proportion of children have tried drinking alcohol before they reach the minimum legal purchase age of 18 – what we define here as underage drinking.\* Moreover, a number have experienced drunkenness, and some drink to harmful levels.

This factsheet summarises the major trends around underage alcohol consumption, analysing its prevalence, how it varies by sociodemographic group, and how these have changed over time. It also looks at the drinking behaviours of underage drinkers – how much they drink, what they drink, how they access it, where they drink, and who they drink with.

The factsheet offers an overview of the research seeking to explain underage drinking, identifying a number of factors, including family and peer influence, personality and behavioural risk factors and marketing.

One notable recent trend has been a clear decline in underage drinking since the early 2000s. There are a number of theories explaining this fall, which are collated here: better legal enforcement, the rise of new technology, changing social norms, happier and more conscientious children, better parenting, demographic shifts and lower affordability and economic confidence.

Finally, evidence on the health and social impact of drinking in childhood and young adulthood are reviewed, including neurological risks, development problems, risky sexual behaviour, crime, injury and violence and educational outcomes.

---

\* N.B. Children aged 16 or 17 may consume wine, beer or cider on licensed premises when ordered with a meal. In England and Wales, it must be an adult who orders; however, an adult doesn't have to be present to order alcohol with a meal in Scotland.

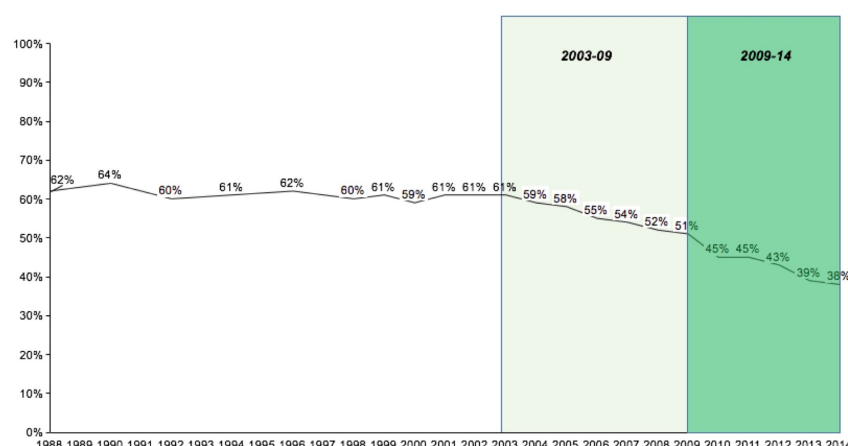


# Prevalence of underage drinking

The main source of information on underage drinking in England is the Health and Social Care Information Centre's [\*Smoking, drinking and drug use among young people in England \(SDD\) survey\*](#). This is a large nationally representative survey administered to 11–15-year-olds through schools. NHS National Services Scotland carries out an equivalent survey for Scotland, polling 13 and 15-year-olds in the [\*Scottish Schools Adolescent Lifestyle and Substance Use Survey \(SALSUS\)\*](#).

Underage drinking remains fairly prevalent: according to the most recent data, around two-fifths (38%) of English 11–15-year-olds have tried alcohol.<sup>1</sup> In Scotland, the figure is 32% for 13-year-olds and 70% for 15-year-olds.<sup>2</sup> However, in both countries, there is evidence that this has been falling, having peaked around 2002–2003. Moreover, the decline appears to be accelerating, with sharper drops since 2009.

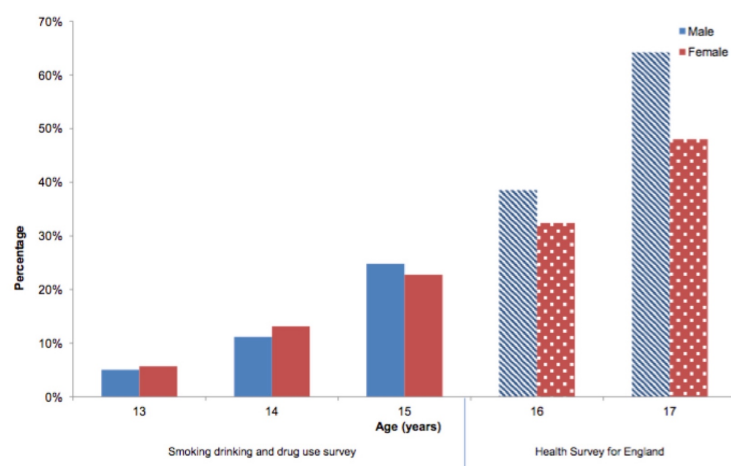
Figure 1: Proportion of 11–15-year-olds in England ever to have had an alcoholic drink



Source: HSCIC (2015), *Smoking, Drinking and Drug Use*, Table 5.1

While the SDD focuses on 11–15-year-olds, it is important to remember that alcohol consumption is much higher among 16 and 17-year-olds. Almost two-thirds (64%) of 17-year-old boys and almost half (48%) of girls drink on a weekly basis.

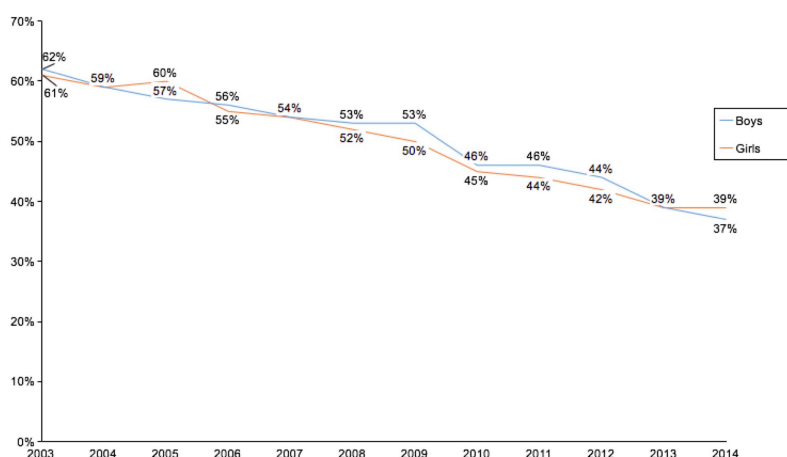
Figure 2: Proportion of children in England who drank in the last week, by age



Source: Public Health England (2016), Data intelligence summary: Alcohol consumption and harm among under 18 year olds, p. 4

As the chart above shows, boys and girls are similarly likely to drink until the age of 16, at which point boys become much more likely to drink. However, the recent decline in the prevalence of underage drinking appears to apply equally to both sexes.

Figure 3: Proportion of 11–15-year-olds in England ever to have had an alcoholic drink, by sex

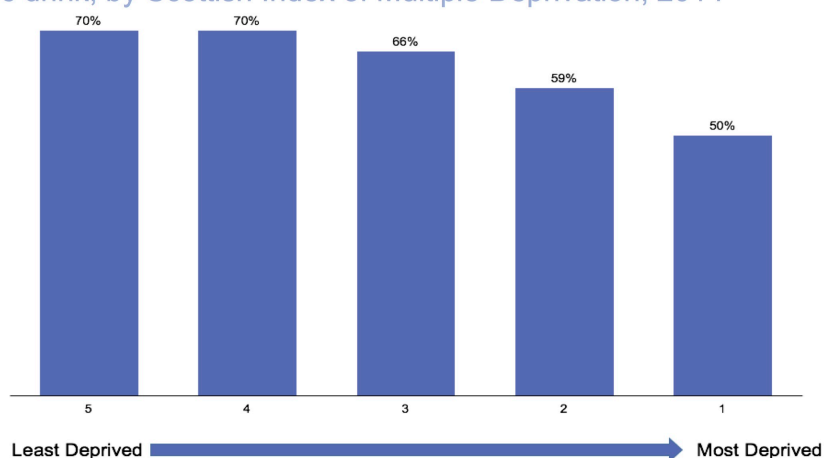


Source: HSCIC (2015), Smoking, Drinking and Drug Use, Table 5.1

The relationship between socioeconomic status and underage drinking is less clear. In England, children from the most deprived quintile are less likely to drink than those from more affluent backgrounds.



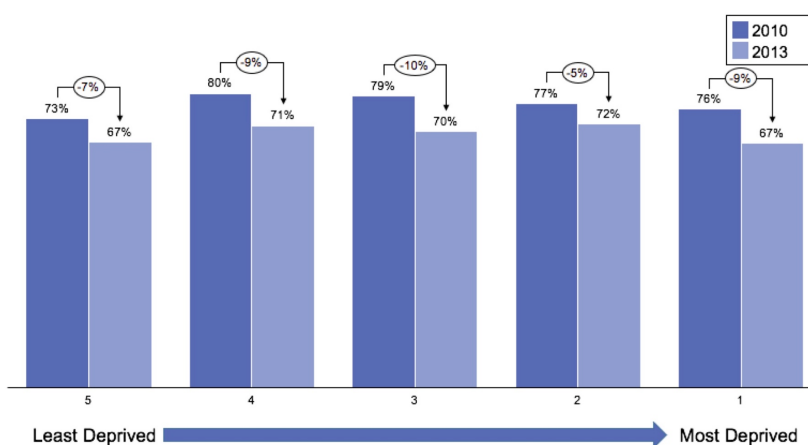
Figure 4: Proportion of 15-year-olds in England ever to have had an alcoholic drink, by Scottish Index of Multiple Deprivation, 2014



Source: HSCIC (2015), Health and Wellbeing of 15-year-olds in England – Main findings from the What About YOUTH? Survey 2014, Table 6.5

However, in Scotland alcohol use is equally prevalent across children of all socioeconomic groups.

Figure 5: Proportion of 15-year-olds in Scotland ever to have had an alcoholic drink, by Scottish Index of Multiple Deprivation

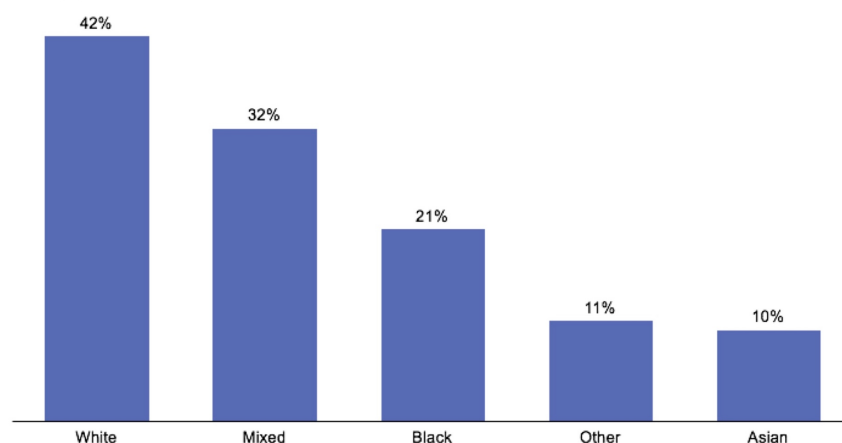


Source: ISD Scotland (2014), Scottish Schools Adolescent Lifestyle and Substance Use Survey, Table A43

There are substantial differences in the rate of underage drinking across different ethnicities. White children are by far the most likely to try alcohol, with 42% of 11–15-

year-olds having done so. By contrast, 21% of black children and 10% of Asians have tried drinking.

Figure 6: Proportion of English 11–15-year-olds to have ever tried alcohol, by ethnicity, 2014



Source: HSCIC (2015), Smoking, Drinking and Drug Use, Table 10.10

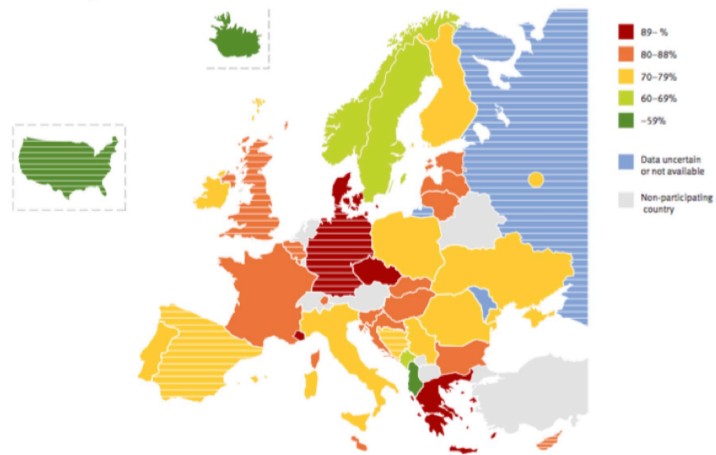
## Comparisons with other countries

It can be tricky to put UK underage drinking in international perspective, given differences in definitions and survey methodology. The most reliable source of such comparisons is the [\*European School Survey project on Alcohol and Other Drugs\* \(ESPAD\)](#).

According to the most recent ESPAD survey, carried out in 2011, young people's drinking in the UK is well above the European average on a number of metrics.<sup>3</sup> 85% of 15–16-year-olds in the UK had drunk alcohol in the past 12 months, while the European average is 79%. 65% had drunk alcohol in the past 30 days, compared to 57% across the whole of Europe. 55% of British respondents reported ever having been drunk, while 47% had done so in the rest of the continent.

However, it is important to be cautious in interpreting these numbers. Firstly, as the data above shows, young people's drinking in the UK has fallen quite substantially since 2011, so the last ESPAD results may show an outdated picture. Second, the ESPAD report notes a low response rate (6%) from British schools to the 2011 survey, though it maintains that the sample is sufficient to make valid comparisons with other countries, as a "precautionary measure", it suggests that comparability may be "limited".<sup>4</sup>

Figure 7: Proportion of 15–16-year-olds to have used alcohol in the past 12 months, by country



Source: Hibell, B. et al (2012), The 2011 ESPAD Report: Substance Use Among Students in 36 European Countries. Stockholm: The Swedish Council for Information on Alcohol and Other Drugs (CAN), Figure 2a

<sup>1</sup> HSCIC (2015), Smoking, Drinking and Drug Use Among Young People in England – 2014, Table 5.1

<sup>2</sup> ISD Scotland (2014), Scottish Schools Adolescent Lifestyle and Substance Use Survey, Table A1

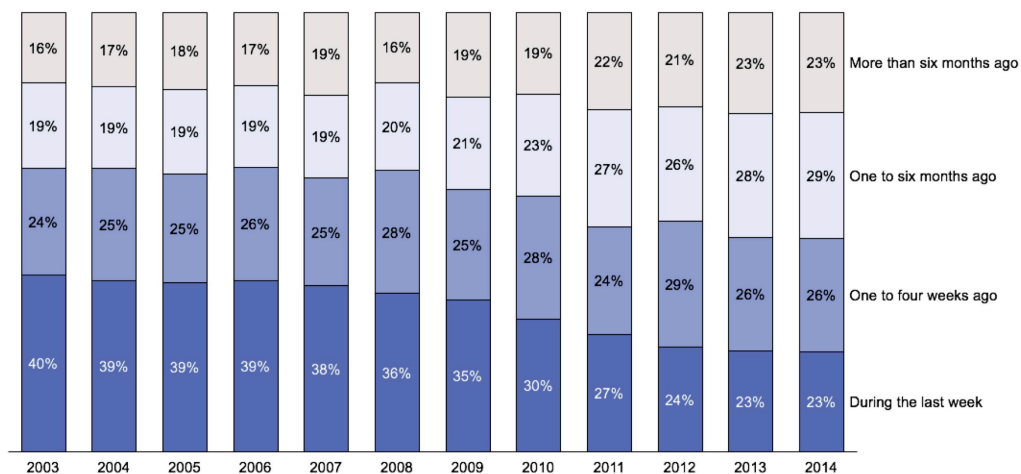
<sup>3</sup> Hibell, B. et al (2012), *The 2011 ESPAD Report: Substance Use Among Students in 36 European Countries*. Stockholm: The Swedish Council for Information on Alcohol and Other Drugs (CAN)

<sup>4</sup> Hibell et al, op. cit., p. 61

# Drinking behaviours of underage drinkers

Of those children who have tried alcohol, around a quarter drank in the last week, and around half in the last month. This is substantially lower than in 2003, when the figures were 40% and 64% respectively. This suggests that children are drinking much less frequently than before.

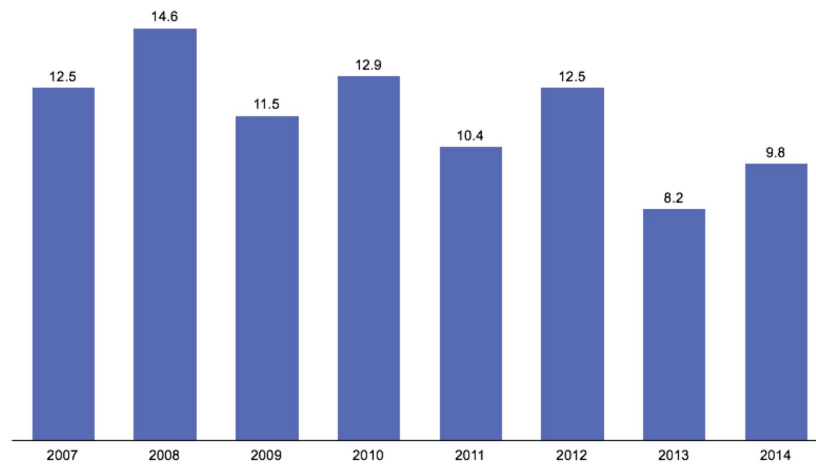
Figure 8: Proportion of 11–15-year-olds in England to have tried alcohol, by when they last drank



Source: HSCIC (2015), Smoking, Drinking and Drug Use, Table 5.3b

It is less clear, however, whether the overall volume that underage drinkers consume has fallen. Comparisons are particularly tricky, given changes in the methodology for estimating units from survey questions. The SDD suggests a slight downward trend, but the indicator is volatile.

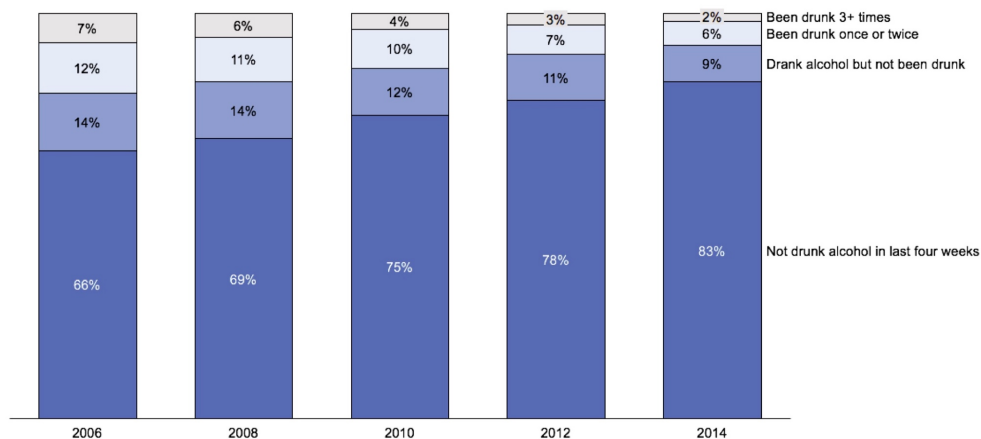
Figure 9: Average units per week consumed by 11–15-year-olds who drank in the last week



Source: HSCIC (2015), Smoking, Drinking and Drug Use, Table 5.3b

Teenage drunkenness is not uncommon, but does appear to be declining. In 2014, 8% of English 11–15-year-olds reported being drunk in the last four weeks, with 2% saying they had been drunk on at least three occasions. This is down from 19% in 2006.

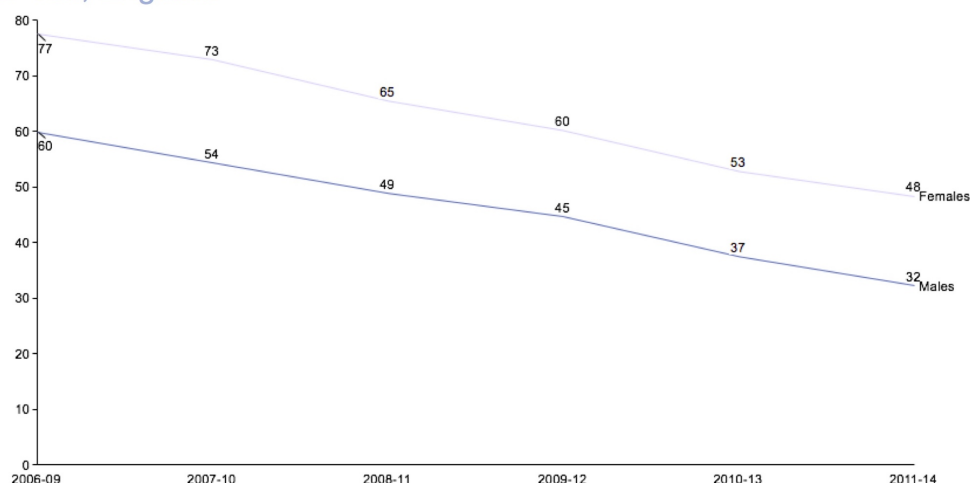
Figure 10: Drunkenness of 11–15-year-olds in England



Source: HSCIC (2015), Smoking, Drinking and Drug Use, Table 5.3b

There are further indicators that the most harmful underage drinking is falling. The rate of alcohol-specific hospital admissions\* of under 18s has fallen dramatically since 2009: by 46% among boys, and 38% among girls. This suggests that the heaviest drinkers (or at least those with the most harmful consumption patterns) are drinking less.

Figure 11: Alcohol-specific hospital admissions per 100,000 population – under 18s, England

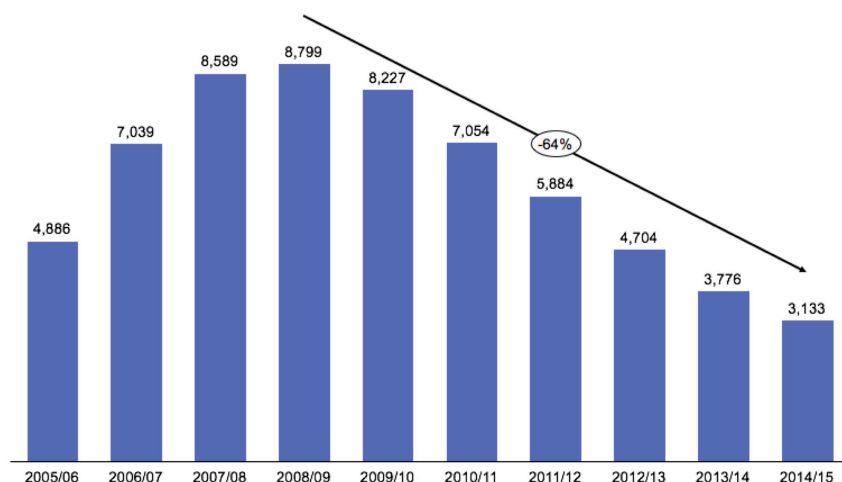


Source: HSCIC (2015), Smoking, Drinking and Drug Use, Table 7.9

Another indicator that the most severe alcohol misuse is in decline among young people is the fact that far fewer under 18s are in specialist treatment for alcohol misuse – down 64% from the recent peak, which was 2009. Of course, these statistics by themselves do not show harmful drinking is falling, as they may reflect trends in access to treatment. However, the fact that they match and corroborate the evidence above suggests that underage drinking is falling across all levels of consumption.

\* That is, admissions for conditions in which alcohol is causally implicated in all cases, such as alcohol-related liver cirrhosis

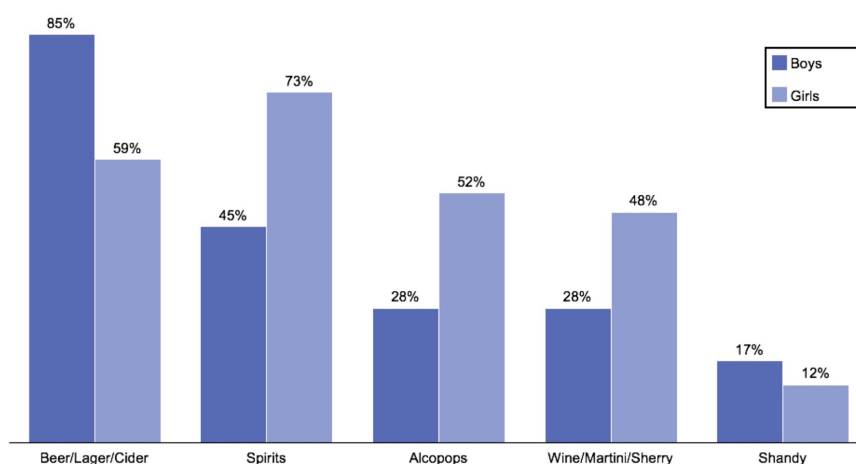
Figure 12: Number of under 18s in specialist alcohol treatment, England



Source: Public Health England (2015), Young people's substance misuse statistics from the National Drug Treatment Monitoring System (NDTMS) 1 April 2014 to 31 March 2015, Table 5.2.1

Beer/lager/cider and spirits are the most popular drinks among underage drinkers, with boys favouring the former, and girls the latter. Girls have more diverse tastes, with a large proportion drinking alcopops and wine as well.

Figure 13: Types of alcohol drunk in the last week, by English 11–15-year-olds who drank in the last week

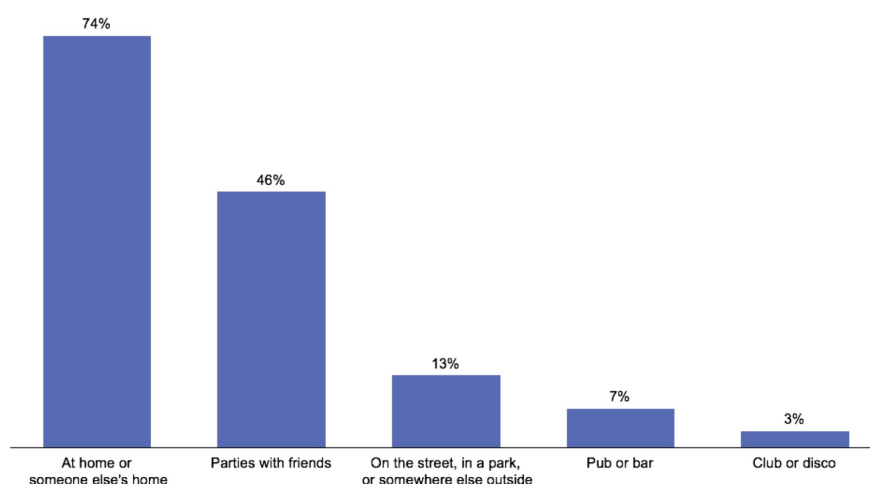


Source: HSCIC (2015), Smoking, Drinking and Drug Use, Table 5.16b

The vast majority of underage drinking occurs in domestic situations, with 74% of current drinkers usually drinking at their own or someone else's home and 46% usually drinking at parties. By contrast, relatively little drinking occurs 'out': outdoors, or in pubs, clubs and bars.



Figure 14: Where English 11–15-year-old current drinkers usually drink



Source: HSCIC (2015), Smoking, Drinking and Drug Use, Table 5.16b

Most underage drinkers do not buy their own alcohol – rather, they are most likely to be given it by parents, friends or others. A sizeable proportion take alcohol from parents or friends.

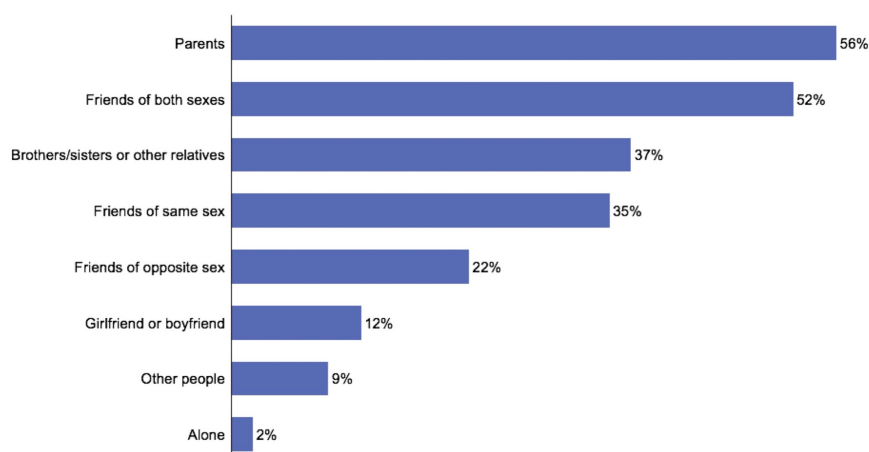
Figure 15: How English 11–15-year-olds obtain alcohol

How obtained alcohol in the last four weeks: 2004-2014						
All pupils		2004-2014				
How obtained alcohol <sup>a</sup>	Year					
	2004	2006	2008	2010 <sup>b</sup>	2012 <sup>b</sup>	2014 <sup>b</sup>
	%	%	%	%	%	%
Bought alcohol by someone else	20	20	18	15	13	9
Tried to buy from shop <sup>c</sup>	6	7	6	5	4	3
Tried to buy from pub <sup>c</sup>	5	4	4	2	1	1
Given alcohol by parents	27	23	22	20	19	17
Given alcohol by friends	27	26	24	23	19	15
Given alcohol by other relatives	12	10	9	9	8	7
Given alcohol by siblings	8	7	7	6	6	5
Given alcohol by other people	9	10	9	8	7	5
Taken alcohol from home	18	14	14	12	13	11
Taken alcohol from friend's home	11	10	10	9	8	7
Stolen alcohol from home	6	6	6	5	4	3
Stolen alcohol from friend's home	1	1	1	1	1	1
Stolen alcohol from somewhere else	1	2	1	1	1	1
<b>Obtained any alcohol in last four weeks<sup>c</sup></b>	<b>49</b>	<b>44</b>	<b>42</b>	<b>36</b>	<b>33</b>	<b>28</b>

Source: HSCIC (2015), Smoking, Drinking and Drug Use, Table 6.1b

Over half of underage drinkers (56%) say that they usually drink with their parents. However, drinking with mixed-sex friendship groups (52%), same-sex friendship groups (35%) and siblings (37%) is also common.

Figure 16: Who English 11–15-year-old current drinkers usually drink with



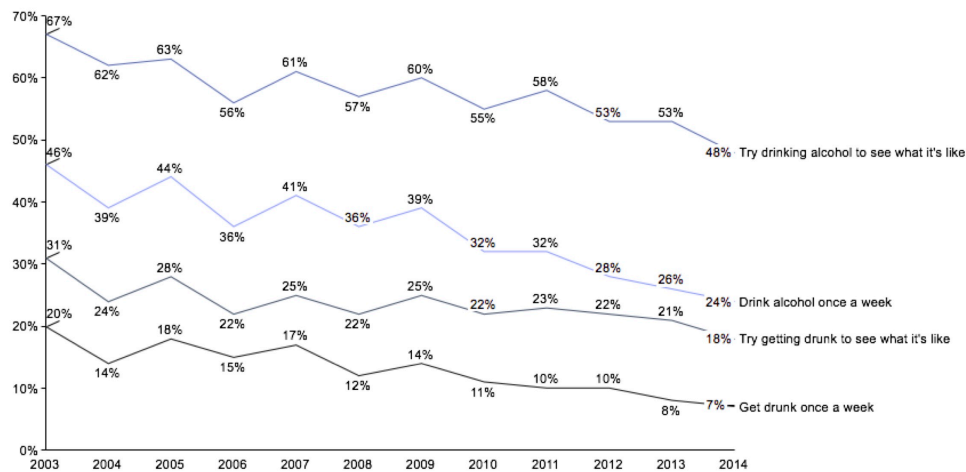
Source: HSCIC (2015), Smoking, Drinking and Drug Use, Table 6.11

## Factors that may drive underage drinking

A substantial amount of research has sought to explain the causes and predictors of underage drinking. A number of characteristics have been identified which increase the likelihood of young people consuming alcohol.

A significant influence is a young person's 'expectancies' towards alcohol – whether they are positively or negatively disposed towards it, and the extent to which they associate it with positive or negative consequences. Positive expectancies towards alcohol increase the chances of a child drinking.<sup>1</sup> There is evidence that children are less likely to believe that alcohol is acceptable than before, though almost half still feel it is acceptable for children of their age to try alcohol, and a quarter believe it is acceptable to drink on a weekly basis.

Figure 17: Proportion of 11–15-year-olds in England that believe it is acceptable of someone of their age to...



Source: Velleman, R. (2009), *Influences on how children and young people learn about and behave towards alcohol*. York: Joseph Rowntree Foundation, pp17-19; Bremner, P. et al (2011), *Young people, alcohol and influences*. York: Joseph Rowntree Foundation

Less clear is what determines these expectancies towards alcohol. In a review of the literature, Donovan identifies four 'domains' of risk factors: family, peer, personality and behavioural.<sup>2</sup>

## Family domain risk factors

A number of variables around family context have been consistently found to be associated with underage drinking. In particular:

- **Modelling:** Parents' propensity to drink themselves – children of heavier drinkers are more likely to drink.<sup>3</sup> Parental smoking and use of other drugs has also been linked to underage drinking.
- **Approval:** Children whose parents are more permissive towards drinking are more likely to drink. This is also associated with children having easier access to alcohol, which is another factor linked to higher drinking rates.<sup>4</sup>
- **Monitoring:** Children whose parents have a better awareness of their activities and whereabouts are less likely to drink.<sup>5</sup>
- **Relationship quality:** A range of indicators of parent-child relationships, including strength of communication<sup>6</sup>, support, acceptance, structure<sup>7</sup>, and openness/lack of secretiveness<sup>8</sup> are associated with lower teen drinking. Velleman argues that the optimal parenting style to reduce the likelihood of underage drinking involves instilling self-efficacy, imposing clear, consistent and enforced rules and close bonding.<sup>9</sup>
- **Family structure:** Children from 'intact' families (i.e. living with both natural parents) have been found to be less likely to drink.<sup>10</sup>

## Peer domain risk factors

The influence of peers has long been recognised in shaping children's propensity to consume alcohol. For example, a Joseph Rowntree Foundation investigation of young

people's attitudes to alcohol found that "Alcohol, but in particular drunkenness, were seen to facilitate socialising, and the creation and maintenance of group bonds. These peer group needs are prominent during young adulthood".<sup>11</sup>

A number of studies have found that greater use of alcohol and other drugs among friends is associated with higher underage drinking.<sup>12</sup> However, greater social assertiveness, which can be seen as independence from peer pressure reduces the likelihood of drinking.<sup>13</sup>

There is some debate over whether direct peer pressure is the main factor in influencing underage drinking, or whether peer selection (the idea that associating with the sort of children who drink the child's underlying characteristics) better explains the relationship.<sup>14</sup> Both are likely to play a role. Similarly, the relative importance of family and peer influences is disputed, with some suggesting that parental influence is more important in younger children, and peer influence in older.<sup>15</sup> However, the relationship between the two is complex – for example, parents may be able to influence the groups that their children associate with.

## Personality domain risk factors

Personality domain factors that influence underage drinking include values, beliefs, attributes, dispositions and psychological condition. The sorts of factors that have been linked to drinking include<sup>16</sup>:

- **Attainment and attitudes to school:** Those who are less successful, have lower expectations of achievement, or who are less motivated at school are more likely to drink
- **Rejection of authority:** Tendencies towards unconventionality, rebelliousness and rebellion against parents are linked to higher drinking
- **Affective disorders:** Stress, anxiety and depression are generally associated with higher alcohol use

## Behavioural domain risk factors

As noted above, underage drinkers are more likely to engage in other risky or anti-social behaviours. Children identified by their teachers as aggressive are more likely to take up drinking. Underage drinkers are more likely to smoke. They tend to watch more television.<sup>17</sup> Miller identifies heavy drinking with 'sociable delinquency' – behaviours such as "frequently going out with friends, riding round on mopeds, playing on slot machines, being delinquent and aggressive and experiencing less parental control".<sup>18</sup> By contrast, engaging in hobbies such as reading, singing, drawing and writing reduces the likelihood of underage drinking.<sup>19</sup>

## Marketing

A final factor regularly cited as a cause of underage drinking is marketing. A substantial literature shows that children are regularly exposed to alcohol industry marketing and that children who are more exposed to marketing are more likely to drink. This is covered in greater detail in the *IAS Marketing factsheet*.<sup>\*\*</sup>

There is some debate over how the influence of marketing relates to other influences described above. For example, it has been suggested that children's susceptibility to alcohol advertising is mediated by the pre-existing expectancies and attitudes they have towards alcohol as a result of family and peer influence.<sup>20</sup> Thus leads Velleman to argue that the risk

---

<sup>\*\*</sup> <http://www.ias.org.uk/Alcohol-knowledge-centre/Marketing/Factsheets/Alcohol-marketing-and-children.aspx>

of children being encouraged to drink by industry marketing can be reduced by parents countering these messages with alternative perspectives on alcohol.<sup>21</sup>

---

<sup>1</sup> Velleman, R. (2009), *Influences on how children and young people learn about and behave towards alcohol*. York: Joseph Rowntree Foundation, pp. 17–19; Bremner, P. et al (2011), *Young people, alcohol and influences*. York: Joseph Rowntree Foundation

<sup>2</sup> Donovan, J.E. (2004), Adolescent alcohol initiation: A review of psychosocial risk factors, *Journal of Adolescent Health* 35:6, pp529.e7-529.e18

<sup>3</sup> Rossow, I. et al (2016), Does parental drinking influence children's drinking? A systematic review of prospective cohort studies?, *Addiction* 111:2, pp. 204–17

<sup>4</sup> Ryan, M. et al (2010), Parenting factors associated with reduced adolescent alcohol use: a systematic review of longitudinal studies.; Bremner et al, op. cit.

<sup>5</sup> Ledoux, S. et al (2002), Family structure, parent-child relationships, and alcohol and other drug use among teenagers in France and the United Kingdom, *Alcohol and Alcoholism* 37:1, pp. 52–60; Ryan, op. cit.

<sup>6</sup> Ryan, op. cit.

<sup>7</sup> Foxcroft, D. & Lowe, G. (1991), Adolescent drinking behaviour and family socialization factors: a meta-analysis, *Journal of Adolescence* 14:3, pp. 255–73

<sup>8</sup> McCann, M. et al (2016), Assessing elements of a family approach to reduce adolescent drinking frequency: parent-adolescent relationship, knowledge management and keeping secrets, *Addiction* 111:5, pp. 843–53

<sup>9</sup> Velleman, op. cit.

<sup>10</sup> Donovan, op. cit.; Ledoux et al, op. cit., Foxcroft & Lowe, op. cit.

<sup>11</sup> Seaman, P. & Ikegwuonu, T. (2010), *Drinking to belong: Understanding young adults' alcohol use within social networks*. York: Joseph Rowntree Foundation, p. 17

<sup>12</sup> Bremner, op. cit.; Donovan, op. cit.

<sup>13</sup> Donovan, op. cit.

<sup>14</sup> Velleman, op. cit.

<sup>15</sup> Seaman & Ikegwuonu, op. cit.

<sup>16</sup> Donovan, op. cit.

<sup>17</sup> Donovan, op. cit.

<sup>18</sup> Miller, P. (1997), Family structure, personality, drinking, smoking and illicit drug use: a study of UK teenagers, *Drug and Alcohol Dependence* 45:1-2, pp. 121–9

<sup>19</sup> Ibid.

<sup>20</sup> Martino, S.C. et al (2006), Socio-environmental influences on adolescents' alcohol outcome expectancies: a prospective analysis, *Addiction* 101:7, pp. 971–83

<sup>21</sup> Velleman, op. cit., p. 37



# Why has underage drinking declined?

As described above, there has been a marked decline in the prevalence of underage drinking in recent years. There are a variety of theories to explain this trend, though despite a lack of thorough research and compelling evidence. The IAS report [\*Youthful Abandon\*](#) summarises and evaluates these in detail, identifying seven broad hypotheses:

## 1. Better legal enforcement

There is evidence that vendors are less likely to serve alcohol to underage customers than before, partly as a result of voluntary ID checking initiatives such as Challenge 21<sup>1</sup> and Challenge 25<sup>2</sup>, but also because of closer collaboration between police services and local governments.<sup>3</sup> Data from Serve Legal, a private company offering test purchase services, shows that 45% sold to underage consumers in 2007, but that this had declined to 24% in 2010.<sup>4</sup> By 2015, 13% of supermarkets and 17% of convenience stores failed test purchases.<sup>5</sup>

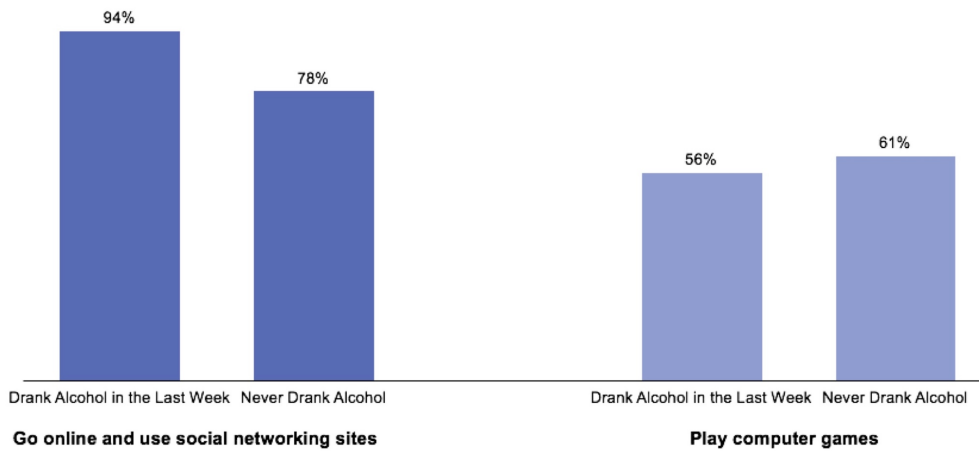
However, this is likely to have made only a modest contribution to the decline in underage drinking, since relatively few underage drinkers buy their own alcohol – at its peak in 2004 only 6% of children bought alcohol from a shop and 5% from a pub. By contrast, parents and friends are a much more significant source of supply: in 2004, 27% of children had obtained alcohol from a parent, and the same number from a friend.<sup>6</sup>

## 2. Rise of new technology

Another prominent theory attributes the falling drinking among young people to greater use of the internet and social media. It is argued that new technology provides children with alternative sources of entertainment, different ways of socialising and also increases the negative consequence of drinking – for example, because embarrassing drunken pictures may be seen by friends or potential employers.

There is limited evidence for such a theory, though little research has addressed it directly. One unpublished study reports that children who regularly play computer games are less likely to have ever drunk alcohol – though this finding only holds in three of the six countries examined, including the UK.<sup>7</sup> However, there is more evidence that internet usage is associated with *higher* drinking. The Scottish SALSUS data shows that children who drink are more likely to 'go online and use social networking sites' on a weekly basis (although they are slightly less likely to play computer games). This may be because children on the internet are exposed to glamourised accounts of others' drinking, or to online advertising. Surveys of American university students indicate that they are more likely to drink if they spend more time online for a range of non-educational purposes (including social networking, downloading music, playing video games, shopping and watching pornography).<sup>8</sup> It is important to note, however, that these associations are merely correlations, which may disappear when controlling for confounding factors.<sup>9</sup>

Figure 18: Proportion of Scottish 13 and 15-year-old drinkers / non-drinkers engaging in stated leisure activities on a weekly basis



Source: ISD Scotland (2014), Scottish Schools Adolescent Lifestyle and Substance Use Survey, Table A33a

### 3. Changing social norms

A third set of theories focus on cultural change. One version of this explains falling youth drinking as a ‘backlash’ against the heavier consumption of earlier generations.<sup>10</sup> This reflects a long-standing theory that the social position of alcohol ebbs and flows in ‘long waves’.<sup>11</sup> On this view, above a certain level of alcohol consumption society reaches ‘saturation’. At this point, the harms resulting from alcohol, such as ill health and crime, lead to greater concern about alcohol at both individual and societal level. This leads to a decline in consumption. In turn, these cultural shifts bring about increasingly restrictive government policies, which further suppress consumption to the point where previous concern seems exaggerated. This leads to a relaxation of social and political attitudes, and increase in drinking, and so the cycle continues. In line with this theory, it has been suggested that the fall in underage drinking reflects the tipping point into a new ‘wave’ of attitudes turning against alcohol consumption.<sup>12</sup>

Cutting against these arguments is the “fairly large and consistent literature demonstrating that more parental drinking is associated with more drinking in offspring” identified by one recent systematic review.<sup>13</sup> The SDD shows that the more people in a young person’s household that drink, the more likely they are to drink themselves.<sup>14</sup> This suggests that children are more likely to emulate their parents drinking habits than to reject them.

Other theories suggest that young people are drinking less because they are more aware of the health harms associated with alcohol, or because they are more concerned about their health in general. However, there is little evidence either way to support such claims.<sup>15</sup>

### 4. Happier and more conscientious children

As described above, there are a number of personality and behavioural traits that are associated with lower underage drinking, and there is some evidence that these are

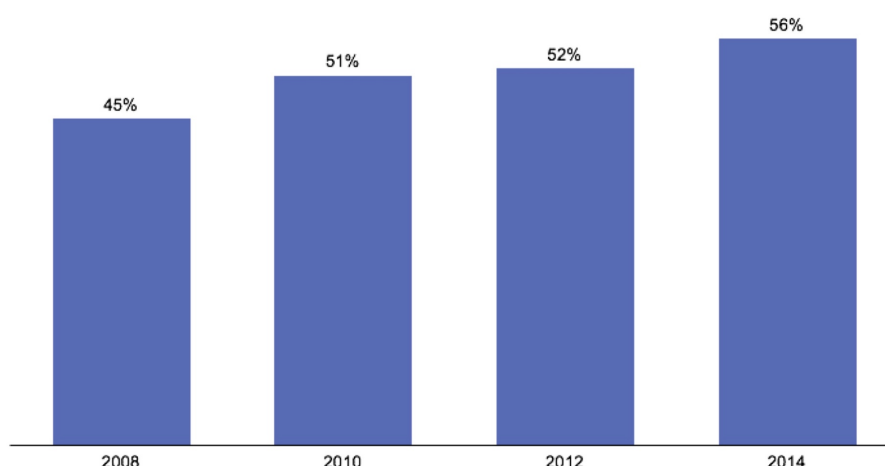


increasing. For example, some indicators of children's subjective wellbeing improved between the mid 1990s and 2007, though it appears to have fallen back in subsequent years. In particular, indicators of educational performance and satisfaction at school appear have improved, though these trends are contested.<sup>16</sup>

## 5. Better parenting

Trends in the parenting risk factors described above may also have contributed to lower underage drinking. Alcohol consumption among 25–44-year-olds – the group most likely to have dependent children has fallen in recent years, suggesting parents are modelling lower levels of alcohol consumption for their children.<sup>17</sup> Parents appear to be taking a stricter line on alcohol: the proportion of children who believe their parents would not approve of them drinking has risen from 45% in 2008 to 56% in 2014.

Figure 19: Proportion of 11–15-year-olds who believe their parents wouldn't like them drinking



Source: HSCIC (2015), Smoking, Drinking and Drug Use, Table 7.2

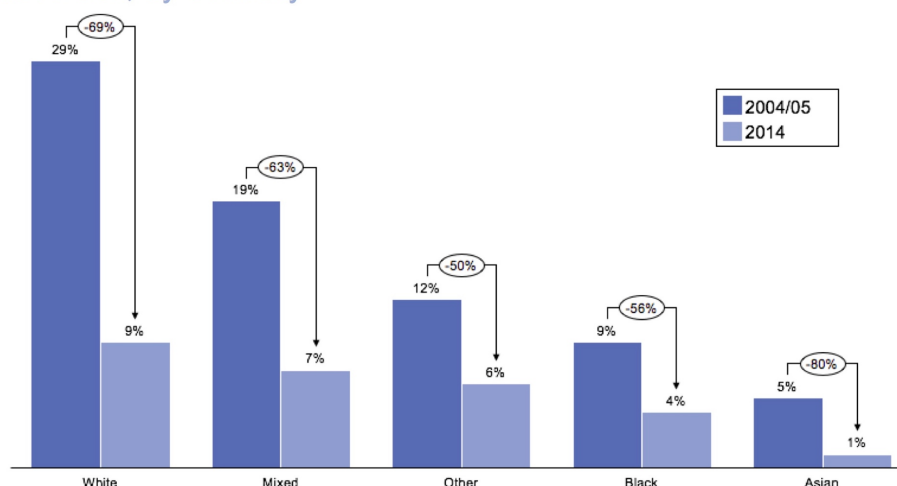
Parents' monitoring of their children's behaviour appears to have increased. The proportion of parents who regularly asked their teenage who they were with rose from 67% to 77% between 1986 and 2006, while the proportion who told their parents rose from 78% to 86%.<sup>18</sup> Particularly in recent years, fewer children are likely to be out late without their parents' knowledge: 14% of 11–15-year-olds had been out after 9pm without informing their parents of their whereabouts in 2014, down from 18% in 2006.<sup>19</sup> There is also some evidence that parents are developing warmer and more supportive relationships with their children – for example, they are less likely to report quarrelling than in previous years.<sup>20</sup>

## 6. Demographic shifts

A number of commentators have linked lower drinking among young people to the demographic shifts associated with immigration.<sup>21</sup> As mentioned above, ethnic minorities are less likely to drink than white children, so it has been suggested that the increase in ethnic minorities helps account for lower overall drinking. While this is doubtless part of the

explanation, it can only be a small part of the story. Drinking has been falling among all ethnic groups, and in fact the decline has been greater among white children (who accounted for a disproportionate share of consumption to begin with).

Figure 20: Proportion of English 11–15-year-olds to have drunk alcohol in the past week, by ethnicity



Source: HSCIC (2015), Smoking, Drinking and Drug Use, Table 10a

However, it has been suggested that demographic change has less direct effects on drinking – that the peer effects of white children being surrounded by lower-drinking minorities may influence them to drink less themselves.

Studies from Norway and the Netherlands provide some support for this theory. Though the proportion of ethnic minority students in Dutch schools was found only to influence drinking among other ethnic minorities, stronger relationships have been found with religious background.<sup>22</sup> Schools with a higher concentration of children with parents from majority-Muslim countries have lower levels of drinking among both ‘native’ and immigrant children.<sup>23</sup>

## 7. Lower affordability that may drive underage drinking

A final set of theories link underage drinking to the economic context. In particular, the financial crisis and recession have had three effects: to reduce spending power, to encourage the government to raise taxes on alcohol and to reduce economic confidence. It is well established that alcohol consumption is strongly influenced by affordability.<sup>24</sup> The recent recession has led to slow wage growth – which filters down to children through their families, but also reduces their direct earning power. At the same time, the Government raised taxes on alcohol – between 2008 and 2013, alcohol duty was increased by 2% above inflation each year.

Cumulatively, these developments have significantly reduced the affordability of alcohol for under 18s. Beer is 26% and wine and spirits 31% more expensive than in 2007. By comparison the national minimum wage for under 18s has risen by only 14% over the period.<sup>25</sup> Demos reports that declining affordability was cited by 16–24-year-olds as the

second most likely explanation for the fall in underage drinking (referenced by 55% of respondents).<sup>26</sup>

---

<sup>1</sup> British Beer & Pub Association, Challenge 21. Available from:

<<http://www.beerandpub.com/industry-briefings/challenge-21>> [Accessed 4 May 2016]

<sup>2</sup> Wine & Spirit Trade Association, Challenge 25. Available from: <<http://www.wsta.co.uk/challenge-25>>. [Accessed 4 May 2016]

<sup>3</sup> Foster, J. & Charalambides, L. (2016), *The Licensing Act (2003): its uses and abuses 10 years on*, London: Institute of Alcohol Studies, p. 98

<sup>4</sup> Birdwell, J. et al (2013), *Sobering Up*, London: Demos

<sup>5</sup> Institute of Alcohol Studies (2016), Majority of web alcohol purchases fail age check tests, *Alert*. Available from: <<http://www.ias.org.uk/What-we-do/Alcohol-Alert/January-2016.aspx>>. [Accessed 4 May 2016]

<sup>6</sup> HSCIC (2015), Smoking, Drinking and Drug Use, Table 6.1

<sup>7</sup> Svensson, J. (2013), Alcohol consumption and alcohol-related harm among young people: studies of the recent experience in Sweden, PhD Thesis, Karolinska Institutet

<sup>8</sup> Epstein (2011), op. cit.; Padilla-Walker, L.M. et al (2010), More Than Just a Game: Video Game and Internet Use During Emerging Adulthood, *Journal of Youth and Adolescence* 39:2, pp. 103–13

<sup>9</sup> Sik Lee et al (2013), op. cit.; Chiao, C. et al (2014), Adolescent internet use and its relationship to cigarette smoking and alcohol use: a prospective cohort study, *Addictive Behaviors* 39:1, pp 7–12

<sup>10</sup> Nelson, F. (2013), Boozy, druggy adults. Sober, serious kids. Welcome to Ab Fab Britain, *The Spectator* (9 November). Available from: <<http://www.spectator.co.uk/2013/11/ab-fab-britain/>>. [Accessed 5 May 2016]

<sup>11</sup> Skog, O-J. (1986), The long waves of alcohol consumption: A social network perspective on cultural change, *Social Networks* 8:1, pp. 1–32; Room, R. et al (2009), Explaining change and stasis in alcohol consumption, *Addiction Research & Theory* 17:6, pp. 562–76

<sup>12</sup> Livingston (2014), op. cit.

<sup>13</sup> Rossow, I. et al (2016), Does parental drinking influence children's drinking? A systematic review of prospective cohort studies?, *Addiction* 111:2, pp. 204–17

<sup>14</sup> HSCIC (2015), Smoking, Drinking and Drug Use, Table 7.1

<sup>15</sup> Bhattacharya, A. (2016), *Youthful Abandon: Why are young people drinking less?* London: Institute of Alcohol Studies, pp. 25–6

<sup>16</sup> Bhattacharya, A., op. cit., pp. 27–8

<sup>17</sup> Caul, S. (2016), Adult drinking habits in Great Britain. Office for National Statistics. Available from: <<http://tinyurl.com/hu9hnay>>. [Accessed 9 May 2016]

<sup>18</sup> Nuffield Foundation (2009), *Time trends in parenting and outcomes for young people*. London: Nuffield Foundation.

<sup>19</sup> Bhattacharya, A., op. cit., pp. 30–1

<sup>20</sup> Bhattacharya, A., op. cit., pp. 31–2

<sup>21</sup> Crone, J. (2014), Generation sensible: How today's teenagers are less likely to drink, smoke or take drugs 'because of rise in the number of young Muslims', *Daily Mail* (14 September). Available from: <<http://tinyurl.com/zl4pdhy>> [Accessed 9 June 2016]; Hill, A. (2015), Teetotaller numbers rise in UK with one in five adults not drinking, *The Guardian* (13 February). Available from:

<<http://www.theguardian.com/society/2015/feb/13/teetotallers-on-rise-in-uk-one-in-five-dont-drink>>. [Accessed 11 May 2016]

<sup>22</sup> Monshouwer, K. et al (2007), Ethnic composition of schools affects episodic heavy drinking only in ethnic-minority students, *Addiction* 102:5, pp. 722–29

<sup>23</sup> Amundsen, E.J. et al (2005), Drinking pattern among adolescents with immigrant and Norwegian backgrounds: A two-way influence, *Addiction* 100:1, pp. 1453–63; van Tubergen, F. & Poortman, A-R. (2010), Adolescent alcohol use in the Netherlands: the role of ethnicity, ethnic intermarriage, and ethnic school composition, *Ethnicity & Health* 15:1, pp. 1–13

<sup>24</sup> Sassi, F. et al (2013), The Role of Fiscal Policies in Health Promotion, *OECD Health Working Papers No66*, p. 10

<sup>25</sup> Bhattacharya, A., op. cit., pp. 36

<sup>26</sup> Birdwell & Wybron (2015), op. cit.

# The health and social impacts of underage drinking

Children and young people who misuse alcohol are at greater risk of suffering negative health and social outcomes compared to adults, because their mental and physical faculties are not yet fully developed. A 2009 report by the then Chief Medical Officers of England, Wales and Northern Ireland listed some of these potentially adverse consequences:

Figure 21: Adverse consequences of drinking alcohol for children and young people

- The potentially adverse consequences for children and young people who misuse alcohol include the following:
- Adolescents who misuse alcohol are more likely to suffer from side effects including appetite changes, weight loss, eczema, headaches and sleep disturbance.
  - The most common impacts of alcohol intoxication are vomiting and coma.
  - Young people are not immune to the chronic diseases and conditions associated with excess alcohol consumption in adults, and deaths from liver disease are now occurring at younger ages.
  - Adolescents and young people who drink and drive, or allow themselves to be carried by a drink driver, are more likely to be involved in a car accident.
  - Adolescents and young people who drink alcohol are more likely to sustain an injury, often as a result of an assault.
  - Alcohol abuse in adolescence, during a developmentally sensitive period, poses a particular danger to the emerging brain faculties of executive functioning and long-term memory.
  - Adolescents are likely to be more vulnerable than adults to both subtle brain damage and long-lasting cognitive deficits following alcohol exposure.
  - Alcohol may increase feelings of depression.
  - Stress/anxiety-based drinking is associated with long-term and more severe negative outcomes.
  - There is a relationship between adolescent alcohol use and mental health problems.
  - Alcohol consumption during an evening may affect a child's performance at school on the following day, since it takes time to metabolise alcohol and this process varies depending on the dose of alcohol that was consumed and differing metabolic capacity.
  - There are associations between alcohol consumption and subsequent behaviour with peers and friends. Excessive alcohol use can be detrimental to a young person being able to maintain friendships, particularly if the consumption levels are higher than among the peer group generally.
  - Alcohol consumption can have a detrimental effect on young people's short-term educational performance.
  - Alcohol consumption by young people, particularly students, is more likely to make them vulnerable to being the victims of crime.
  - Alcohol may make some young people more likely to display aggressive behaviour, although it is likely that other factors such as their personality and family life will play a role.
  - Alcohol consumption is associated with: not using a condom during a young person's first sexual encounter; an increased likelihood of having sex and at a younger age; unprotected sex; teenage pregnancy; and the likelihood of contracting sexually transmitted diseases.

Source: Donaldson, L. (2009), *Guidance on the Consumption of Alcohol by Children and Young People*. London: Department of Health

On the basis of these risks, the Chief Medical Officers advised that no children under the age of 15 years should consume alcohol, and that if 15–17-year-olds do drink, they should do so infrequently (less than once a week) and under the supervision of a guardian.<sup>1</sup>

## Impact on the brain

The brain is a crucial area of a child's physiological development. Alcohol is capable of affecting the entire organ, but particularly the frontal lobes, which are responsible for 'higher level' thinking such as planning, decision making and judging the likely consequences of actions. This part of the brain continues to develop throughout adolescence, which has led some to suggest that adolescent brains are more sensitive to alcohol than adult brains.<sup>2</sup>

Another area of the brain affected by alcohol is the hippocampus. This area is critical for learning; people with severe damage to the hippocampus are unable to retain any information (such as remembering what they said) for more than a few minutes, though they can still retrieve old memories. Animal research, mostly with rats, suggests that adolescents may be more vulnerable to memory impairments caused by alcohol.<sup>3</sup>

Studies of human adolescents with alcohol-use disorders (either dependence or alcohol abuse) have found that even after several weeks of abstinence, these youths did worse on a memory task than other youths, who were selected to be similar in other respects. The effects can be long-lasting; when followed up 4 and 8 years later, those with alcohol-use disorders still performed worse on tasks involving memory and attention.<sup>4</sup>

## Impact on physiological development

Drinking alcohol in adolescence has also been linked to a number of developmental issues. It can reduce levels of important hormones, including oestrogen in girls<sup>5</sup> and luteinizing hormone and testosterone in boys<sup>6</sup>, which are all key for sexual development. It has therefore been associated with delayed puberty in both girls and boys.<sup>7</sup> Heavy drinking has also been found to lower growth hormone levels.<sup>8</sup> Higher alcohol consumption is further associated with lower bone mineral density in boys, but not in girls.<sup>9</sup>

## Risk of dependence and harmful drinking in adulthood

A number of studies have demonstrated that the earlier a person drinks, the more likely they are to develop alcohol dependence or other alcohol-related problems in later life. It has been estimated that each year a child delays drinking is associated with a 9–21% reduction in the chances of becoming dependent.<sup>10</sup> This risk is believed to be particularly acute below the age of 15.<sup>11</sup> In general, children who start drinking at younger ages tend to drink more in adulthood, and are more likely to drink to intoxication.<sup>12</sup>

## Adolescents, alcohol and sexual health

There is a close link between alcohol use and risky sexual behavior in teenagers.

Survey evidence shows that:

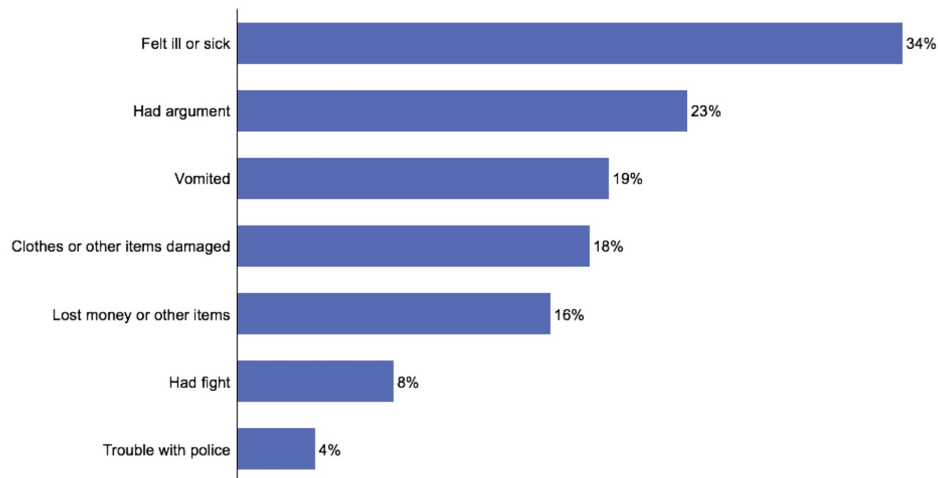
- Of those 15–19-year-olds who had had sex with someone they had known for less than one day, 61% of females and 48% of males gave alcohol or drugs as a reason<sup>13</sup>
- 1-in-4 16 and 17-year-olds had been drinking alcohol the first time they had sex without a condom<sup>14</sup>

Geographical analysis of ‘hotspots’ has shown that areas with high rates of alcohol-related hospital admissions also suffered disproportionate levels of teenage pregnancy and sexually transmitted infections, even controlling for confounding factors such as deprivation.<sup>15</sup> This confirms international evidence linking alcohol use to risky sexual behaviours.<sup>16</sup>

## Injuries, violence and social disorder

Underage drinkers put themselves at risk of a range of non-health related adverse consequences, as figure 22 shows – for example, 8% of 11–15-year-olds to have been drunk in the last four weeks were involved in fights as a result, and 4% got in trouble with the police.

Figure 22: Adverse consequences experienced by 11–15-year-olds to have been drunk in the last four weeks



Source: HSCIC (2015), *Smoking, Drinking and Drug Use*, Table 6.16

A number of academic studies have found links between young people drinking and being involved in fights, sustaining injuries and committing violent crime. For example, Fergusson et al have found that frequent, heavy or problem drinking in 15 and 16-year-olds is associated with violent but not property offences<sup>17</sup>, while other research has found a diagnosis of alcohol abuse or dependence is associated with both.<sup>18</sup> Survey evidence also suggests that teenage drinkers are more likely to carry weapons.<sup>19</sup> Conversely, it has been shown that 11–16 who drink more or are more frequently drunk are more susceptible to being the victims of violent attacks.<sup>20</sup>

## Adolescent drinking and educational outcomes

Youth drinking has been consistently associated with worse educational outcomes. For example, using US data, Chatterji finds that 15–16-year-old boys who drank at least once a month are 2% less likely to complete high school, 7% less likely to get into college, and 5% less likely to graduate from college. For girls, ever drinking alcohol was associated with a 4% reduction in the probability of going to college.<sup>21</sup>

However, there is substantial dispute over whether this relationship is causal. Chatterji suggests the association is likely to be the result of unobserved factors that affect both drinking and educational outcomes (such as personality traits) and so is sceptical that adolescent drinking *causes* worse educational outcomes.

On the other hand, more recent research on a British cohort born in 1958 has found that heavy drinking in adolescence among boys (though not girls) significantly reduces the likelihood of achieving postsecondary qualifications. This result holds even accounting for a number of possible confounders such as school attainment, behavioural issues, leisure activities and aspirations at age 11.<sup>22</sup> Moreover, the study suggests that the effect is particularly strong for boys from lower socioeconomic backgrounds. Another study has



found that twins who started drinking before 18 have lower educational attainment than their co-twins who did not.<sup>23</sup> Nevertheless, The debate on causality remains unresolved.

The lower educational achievement of youth drinkers affects their success in the labour market. Renna estimates that binge drinking in high school is associated with 1.5–1.84% lower future earnings for boys, and that girls who drink heavily in high school tend to work in occupations and industries that pay less.<sup>24</sup>

<sup>1</sup> Donaldson, L. (2009), *Guidance on the Consumption of Alcohol by Children and Young People*. London: Department of Health

<sup>2</sup> Chambers, R. A. et al (2003), Developmental Neurocircuitry of Motivation in Adolescence: A Critical Period of Addiction Vulnerability, *American Journal of Psychiatry* 160:6, pp. 1041–52

<sup>3</sup> White, A. M. & Swartzwelder, H. S. (2005), Age-related effects of alcohol on memory and memory-related brain function in adolescents and adults, *Recent Developments in Alcoholism* 17, pp. 161–76

<sup>4</sup> Brown, S. & Tapert, S. F. (2004), Adolescence and the trajectory of alcohol use: basic to clinical studies, *Annals of the New York Academy of Sciences* 1021, pp. 234–244

<sup>5</sup> Block, G.D. et al (1993), Effects on pubertal hormones by ethanol abuse in adolescents, *Alcoholism: Clinical and Experimental Research* 17, p. 505

<sup>6</sup> Frias, J. et al (2000), Effects of acute alcohol intoxication on pituitary-gonadal axis hormones, pituitary-adrenal axis hormones, beta-endorphin and prolactin in human adolescents of both sexes. *Life Sciences* 67:9, pp. 1081–6

<sup>7</sup> Peck, J.D. et al (2011), Socio-Environmental Factors Associated with Pubertal Development in Female Adolescents: The Role of Prepubertal Tobacco and Alcohol Use, *Journal of Adolescent Health* 48, pp. 241–6; Davis, E.M. et al (2014), Associations between early alcohol and tobacco use and prolonged time to puberty in boys, *Child: Care, Health and Development* 41:3, pp. 459–66

<sup>8</sup> Frias, J. et al (2000), Effects of acute alcohol intoxication on growth axis in human adolescents of both sexes. *Life Sciences* 67:22, pp. 2691–7

<sup>9</sup> Fehily, A.M. (1992), Factors affecting bone density in young adults, *American Journal of Clinical Nutrition* 56:3, pp. 579–86; Fujita, Y. et al (1999), Factors affecting peak bone density in Japanese women, *Calcified Tissue International* 64:2, pp. 107–11; Neville, C.E. et al (2002), Relationship between physical activity and bone mineral status in young adults: the Northern Ireland Young Hearts Project, *Bone* 30:5, pp. 792–8; Elgán C et al (2002), Bone mineral density and lifestyle among female students aged 16–24 years, *Gynecological Endocrinology* 16:2, pp. 91–98

<sup>10</sup> Donaldson, op. cit., p. 53–4

<sup>11</sup> Ibid.

<sup>12</sup> Donaldson, op. cit., p. 54–6

<sup>13</sup> Alcohol Concern (2002), 'Alcohol and Teenage Pregnancy', London: Alcohol Concern

<sup>14</sup> YouthNet (2009), 'Sex Factor: Young people and sexual health'

<sup>15</sup> Cook, P.A. et al (2010), *Contributions of Alcohol Use to Teenage Pregnancy and Sexually Transmitted Infection rates*. Liverpool: North West Public Health Observatory, Centre for Public health, Liverpool John Moores University

<sup>16</sup> Donaldson, op. cit., p. 57; Thomas, G. et al (2000), Delayed onset of drunkenness as a protective factor for adolescent alcohol misuse and sexual risk taking: a longitudinal study, *Deviant Behavior* 21:2, pp. 181–209

<sup>17</sup> Fergusson, D.M. et al (1996), Alcohol misuse and juvenile offending in adolescence, *Addiction* 91:4, pp. 483–94

<sup>18</sup> Fergusson, D.M. & Horwood, L.J. (2000), Alcohol abuse and crime: a fixed-effects regression analysis, *Addiction* 95:10, pp. 1525–36 See also Popovici, I. et al (2012), Alcohol Use and Crime: Findings from a Longitudinal Sample of U.S. Adolescents and Young Adults, *Alcoholism: Clinical and Experimental Research* 36:3, pp. 532–43

<sup>19</sup> Dukarm, C.P. et al (1996), Illicit substance use, gender, and the risk of violent behavior among adolescents, *Archives of Pediatrics and Adolescent Medicine* 150:8, pp. 797–801

<sup>20</sup> Shepherd, J. et al (2006), Relations between alcohol, violence and victimization in adolescence, *Journal of Adolescence* 29:4, pp. 539–53

<sup>21</sup> Chatterji, P. (2006), Does alcohol use during high school affect educational attainment?: Evidence from the National Education Longitudinal Study, *Economics of Education Review* 25:5, pp. 482–97

<sup>22</sup> Staff, J. et al (2008), Teenage Alcohol Use and Educational Attainment, *Journal of Studies on Alcohol and Drugs* 69:6, pp. 848–58

<sup>23</sup> Grant, J.D. et al (2012), Associations of Alcohol, Nicotine, Cannabis and Drug Use / Dependence with Educational Attainment: Evidence from Co-twin–Control Analyses, *Alcoholism: Clinical and Experimental Research* 36:8, pp. 1412–20

<sup>24</sup> Renna, F. (2007), The economic cost of teen drinking: late graduation and lowered earnings, *Health Economics* 16:4, pp. 407–19





This factsheet is published by the Institute of Alcohol Studies under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License (cc by-nc-sa 4.0)



All factsheets can be accessed via our Alcohol Knowledge Centre

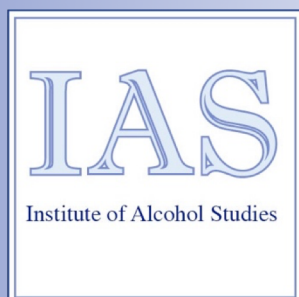


For more information about what we do at the Institute of Alcohol Studies, please visit our website: [www.ias.org.uk](http://www.ias.org.uk)

---

**Our core aim is to serve the public interest on public policy issues linked to alcohol. We do this by advocating for the use of scientific evidence in policy-making to reduce alcohol-related harm.**

---



**An Institute of Alcohol Studies publication**

Alliance House  
12 Caxton Street  
London SW1H 0QS

Telephone | 0207 222 4001  
Email | [info@ias.org.uk](mailto:info@ias.org.uk)  
Twitter | [@InstAlcStud](https://twitter.com/InstAlcStud)  
Web | [www.ias.org.uk](http://www.ias.org.uk)

The Institute of Alcohol Studies is a registered charity no. 1112671