

## HEALTH AND SOCIAL CARE

# Multiple substance use among adolescents in Scotland: profile and trends

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# Executive Summary

## Introduction and background

The Scottish Schools Adolescent Lifestyle and Substance Use Survey (SALSUS) is a continuation of a long established series of national surveys on smoking, drinking and drug use. It is the Scottish Government's main source of prevalence data on adolescent substance use. The data on substance use is collected alongside other contextual lifestyle, health and social factors.

This report explores trends in multiple substance use, the profile of those using multiple substances in 2013, and the factors which best predict the use of multiple substances.

## Changes in multiple substance use over time

Consistent with other surveys of substance use in Scotland and England, regular use of individual substances (tobacco, alcohol and drugs) has fallen over time and is now at an all-time low. A similar pattern emerged for multiple substance use: among 13 year olds the use of two or more substances has decreased from 5% in 1998 to 1% in 2013 and among 15 year olds from 23% to 8%.

## Profile of multiple substance users in 2013

Nineteen per cent of 15 year olds had used any substance regularly<sup>1</sup>. Less than half of those (8%) were using more than one.

Of the 8% of pupils who had used more than one substance:

- 3% used all three substances regularly
- 2% had smoked and used drugs regularly
- 2% drank and used drugs regularly
- 1% smoked and drank regularly.

Substance use patterns were broadly similar across boys and girls. That said, 15 year old boys were more likely to have used any substance than 15 year old girls (20% of boys compared with 18% of girls).

Overall, many different aspects of pupils' lifestyles were associated with higher levels of multiple substance use. However, two key risk factors emerged:

- Disengagement with school (increased levels of exclusion and truanting were strongly associated with the use of two or more substances)

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<sup>1</sup> Regular smoking is defined as smoking at least one cigarette in the last week, regular drinking as having had an alcoholic drink in the last week and regular drug use as having used any drugs in the last month.

- Lower supervision and structure in leisure time activities (a greater number of evenings spent out with friends, more time spent 'hanging out in the street', lower levels of club/group membership and lower parental knowledge of activities were associated with the use of two or more substances).

Other factors that were associated with higher levels of multiple substance use included:

- friendships with older pupils
- having no close friends
- poor mental health - particularly in relation to conduct problems
- Free School Meal entitlement
- a mixed or multiple ethnic identity.

The profile of multiple substance use was in line with previous research and has not appeared to have changed a great deal over time.

### **Predictors of multiple substance use**

In line with the profile outlined above, the factors that were the strongest drivers of any and multiple substance use were:

- number of times excluded from school
- number of times truanted
- number of evenings spent with friends
- age of friends.

As each of these variables increased, the more likely a pupil was to use two or more substances regularly.

# 1 Background and methodology

## Policy background

### Smoking

Scotland has already come a long way in shifting cultural attitudes to smoking and is now seen as a world leader on tobacco control. Since the Scottish Parliament was established in 1999, it has overseen:

- legislation to ban tobacco advertising in 2002
- historic smoke-free legislation in 2006
- the increase in the age for tobacco sales from 16 to 18 in 2007
- the overhaul of tobacco sale and display law, including legislation to ban the display of cigarettes for sale in shops and self-service sales from automatic vending machines in 2010
- establishment of the first Tobacco Retail Register in the UK
- comprehensive awareness raising campaigns
- record investment in NHS smoking cessation services helping hundreds of thousands of people to attempt to quit smoking.

The Scottish Government published its latest tobacco control strategy, *Creating a Tobacco-Free Generation: A Tobacco Control Strategy for Scotland*, in March 2013. This set an ambitious target – to reduce smoking prevalence to 5% by 2034. This would mean that a child born in 2013 will turn 21 and become an adult in a Scotland which is largely devoid of tobacco-use with all the health, social and economic benefits that entails. Progress towards the target will be measured on a 5-yearly basis using data on smoking prevalence by SIMD quintile from the Scottish Household Survey.

The 2034 target is challenging and achieving it will require a determined effort to reduce smoking rates and prevent smoking take-up, particularly amongst our young people.

## Drinking

In recognition of the harm caused by alcohol in Scotland, the Scottish Government has in place a national alcohol strategy – Changing Scotland’s Relationship with Alcohol: A Framework for Action (2009). This Framework adopts a whole population approach and identifies the need for sustained action in four areas: reduced consumption; supporting families and communities; positive attitudes, positive choices; improved treatment and support. The Framework aims to help tackle the damaging impact alcohol misuse has on families and communities, including young people.

The Framework includes legislative measures as set out in the Licensing (Scotland) Act 2005 and the Alcohol etc. (Scotland) Act 2010. Such restrictions cover the sale of alcohol, pricing and promotion of alcohol, and age verification policies such as ‘Challenge 25’. Funding has been provided to increase access to specialist alcohol services, while 560,000 alcohol brief interventions (ABIs) have been delivered to date. Additionally, the Alcohol (Minimum Pricing) (Scotland) Act 2012 aims to limit alcohol consumption by reducing affordability; a minimum price of 50 pence per unit of alcohol has been passed but not yet implemented because of a legal challenge led by the Scotch Whisky Association.

There are 30 Alcohol and Drugs Partnerships that are tasked with tackling problem alcohol and drug use and promoting recovery. They are working alongside other partners such as CoSLA and the NHS. The partnerships provide person-centred and recovery-focussed care at a local level. NHS Health Scotland is tasked with Monitoring and Evaluating Scotland’s Alcohol Strategy against this Framework.

'The Road to Recovery' outlines the Scottish Government's national performance framework for drug prevention and rehabilitation embedded within an understanding of social exclusion and health inequality. The framework promotes the concept of recovery among service users and providers, and seeks to integrate a range of drug treatment and rehabilitation services. The strategy stresses preventative action in families specifying the need to educate children about drug use through Curriculum for Excellence, the schools based substance use education resource 'Choices for Life', and the drug prevention campaign 'Know the Score'. Additionally, the framework seeks to reduce waiting times for referral to services for drug related problems within 3 weeks under the Scottish Government's Health Improvement, Efficiency, Access to Services and Treatment (HEAT) standard.

The 'Road to Recovery' is delivered by 30 Alcohol and Drug Partnerships (ADPs) alongside a number of initiatives such as the Scottish Recovery Consortium, which is a recovery oriented charity to support recovery from problem drug use. Scottish Government officials are currently finalising arrangements with a range of partners and experts to support The Road to Recovery going forward, and who will work in collaboration with Scottish Government to help deliver the strategy.

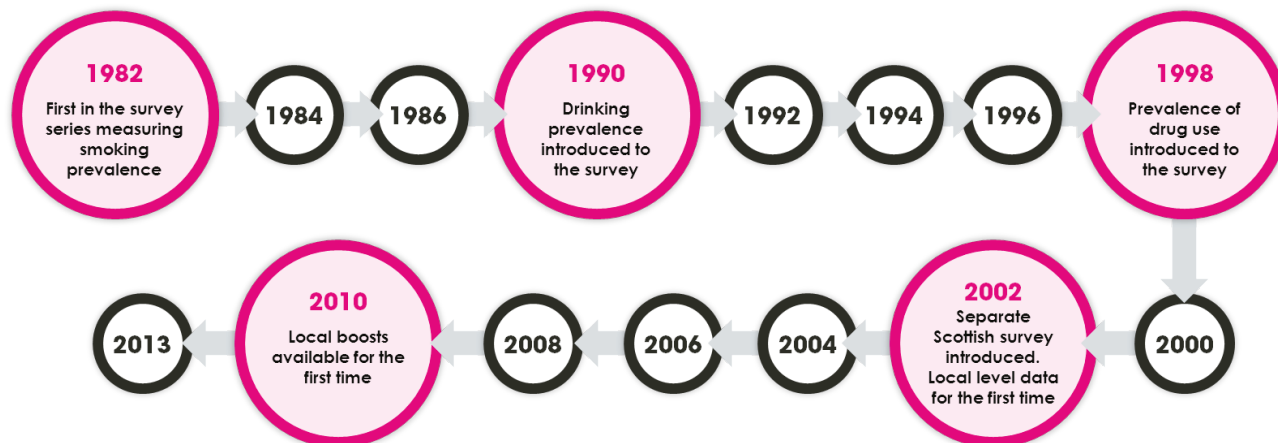
Recently the Scottish Government has taken steps to strengthen the evidence base on new psychoactive substances (NPS), supported by an NPS Evidence Group, composed of stakeholders from academia, health, enforcement and the third sector amongst others. The Scottish Government has commissioned research to identify the prevalence and harms of new psychoactive substance use among vulnerable groups in Scotland. This work has been carried out alongside the work of an NPS Expert Review Group, who were tasked with reviewing the current legal framework available to Scottish public authorities to tackle the sale and supply of NPS in Scotland. The final recommendations of the Expert Review Group were published in February 2015 (<http://www.gov.scot/Publications/2015/02/3802/0>).

### Survey background and purpose

- 1.1 The Scottish Schools Adolescent Lifestyle and Substance Use Survey (SALSUS) is a continuation of a long established series of national surveys on smoking, drinking and drug use (Figure 1). These were carried out jointly in Scotland and England between 1982 and 2000, to provide a national picture of young peoples' smoking, drinking, and drug use behaviours within the context of other lifestyle, health and social factors.
- 1.2 Since 2002, Scotland has developed its own, more tailored, survey known as SALSUS. SALSUS measures progress towards Scottish Government targets for smoking and drug use, and is used to inform the Scottish Government priority of addressing harmful drinking among young people. The survey series also provides local prevalence rates for smoking, drinking and drug use across Alcohol and Drug Partnerships (ADPs), local authorities and NHS Boards. SALSUS data are used in a number of the

ADP national core indicators, which allows them to monitor their progress against a common set of outcomes. ADPs and their community planning partners make extensive use of SALSUS data in local needs assessments and in developing their strategic priorities.

**Figure 1.1 – History of SALSUS and its predecessors**



- 1.3 Full access to the 2013 results can be found here: <http://www.isdscotland.org/Health-Topics/Public-Health/SALSUS/Latest-Report/>.

## Methodology

- 1.4 SALSUS is a confidential, self-completion questionnaire that is completed by S2 and S4 pupils, average age 13 and 15 years, in school (previous waves surveyed S1-S4). The survey covers items on smoking, drinking and drug use, as well as a number of contextual questions about lifestyle.
- 1.5 Since 1990, the datasets from SALSUS and its predecessors have been deposited in the UK data archive. The Scottish Government commissioned Ipsos MORI to examine the feasibility of combining these datasets into a single dataset to facilitate greater use of this resource, and, if it was deemed feasible, to create a unified dataset together with accompanying documentation. As part of the feasibility stage, changes in the methodology and questionnaire coverage were examined.
- 1.6 We concluded that the data was consistent enough that a combined dataset would allow meaningful analysis of trends over time. This combined dataset has now been constructed and this report is one of the first uses of this data source.



## 2 Changes in multiple substance use over time

### Key Findings

- Regular use of individual substances (tobacco, alcohol and drugs) has fallen over time and is now at an all-time low.
- These findings are consistent with other surveys such as Health Behaviours in Scotland-Aged Children (1) (see reference list on page 41) and Smoking, Drinking and Drug Use Among Young People in England (2).
- Multiple substance use (recent use of two or more substances) has also fallen over time. This was the case for both age groups and sexes.

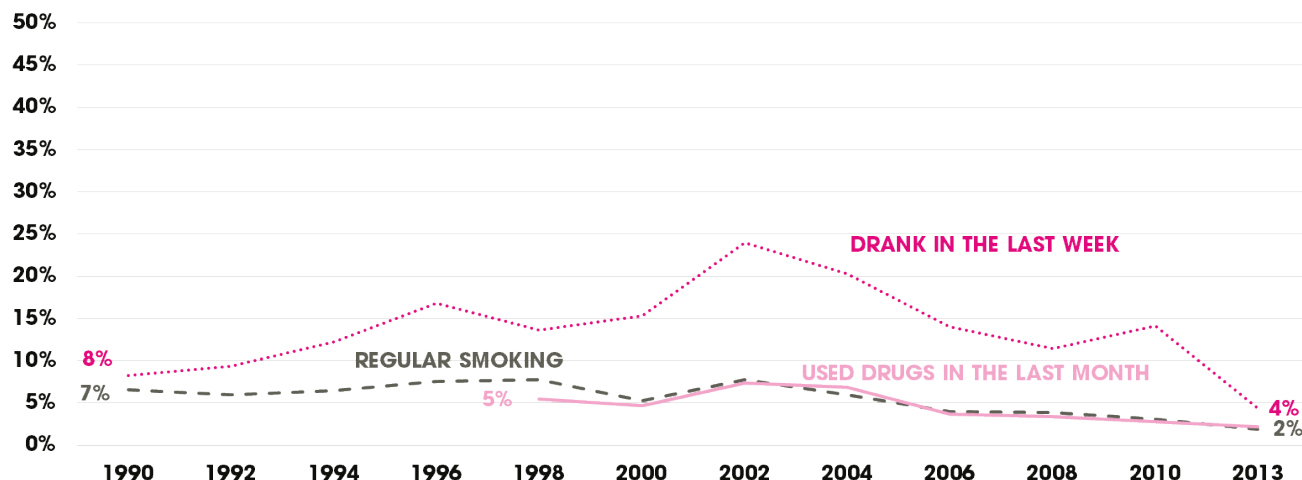
### Wider context of changes in substance use over time

- 2.1 This report explores trends in multiple substance use, the profile of those using multiple substances in 2013, and the factors which best predict the use of multiple substances.
- 2.2 Before looking at multiple substance use in more detail, it is important to put the findings in the context of the wider substance use landscape. The use of tobacco, alcohol and drugs has been steadily decreasing among young people in Scotland for a number of years. This reduction in substance use can be seen not only in the SALSUS results, but also in the most recent Health Behaviours in School-Aged Children (HBSC) figures (1) and reflects a similar pattern in data in England in the 2013 Smoking, Drinking and Drug Use Among Young People in England Survey (HCIS, 2014) (2).
- 2.3 The proportion of regular smokers<sup>2</sup> fluctuated for a number of years before reaching a peak in 1996. Since then, regular smoking has been steadily declining among both age groups. Regular smoking is now at the lowest recorded level since the data has been collected (Figures 2.1 and 2.2).

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<sup>2</sup> A regular smoker is classified as a pupil who reported usually smoking at least 1 cigarette a week.

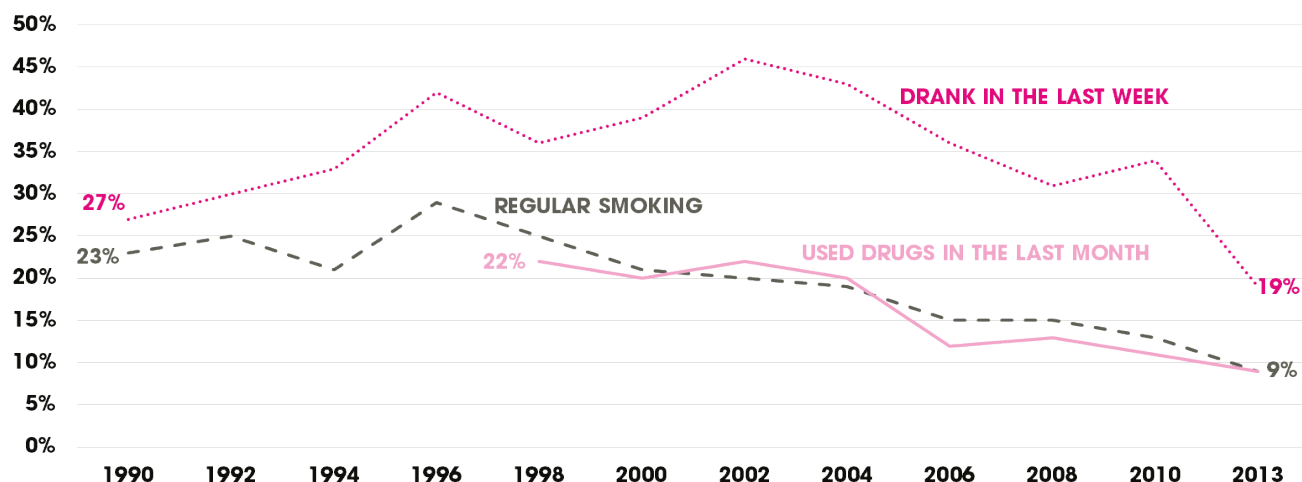
**Figure 2.1 – Trends in regular substance use among 13 year olds between 1990 and 2013**



Base: all 13 year old pupils (full bases in appendix A)

2.4 Among both age groups, drinking in the last week increased steadily until 1996. After a small drop in the figures in 1998, drinking in the last week began to increase again until it reached a high point in 2002. Since 2002, recent alcohol use has decreased to the lowest levels recorded in 2013 (Figures 2.1 and 2.2).

**Figure 2.2 – Trends in regular substance use among 15 year olds between 1990 and 2013**



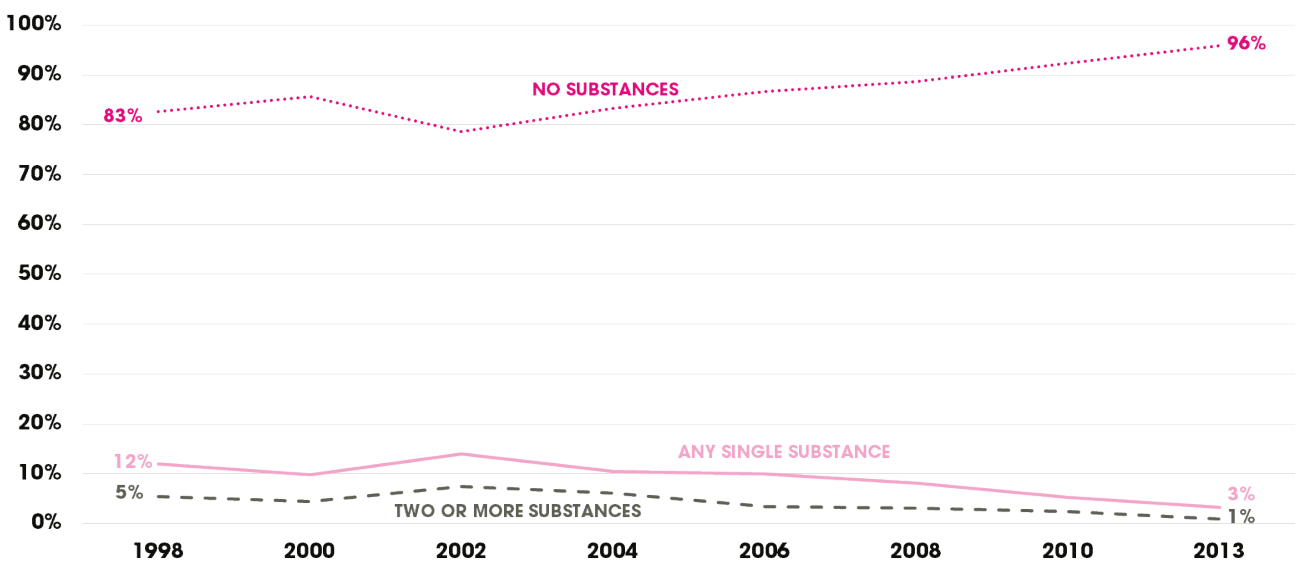
Base: all 15 year old pupils (full bases in appendix A)

2.5 Drug use in the last month has been falling since it was first included in the survey in 1998. This was the case for both age groups. As with regular smoking and drinking, regular drug use is now at its lowest ever levels (Figure 2.1 and 2.2).

## Multiple substance use trends by age

- 2.6 As with the main smoking, drinking and drug use trends, multiple substance use<sup>3</sup> has decreased in recent years. This again reflects findings from the Smoking, Drinking and Drug Use Among Young People in England Survey (2).
- 2.7 Among both age groups, there was a small increase in the use of two or more substances, until reaching a peak in 2002. Since that wave of the survey, the prevalence of multiple substance use has decreased until reaching a low in 2013 (Figures 2.3 and 2.4).

Figure 2.3 – Multiple substance use over time among 13 year olds<sup>4</sup>

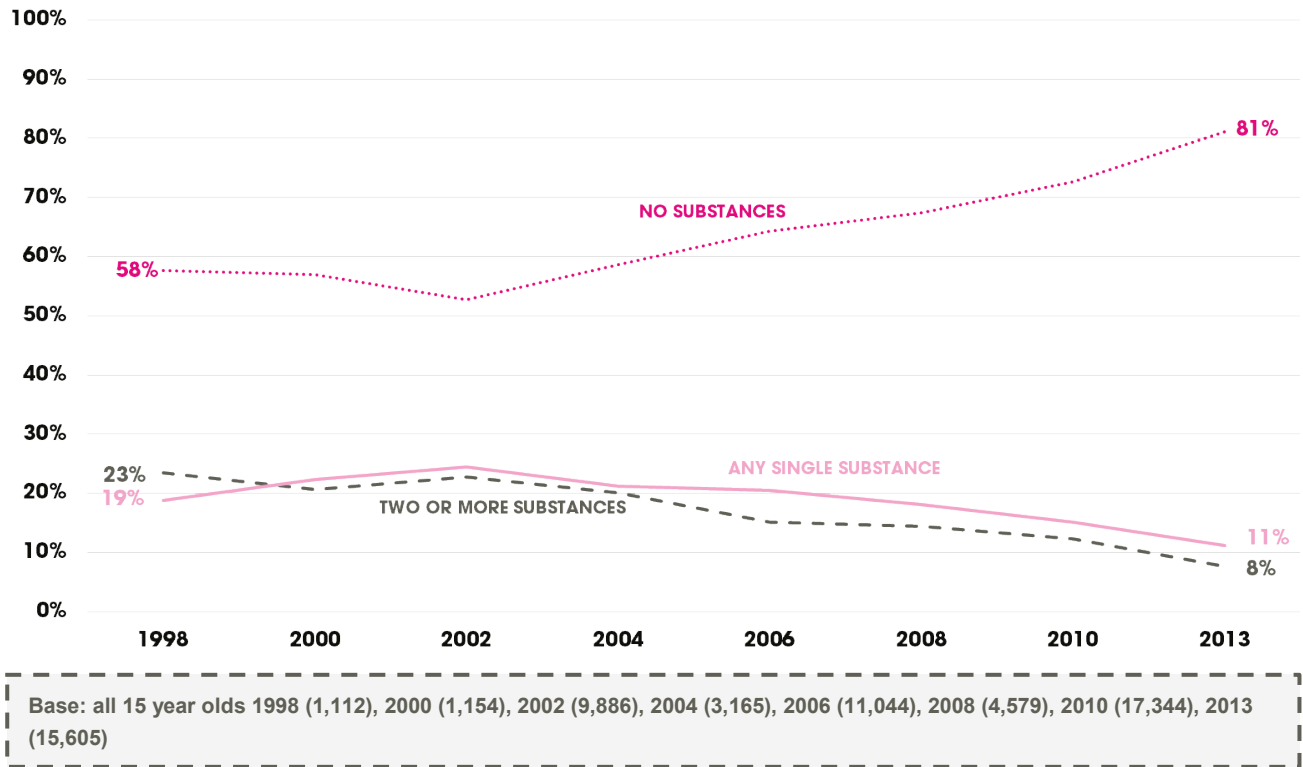


Base: all 13 year olds 1998 (612), 2000 (1,199), 2002 (11,447), 2004 (3,281), 2006 (11,608), 2008 (5,220), 2010 (18,586), 2013 (16,327)

<sup>3</sup> Any mention of multiple substance use refers to the use of two or more substances regularly

<sup>4</sup> Those that use any single substance participated in only one of the following activities: smoking regularly, drinking in the last week or taking drugs in the last month.

**Figure 2.4 – Multiple substance use over time among 15 year olds**



- 2.8 As with the main substance use trends, multiple substance use was higher among 15 year olds than 13 year olds. As the number of 13 year olds using two or more substances was very low (1%), the small sample sizes would not allow meaningful analysis. The remainder of the report focuses on the profile of multiple substance users in S4.
- 2.9 In terms of gender, the pattern of multiple substance use over time was very similar for boys and girls. Among boys, the use of two or more substances had decreased from 17% in 1998, to a low of 5% in 2013 and, among girls, from 17% in 1998, to 4% in 2013.

### 3 Profile of multiple substance users in 2013

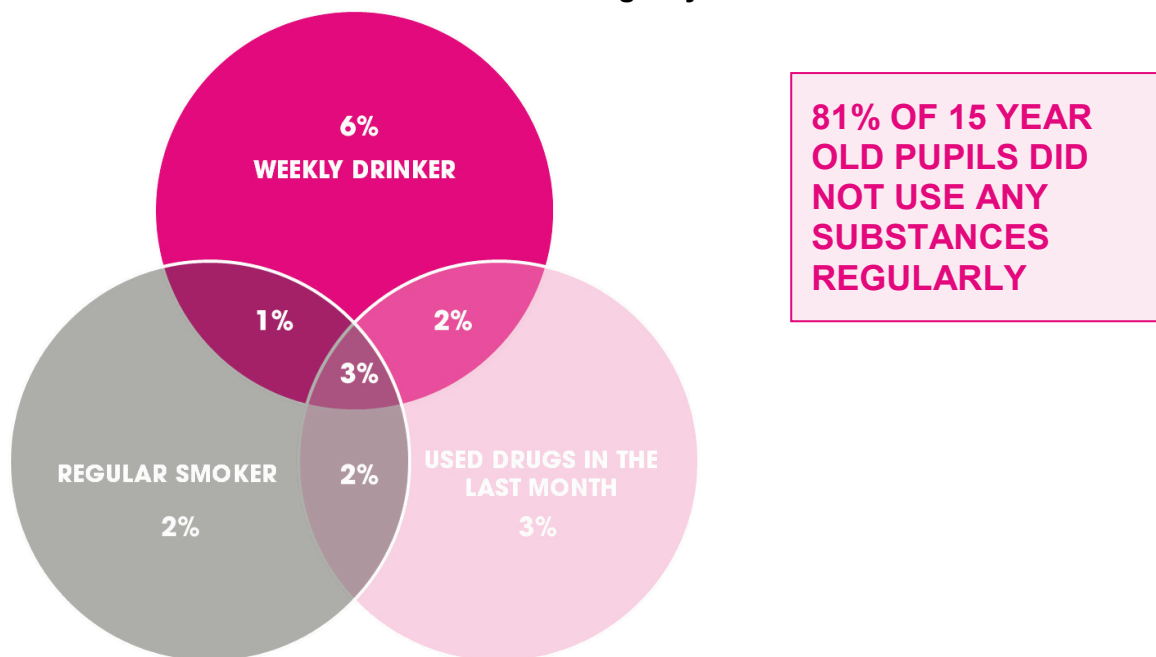
#### Key Findings

- Nineteen per cent of 15 year olds had used any substance. Less than half of those were using more than one (8%).
- Overall, 15 year old boys were more likely to have used any substance than 15 year old girls (20% of boys, compared with 18% of girls).
- Many factors showed a relationship with multiple substance use across the different themes explored. However, two main themes emerged: engagement with school and supervision/structure of free time:
  - Pupils who were disengaged from school were more likely to be multiple substance users – higher rates of exclusion and truanting were associated with using two or more substances.
  - Pupils who spent more leisure time unsupervised and in unstructured activities were more likely to be multiple substance users – more time spent out with friends and hanging in the streets, and lower club/group membership and parental knowledge of pupils' activities were associated with using two or more substances.
- Other factors that were associated with higher levels of multiple substance use included:
  - Friendships with older pupils
  - Having no close friends
  - Poor mental health - particularly in relation to conduct problems
  - Free School Meal entitlement
  - Reporting a mixed or multiple ethnic identities.
- Pupils who thought that they would go to university once they left school were *less* likely to use multiple substances

3.1 Figure 3.1 provides a detailed breakdown of multiple substance use among 15 year olds. Overall, 19% of pupils used at least one substance regularly. More than half of those (11%) had only used one substance: 6% were weekly drinkers only, 3% had used drugs in the last month only and 2% were regular smokers only.

3.2 Of the 8% of pupils who had used more than one substance, 3% used all three substances regularly, 2% had smoked and used drugs regularly, 2% drank and used drugs regularly and 1% smoked and drank regularly (Figure 3.1).

Figure 3.1 – Detailed substance use breakdown among 15 year olds in 2013<sup>5</sup>

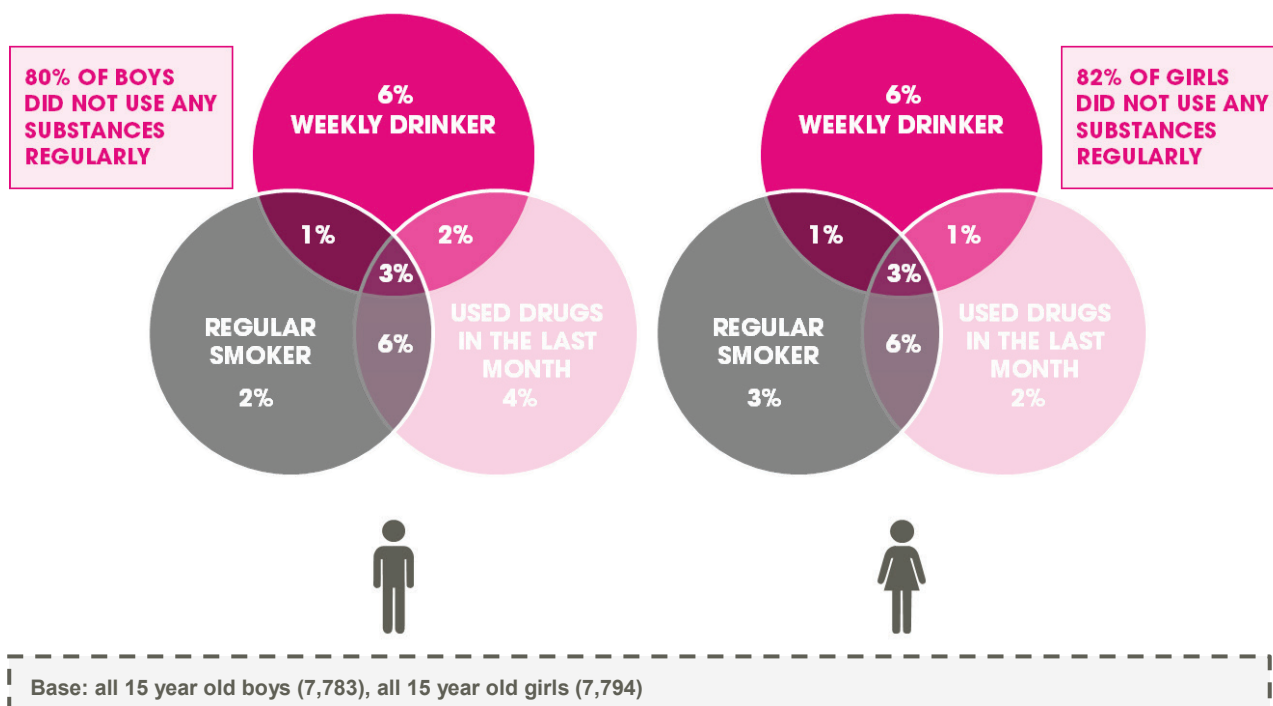


Base: all 15 year old pupils (15,577)

3.3 Overall, boys were slightly more likely than girls to use any substances (20% of boys, compared with 18% of girls). Boys were also more likely to have only used drugs in the last month, or to have drunk weekly and used drugs in the last month. However, girls were more likely than boys to be regular smokers only. It should be borne in mind that while these are statistically significant differences, they are very small and that the profile for males and females is very similar (Figure 3.2).

<sup>5</sup> Missing values were treated slightly differently for the multiple substance use variable across different years of SALSUS data. A new method was applied in the time trends dataset so that the approach taken was consistent across all years. This accounts for the small discrepancy in regular smoking only figure (2%) in the report compared with the 2013 published figure (3%).

**Figure 3.2 – Detailed substance use among 15 year olds by sex in 2013**



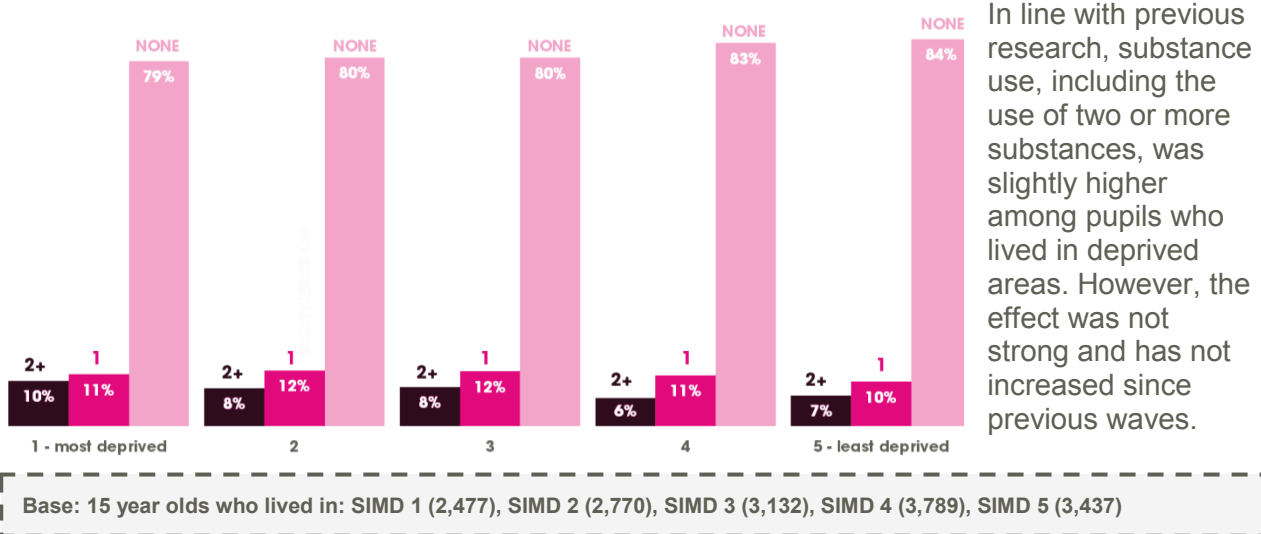
- 3.4 Those who drank on a regular basis were the least likely to have used another substance as well: 50% of weekly drinkers used at least one other substance on a regular or recent basis, compared with 70% of those who used drugs in the last month and 75% of regular smokers.
- 3.5 The following sections explore the profile of multiple substance users in more detail under several thematic headings (geography, family, friends, mental health, school and leisure activities). Comparisons are made between those using two or more substances, one substance, and no substances regularly or recently.

## Geography and deprivation

### Existing findings from other sources

- Free school meals entitlement was associated with increased prevalence of substance use (2).
- Prevalence of substance use is higher among those who live in rural areas (3).
- Higher levels of deprivation are associated with higher levels of multiple substance use (4).

**Figure 3.3 – Number of substances used by Scottish Index of Multiple Deprivation<sup>6</sup> (SIMD) among 15 year olds in 2013**



- 3.6 It should be borne in mind that using SIMD means that we are looking at an area based measure to identify deprivation in individuals. Many people who are materially disadvantaged as individuals live in areas that are not particularly deprived in terms of SIMD; equally, many people living in deprived areas (as identified by SIMD) may not be particularly disadvantaged. For that reason, it is also important to look at family level measures of deprivation (see Figures 3.5 and 3.11).
- 3.7 In 2013, 37% of pupils did not supply a postcode – either because they did not know it or did not want to write it in. Missing postcodes were imputed by sorting the data by class within schools. If a postcode was missing, the postcode of another randomly selected pupil from the same class was copied.

<sup>6</sup> The Scottish Index of Multiple Deprivation (SIMD) 2012 identifies small area concentrations of multiple deprivations across all of Scotland. It is used to compare data zones by providing a relative ranking from most deprived (rank 1) to least deprived (rank 6,505). It is common for cut-offs to be applied to the ranked data zones (e.g. into deciles or quintiles).



3.8 The figures suggest that those who did not provide a postcode were more likely to be those living in areas of deprivation (see Table 3.1). Imputing the postcodes improved this but those living in the most deprived areas were still underrepresented. The data was weighted to account for these differences.

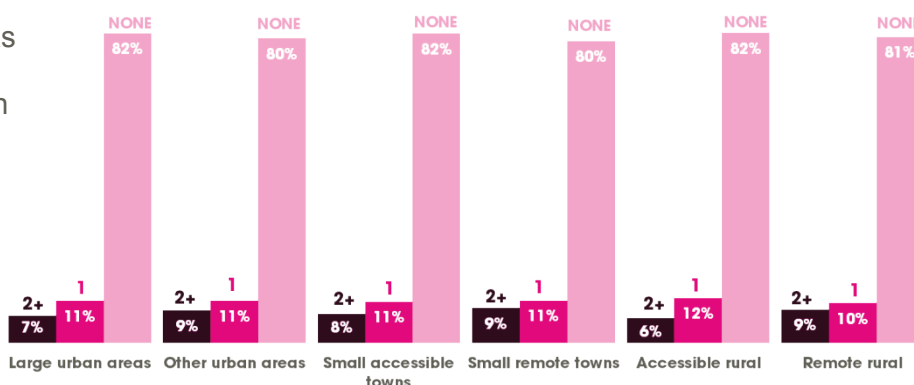
**Table 3.1 SALSUS 2013 – SIMD by postcode imputation<sup>7</sup>**

	SIMD before postcode imputation and checking	SIMD after postcode imputation and checking	SIMD after weighting applied	Population estimates for 13 and 15 year olds 2013 <sup>8</sup>
<b>SIMD 1 – most deprived</b>	16%	17%	18%	20%
<b>SIMD 2</b>	17%	18%	19%	18%
<b>SIMD 3</b>	20%	20%	19%	19%
<b>SIMD 4</b>	24%	24%	24%	21%
<b>SIMD 5 – least deprived</b>	22%	21%	21%	21%
<i>Bases</i>	33,685	33,685	33,685	115,915

**Figure 3.4 – Number of substances used by urban/rural classification among 15 year olds in 2013**

In previous studies, pupils in more rural areas were more likely to use multiple substances than those in urban areas.

However, in 2013, there was no clear pattern in multiple substance use by urban/rural classification.



Base: 15 year olds who lived in: large urban areas (4,869), other urban areas (5,367), small accessible towns (1,556), small remote towns (746), accessible rural (2,077), remote rural (990)

<sup>7</sup> Some of these postcodes were incorrect due to scanning errors and were manually edited rather than imputed

<sup>8</sup> <http://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/population/population-estimates/special-area-population-estimates/population-estimates-by-simd-2012>

**Figure 3.5 – Number of substances used by free school meal entitlement<sup>9</sup> among 15 year olds<sup>10</sup> in 2013**

While multiple substance use and area deprivation were not strongly associated, at an individual family level there appeared to be a stronger relationship.

Pupils in receipt of free school meals were more than twice as likely to have used two or more substances as those that were not.



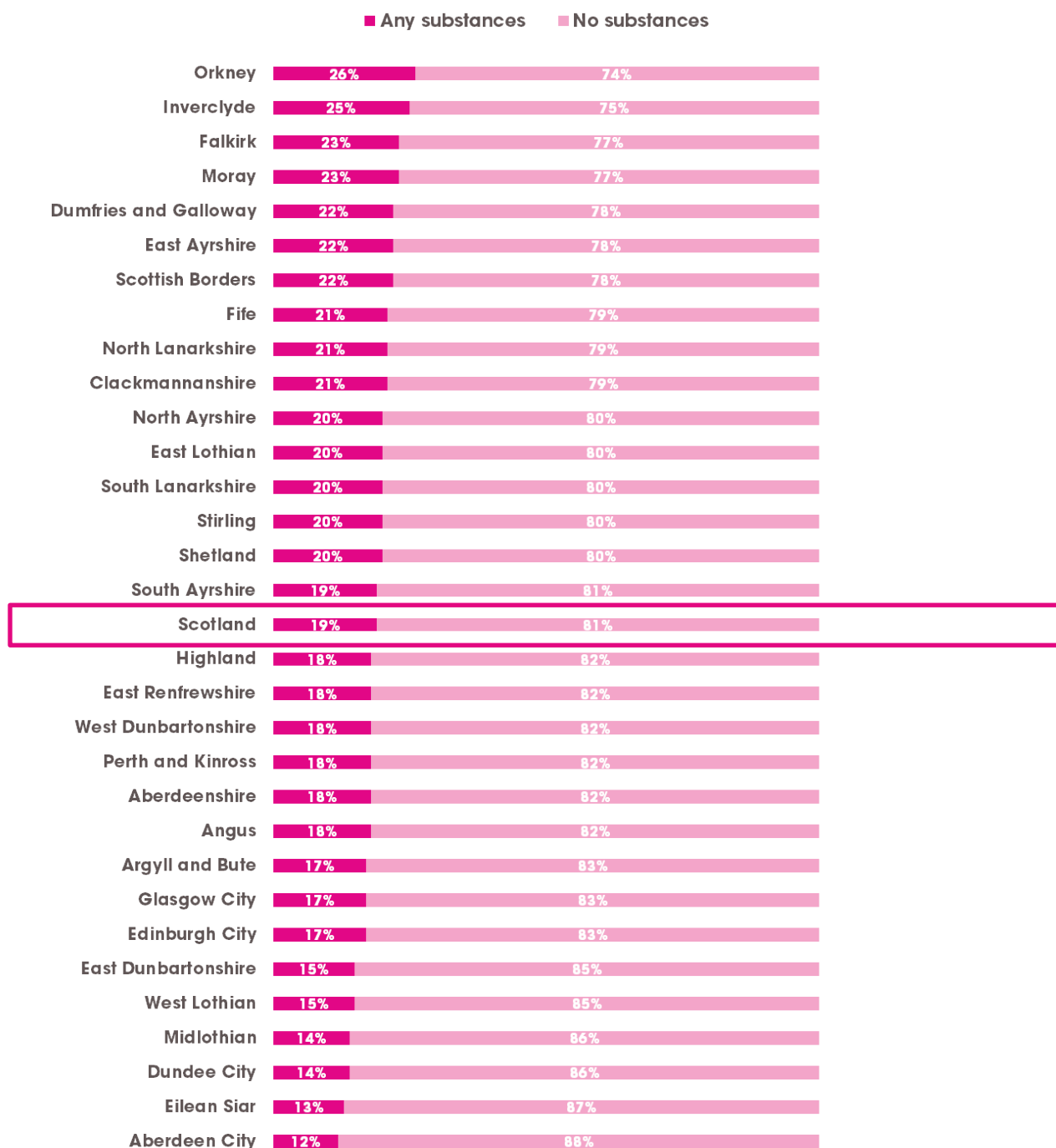
	YES	NO
2+ SUBSTANCES	14%	6%
1 SUBSTANCE	13%	10%
NO SUBSTANCES	73%	83%

Base: 15 year olds who: receive free school meals (1,634), do not receive free school meals (12,389)

<sup>9</sup> Free school meals are provided to those whose parents receive benefits or incomes fall below a certain threshold. As such, free school meal entitlement is often used as a proxy for the level of deprivation of pupils' families.

<sup>10</sup> Figures on free school meals entitlement were based on pupils' survey responses and not official records. Official records show 41,744 pupils (15% of pupils) were registered for free meals in Scottish secondary schools in 2013. In SALSUS 2013, 12% of pupils said they received free school meals – which is very similar. <http://www.gov.scot/Resource/0047/00479422.pdf>

**Figure 3.6 – Number of substances used by local authority among 15 year olds<sup>11</sup> in 2013**



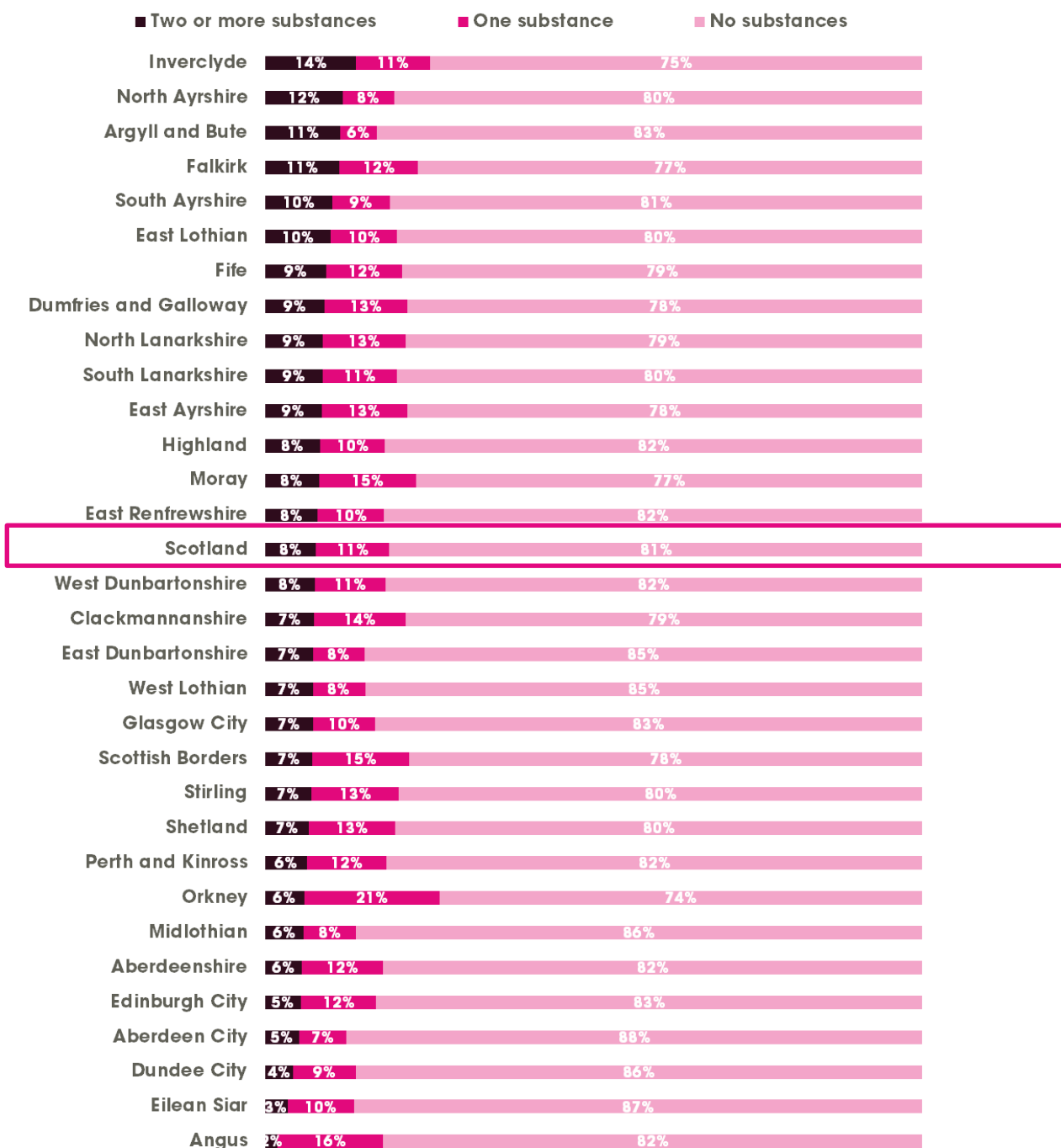
Base: 15 year olds in each local authority (for full bases see appendix A)

3.9 Across the 31 local authorities, the use of any substance regularly ranged between 12% and 26%. Regular substance use was most likely in Orkney<sup>12</sup>, Inverclyde, Falkirk and Moray. Pupils in Eilean Siar, Midlothian, Dundee City and Aberdeen City were least likely to have used any substances (Figure 3.6).

<sup>11</sup> Renfrewshire was not included in analysis due to small base sizes.

<sup>12</sup> Base numbers for Orkney are low so this should be treated with caution.

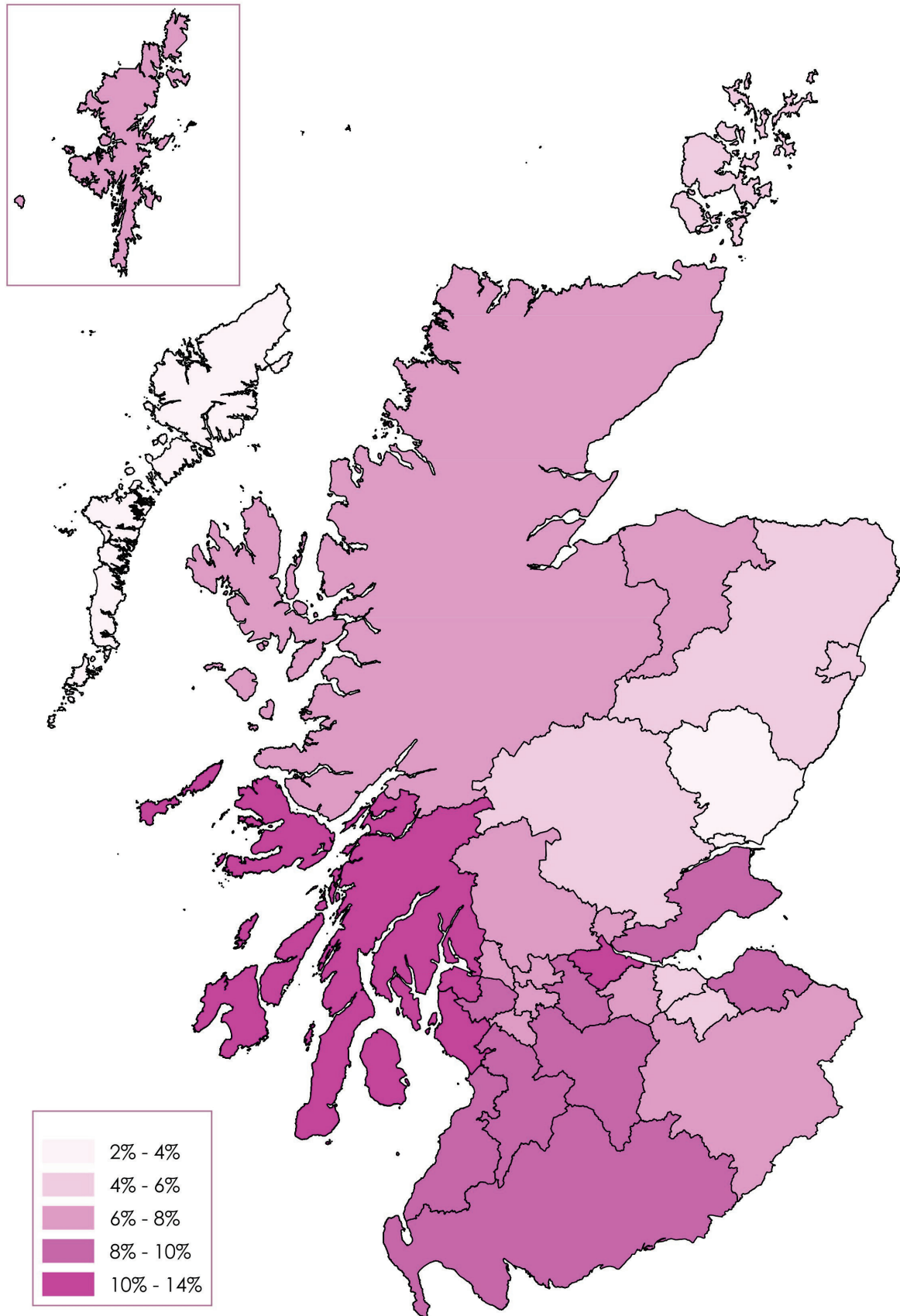
**Figure 3.7 – Number of substances used by local authority among 15 year olds in 2013**



Base: 15 year olds in each local authority (for full bases see appendix A)

3.10 If we look at **two or more** substances used (Figure 3.7 and 3.8) Inverclyde and Falkirk are again among the areas where multiple substance use was most prevalent. Pupils in North Ayrshire, and Argyll and Bute were also more likely than most other areas to use two or more substances. Angus, Eilean Siar, Dundee City and Aberdeen City were the areas with the lowest levels of multiple substance use.

Figure 3.8 Map of the use of two or more substances among 15 year olds in 2013

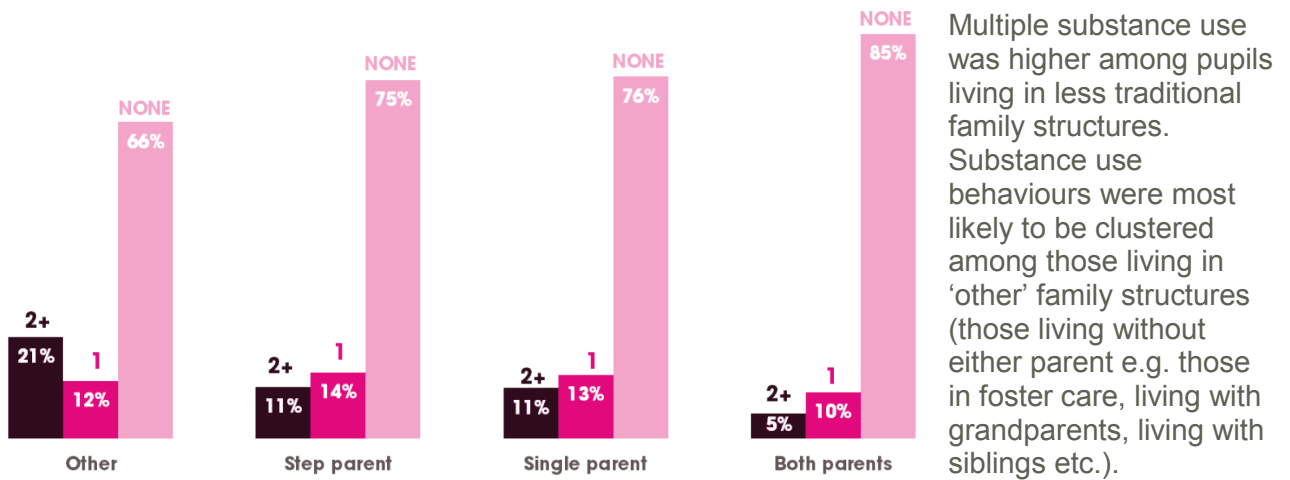


# Family

## Existing findings from other sources

- Family affluence and low family cohesion were associated with increased prevalence of substance misuse (5).
- Parental divorce, perceptions of parental disapproval, parental smoking habits and authoritative parenting styles create circumstances in which young people were more likely to use substances (6).
- Young people from single parent/step parent families were more likely to use substances (7) (8).
- Living with both parents was linked to lower levels of multiple substance use (4).

**Figure 3.9 – Number of substances used by family status among 15 year olds in 2013**

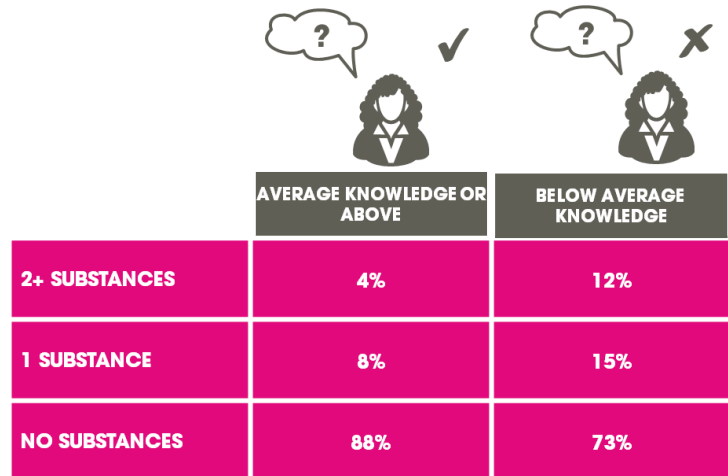


Base: 15 year olds who have: other family (629), step parent family (1,407), single parent family (3,678), both parents (9,579)

**Figure 3.10 – Number of substances used by maternal knowledge<sup>13</sup> among 15 year olds in 2013**

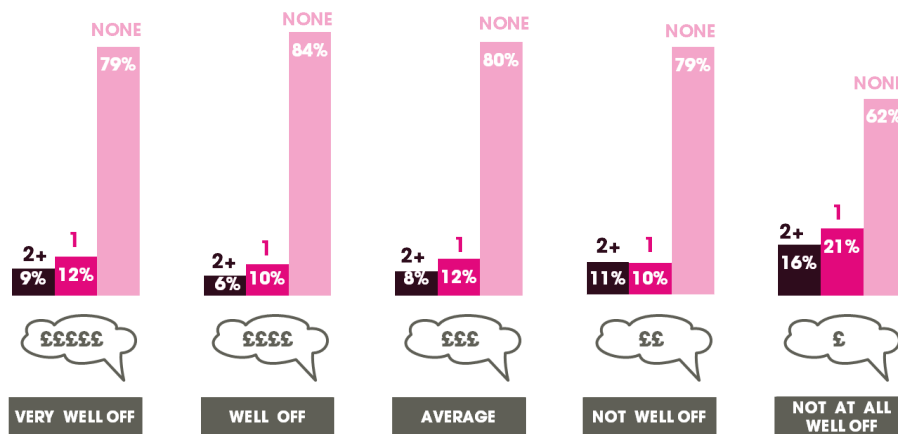
In line with previous research, pupils who thought their parents knew less about their activities were more likely to use two or more substances.

This figure shows the relationship between maternal knowledge and substance use, but the same pattern appeared in regard to paternal knowledge. For full details see appendix B.



Base: 15 year olds who believe: maternal knowledge is median or above (8,522), maternal knowledge below median (6,594)

**Figure 3.11 – Number of substances used by perceived family affluence among 15 year olds in 2013**



While perceived family affluence only tells us what pupils thought the relative economic position of their family was, not their actual status, it was clear that pupils who believed that their family was not at all well off were more likely to use two or more substances.

Base: 15 year olds who think their family is: very well off (1,850), well off (6,060), average (6,580), not well off (697), not at all well off (158)

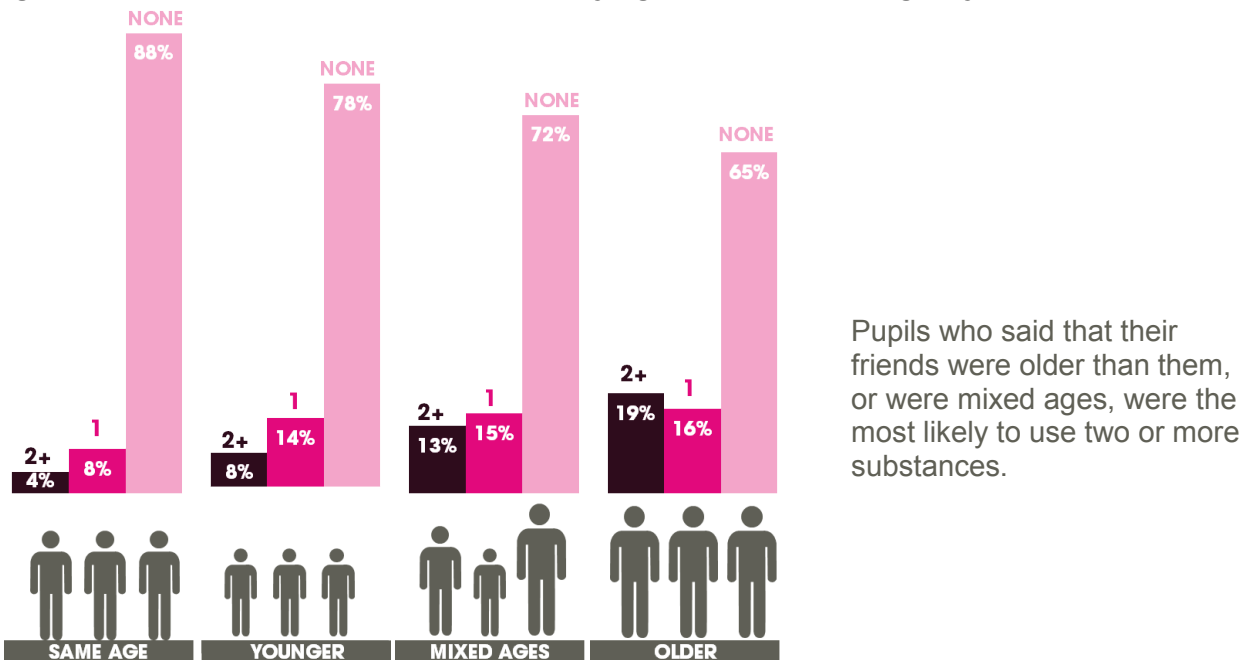
<sup>13</sup> In this instance, average knowledge is represented by the median score, rather than the mean.

## Friends

### Existing findings from other sources

- There was an increased likelihood of smoking, drinking and drug use among young people under the influence of their peer groups (9).
- Increased cannabis consumption was associated with spending more time with friends (10).
- Young people tended to select friends who had common attributes and behaviours to them reinforcing substance use patterns and creating social opportunities for use (11).
- Variations existed within young people's susceptibility to peer influences based on social status, dependency and relationships with close friends (12).
- Pupils who spent many evenings out with friends were more likely to use multiple or single substances (3).

Figure 3.12 – Number of substances used by age of friends among 15 year olds in 2013



Base: 15 year olds whose friends are: same age (9,828), younger (231), mixed ages (4,399), older (670)



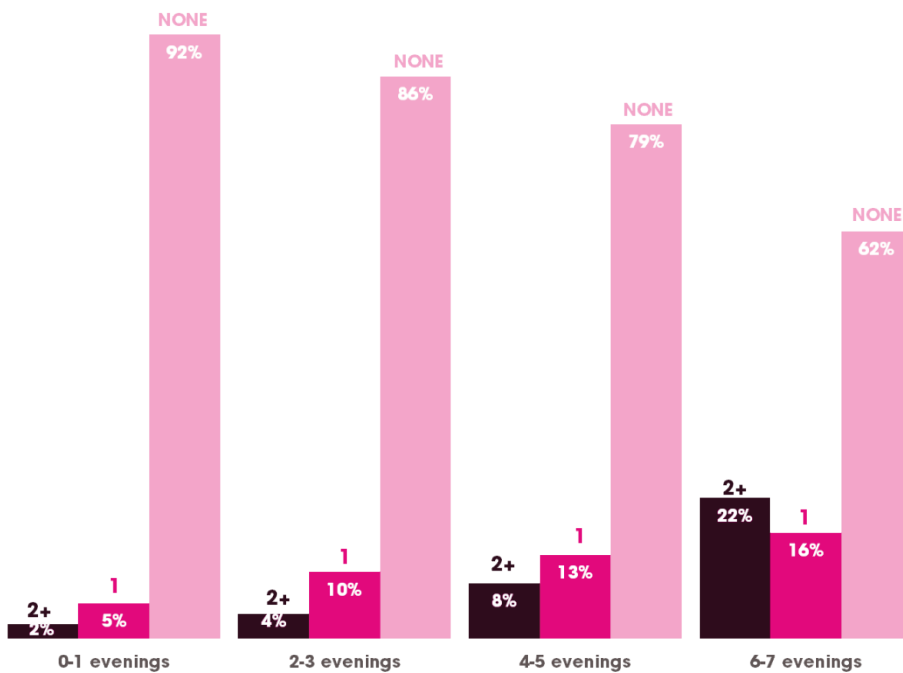
**Figure 3.13 – Number of substances used by number of close friends among 15 year olds in 2013**

Pupils with no close friends were more likely to have used two or more substances than those with at least one close friend.

	NO CLOSE FRIENDS	AT LEAST ONE CLOSE FRIEND
2+ SUBSTANCES	11%	7%
1 SUBSTANCE	14%	11%
NO SUBSTANCES	74%	82%

Base: 15 year olds with: no close friends (294), at least one close friend (14,361)

**Figure 3.14 – Number of substances used by number of evenings spent with friends among 15 year olds in 2013**



The number of evenings pupils spent with friends seemed to have a strong association with multiple substance use.

The greater the number of evenings spent with friends, the greater the likelihood of using two or more substances.

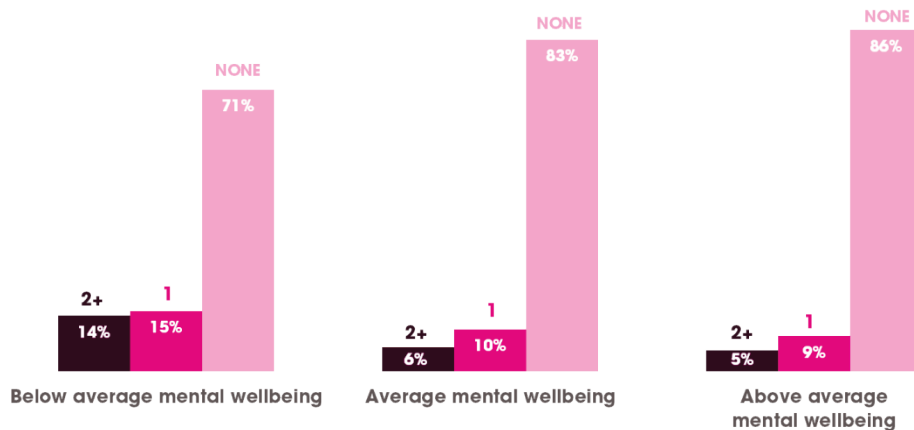
Bases: 15 year olds who spend: 0-1 evenings per week (2,884), 2-3 evenings (5,851), 4-5 evenings (4,227), 6-7 evenings (2,056)

## Mental health

### Existing findings from other sources

- Young people in the UK used substances as a means to alleviate their moods (13).
- Low self-esteem and substance use were correlated among young people (14).
- Daily use of cannabis in female teenagers increased depression and anxiety (15).

**Figure 3.15 – Number of substances used by WEMWBS<sup>14</sup> banding among 15 year olds in 2013 (16)**



Mental wellbeing appeared to be a protective factor for multiple substance use.

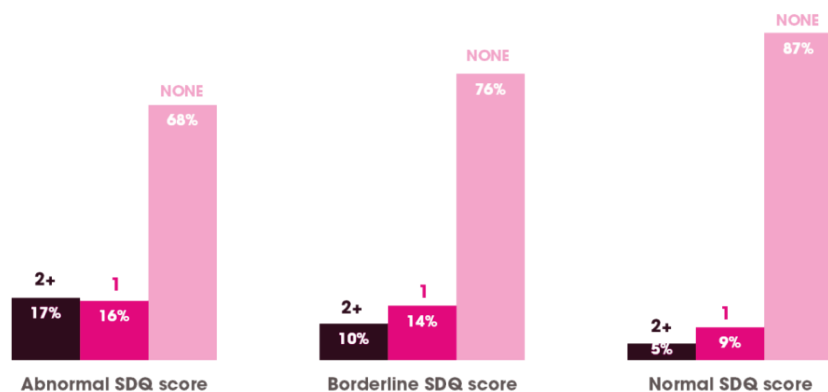
Those with below average WEMWBS scores were more than twice as likely to use two or more substances than those with average or above scores.

Base: 15 year olds with: below average mental wellbeing (2,429), average (10,257), above average (1,773)

**Figure 3.16 – Number of substances used by Strengths and Difficulties score<sup>15</sup> among 15 year olds in 2013 (17)**

In line with the WEMWBS findings, those with greater difficulties on the Strengths and Difficulties questionnaire (SDQ) were more likely to use two or more substances.

However, the relationship to the individual scales that make up the SDQ score differed.

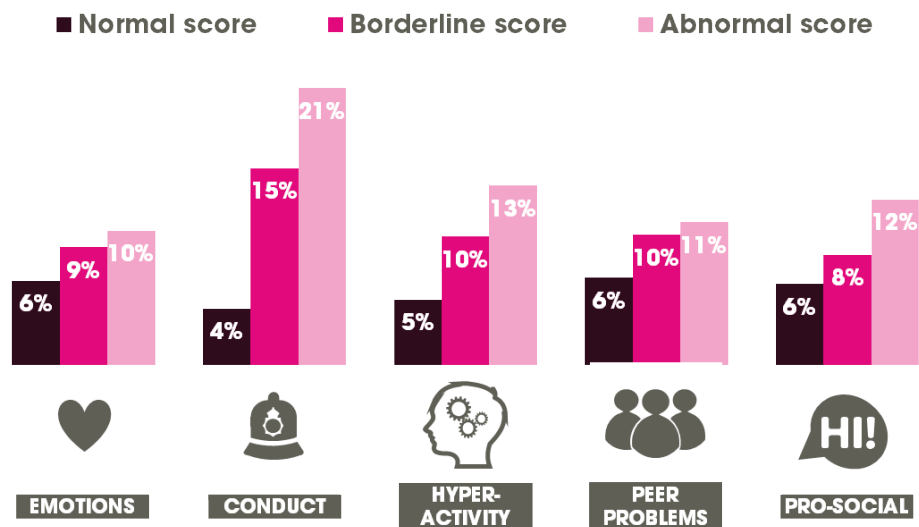


Base: 15 year olds with: abnormal SDQ score (2,202), borderline SDQ score (2,458), normal SDQ score (10,187)

<sup>14</sup> The Warwick-Edinburgh Mental Well-being Scale (WEMWBS) is a scale of 14 positively worded items, with five response categories, for assessing a population's mental wellbeing.

<sup>15</sup> The Strengths and Difficulties Questionnaire (SDQ) is a brief behavioural screening questionnaire about 3-16 year olds. The SDQ asks about 25 attributes, some positive and others negative. These 25 items are divided between 5 scales: emotional problems, conduct problems, hyperactivity, peer problems and pro-social behaviour. An overall difficulties score is collated from the first 4 scales.

Figure 3.17 – Use of two or more substances by individual SDQ scales<sup>16</sup> among 15 year olds in 2013



An abnormal, or borderline, conduct score was most strongly associated with the use of two or more substances, while the association with emotional or peer problems was weaker.

Base: 15 year olds (15,577)

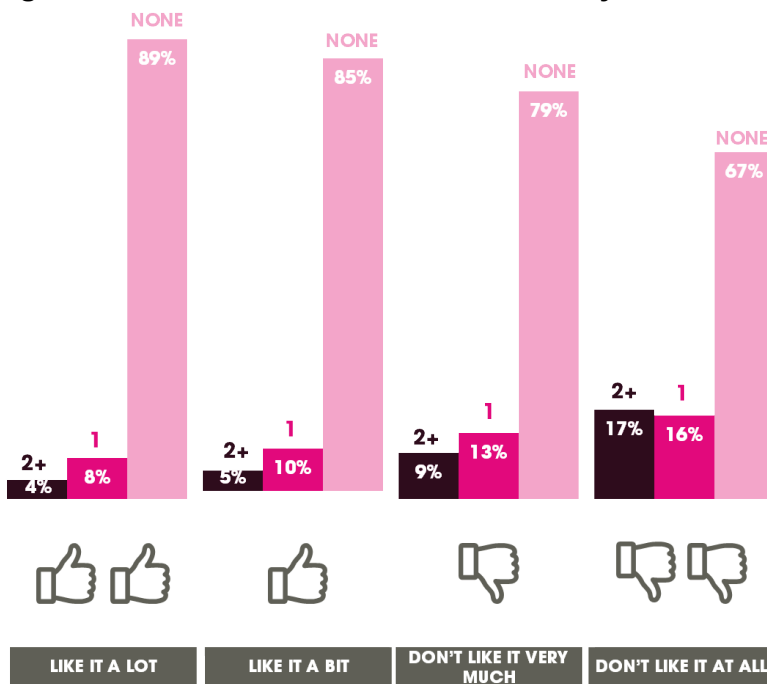
<sup>16</sup> These are the 5 individual scales that make up the Strengths and Difficulties Questionnaire: emotional problems, conduct problems, hyperactivity, peer problems and pro-social behaviour. Pupils are given a score for each individual scale that is classified as either normal, borderline or abnormal.

## School

### Existing findings from other sources

- Higher levels of truanting and exclusion were associated with higher levels of drug use (1).
- Pupils who felt that they had performed well at school were less likely to smoke cigarettes (18).
- Pupils who reported more negative experiences at school were more likely to use multiple substances (3).

Figure 3.18 – Number of substances used by attitudes to school among 15 year olds in 2013




Pupils who did not enjoy their school experience were more likely to use multiple substances, particularly those who said they 'do not like it at all'.

Base: 15 year olds who say they: like school a lot (2,343), like it a bit (7,537), don't like it very much (3,408), don't like it at all (1,774)

**Figure 3.19 – Number of substances used by pressure from school work among 15 year olds in 2013**

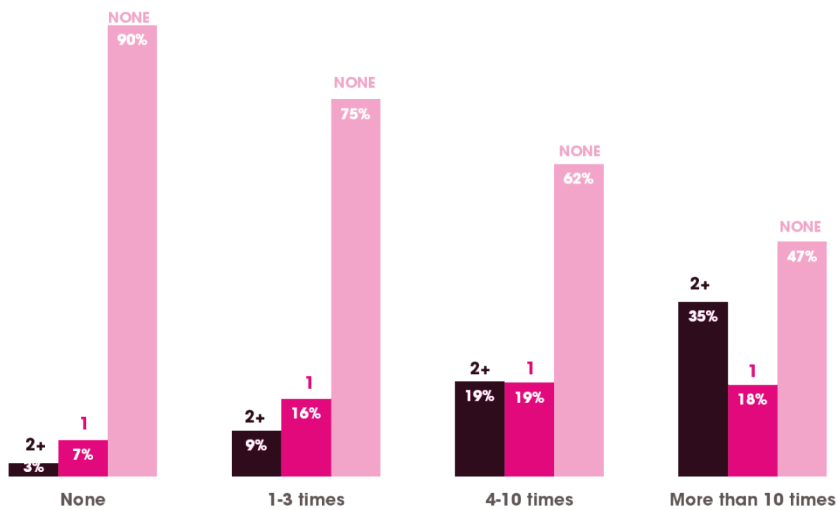
The relationship between multiple substance use and feeling pressured at school had no clear pattern.



	NEVER	SOMETIMES	A LOT OF THE TIME
2+ SUBSTANCES	11%	6%	9%
1 SUBSTANCE	13%	10%	12%
NO SUBSTANCES	77%	85%	80%

Base: 15 year olds who: never feel strained or pressured by schoolwork (1,239), sometimes (7,678), a lot of the time (6,196)

**Figure 3.20 – Number of substances used by number of times truanted among 15 year olds in 2013**



In line with previous research, pupils that skipped school on a regular basis were much more likely to use multiple substances.

Base: 15 year olds who have: not skipped or skived school in the last year (9,338), 1-3 times (3,785), 4-10 times (1,260) more than 10 times (676)

**Figure 3.21 – Number of substances used by exclusion among 15 year olds in 2013**

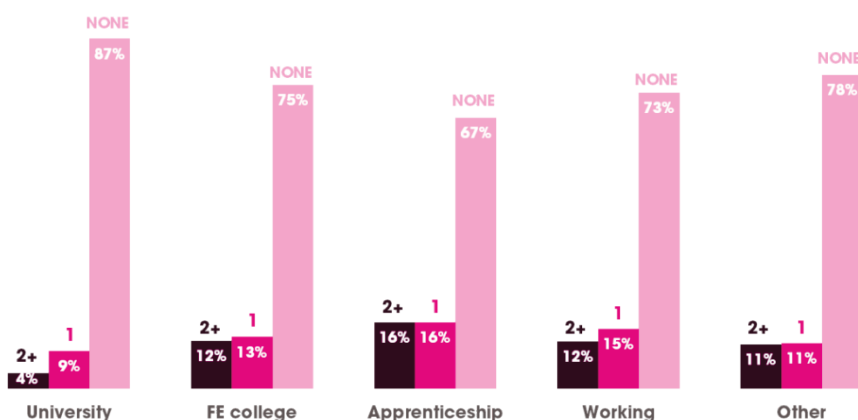
Exclusion from school also had a strong relationship with multiple substance use. Those that had been excluded from school at least once were more than five times as likely to have used two or more substances as those who had not.



	NO	YES
2+ SUBSTANCES	5%	26%
1 SUBSTANCE	10%	17%
NO SUBSTANCES	85%	57%

Base: 15 year olds who: have not been excluded from secondary school (13,583), have been excluded (1,465)

**Figure 3.22 – Number of substances used by aspirations among 15 year olds<sup>17</sup> in 2013**



There were differences in multiple substance use by pupils' aspirations.

Pupils who thought they would go on to University when they left school were least likely to use two or more substances, while those who thought they would do an apprenticeship were most likely.

Base: 15 year olds who think that after school they are most likely to: go to university (8,470), go to FE College (3,057), start an apprenticeship (981), work (1,159), other (1,840)





<sup>17</sup> Answers in the 'other' category includes youth training, unemployed, don't know and those that said other.

## Leisure activities

### Existing findings from other sources

- Hanging out with friends was associated with a higher prevalence of substance use specifically drugs and alcohol (5).
- Young people involved in structured leisure activities such as sports, volunteering or school clubs were less likely to engage in substance use (19).
- Unsupervised leisure time was associated with higher levels of substance use (20).

**Figure 3.23 – Use of two or more substances by whether participate in leisure activities among 15 year olds in 2013**

	AT LEAST ONCE A WEEK	LESS OFTEN
 <b>SEE A FRIEND</b>	8%	2%
 <b>GO TO A FRIEND'S HOUSE</b>	9%	3%
 <b>HANG OUT IN THE STREET</b>	16%	3%
 <b>GO TO A CONERT OR GIG</b>	17%	6%

Activities that involved minimal parental supervision tended to be linked to higher prevalence of multiple substance use. Pupils who saw friends, went to a friend's house, hung out in the street, or went to a concert or gig at least once a week were all more likely to have used two or more substances.

Base: 15 year olds who participate in each activity weekly and less often (see appendix B)

**Figure 3.24 – Number of substances used by group/club attendance among 15 year olds in 2013**

Multiple substance use was lower among those who attended groups/clubs (e.g. youth groups, drama clubs, sports clubs or computer clubs etc.).

Those who had not attended a club in the last 12 months were twice as likely to have used two or more substances as those who had. The effect was greatest among those who attended sports clubs.

	<b>ATTENDED A GROUP/CLUB</b>	<b>NOT ATTENDED A GROUP/CLUB</b>
<b>2+ SUBSTANCES</b>	<b>6%</b>	<b>12%</b>
<b>1 SUBSTANCE</b>	<b>11%</b>	<b>12%</b>
<b>NO SUBSTANCES</b>	<b>84%</b>	<b>76%</b>

Base: 15 year olds who have: attended a club (3,325), not attended a club (11,779)

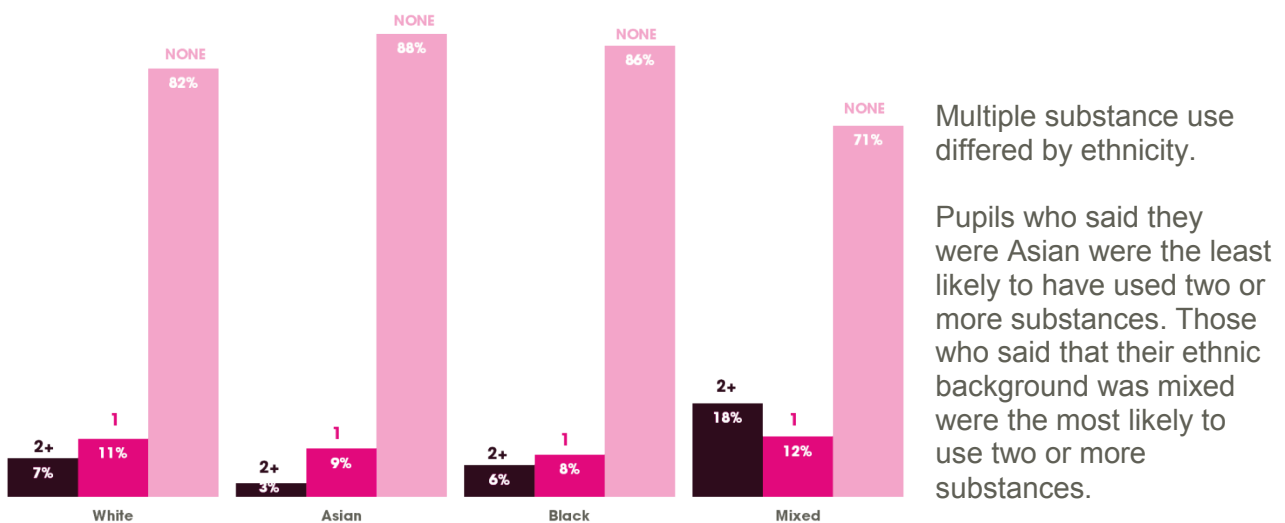


## Ethnicity

### Existing findings from other sources

- White pupils were more likely than Black or Asian pupils to have ever smoked cigarettes and to smoke regularly (21).
- Similarly, white pupils were more likely than those of other ethnicities to drink alcohol, either at all or in the last week (21).
- There were no differences in the prevalence of drug taking (ever, in the last year or in the last month) (21).

Figure 3.25 – Number of substances used by ethnicity among 15 year olds in 2013



Base: 15 year olds who said their ethnic background was: White (14,328), Asian (410), Black (94), Mixed (435)

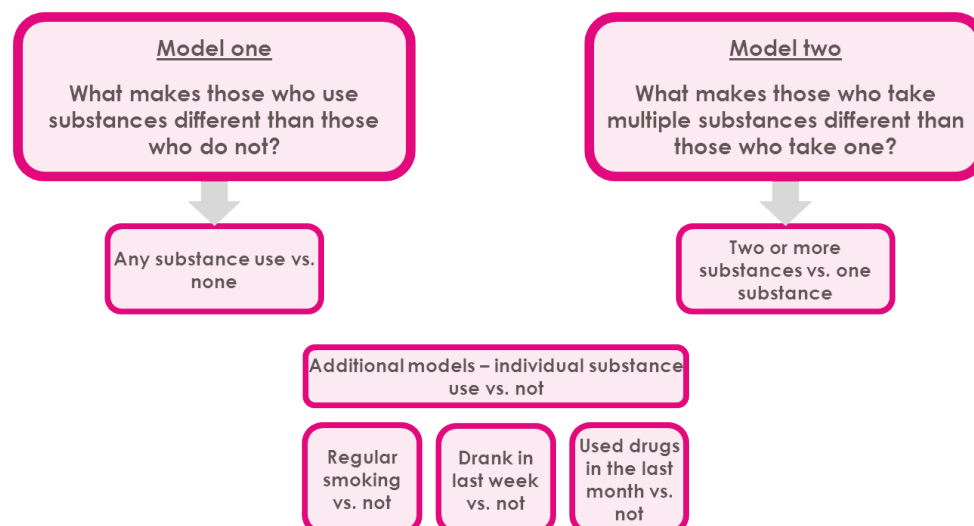
## 4 Predictors of multiple substance use

### Key findings

- The factors that were the strongest drivers of any substance use were exclusion from school, truanting, number of evenings spent with friends, and age of friends.
- The factors which drove any substance use (see above) were the same ones that differentiated between multiple and single substances use.

- 4.1 Logistic regression is used to predict an outcome using several predictor variables. In this report, logistic regression was used to predict substance use and multiple substance use. The data used was limited to 15 year olds in 2010 and 2013<sup>18</sup>.
- 4.2 The main benefit of using logistic regression in this context is to clearly distinguish the different effects of the various factors. By including in the logistic regression models, for example, the Scottish Index of Multiple Deprivation (SIMD) and perceptions of family affluence, it is possible to separate the effect of each of these. This means that any significant difference by any factor is independent of any other factors (i.e. whether area deprivation is a significant factor that is separate from family affluence).

Figure 4.1 – Logistic regression models undertaken



<sup>18</sup> Inclusion of earlier years risked the impact on some variables that had only been introduced recently (such as WEMWBS) being diluted.

- 4.3 Two main logistic regression models were run: any substance use versus no substance use (we also examined the drivers of drinking, smoking and drug use separately) and use of two or more substances versus use of one substance (Figure 4.1).
- 4.4 The potential factors included in each of the logistic regressions were those analysed across the six themes covered earlier in this report: geography and deprivation, family, friends, mental health, school and leisure activities. We used this inclusive approach so that we had the same explanatory variables in each of the models that were run, thus allowing comparability across the models. The factors included are detailed in Table 4.1.

**Table 4.1 – Factors included in each logistic regression**

<b>Geography and deprivation</b>	<b>Family</b>	<b>Friends</b>	<b>Mental Health</b>	<b>School</b>	<b>Leisure activities</b>	<b>Other</b>
<ul style="list-style-type: none"> <li>• SIMD</li> <li>• Rurality</li> <li>• FSM entitlement</li> </ul>	<ul style="list-style-type: none"> <li>• Family status</li> <li>• Maternal knowledge</li> <li>• Paternal knowledge</li> <li>• Perceived family affluence</li> </ul>	<ul style="list-style-type: none"> <li>• Age of friends</li> <li>• Number of close friends</li> <li>• Number of evening spent with friends</li> </ul>	<ul style="list-style-type: none"> <li>• WEMWBS score</li> <li>• Strengths and Difficulties score</li> </ul>	<ul style="list-style-type: none"> <li>• Attitude to school</li> <li>• Whether pressured by school work</li> <li>• Truanting</li> <li>• Exclusion</li> <li>• Aspirations after school</li> </ul>	<ul style="list-style-type: none"> <li>• Group/club membership</li> <li>• Weekly participation in various leisure activities</li> </ul>	<ul style="list-style-type: none"> <li>• Year of survey</li> <li>• Sex</li> </ul>

## What the models show

### Model 1 – What makes those who use tobacco, alcohol and drugs different from those who do not?

- 4.5 Overall, a large number of different factors were associated with a greater likelihood of using any substances (being male, an abnormal Strength and Difficulties score, having no close friends, taking part in unsupervised social activities, low maternal and paternal knowledge etc.). This confirmed much of the analysis that precedes this section and suggested that there is no single driver of substance use.

4.6 Figure 4.2<sup>19</sup> highlights the key drivers of substance use. The detailed regression results can be found in Table C.1 (Appendix C). The drivers of drinking, smoking and taking drugs individually are also summarised in Figure 4.2, with detailed results in Table C.2 in the appendices.

**Figure 4.2 Summary of key drivers of individual and any substance use among 15 year olds in 2013**

	SIGNIFICANT FACTOR IN SUBSTANCE USE?			
	DRINKING	SMOKING	DRUGS	ANY
TRUANCY	YES, A LOT	YES, A LOT	YES, A LOT	YES, A LOT
EXCLUSION	YES, A LOT	YES, A LOT	YES, A LOT	YES, A LOT
EVENINGS WITH FRIENDS	YES, A LOT	YES, A LOT	YES, A LOT	YES, A LOT
AGE OF FRIENDS	YES, A LOT	YES, A LOT	YES, A LOT	YES, A LOT
NO OF CLOSE FRIENDS	YES, A LOT	NO	YES, A LOT	YES, A LOT
FAMILY AFFLUENCE	YES, SOME <sup>†</sup>	YES, SOME <sup>†</sup>	YES, SOME <sup>†</sup>	YES, SOME <sup>†</sup>
MATERNAL KNOWLEDGE	YES, SOME	YES, SOME	YES, A LOT	YES, SOME
HANGING OUT IN THE STREET	YES, SOME	YES, A LOT	YES, A LOT	YES, A LOT
TAKING PART IN ANY ORGANISED GROUPS	YES, SOME	YES, SOME	YES, SOME	YES, SOME
TAKING PART IN SPORTS	NO	YES, SOME	YES, SOME	YES, SOME
STRENGTHS AND DIFFICULTIES SCORE	YES, SOME	YES, SOME	YES, SOME	YES, SOME
WELLBEING	YES, SOME <sup>†</sup>	NO	YES, SOME <sup>†</sup>	YES, SOME <sup>†</sup>
FSM ENTITLEMENT	YES, SOME <sup>†</sup>	NO	NO	NO
RURILITY	YES, SOME	YES, SOME	YES, SOME	YES, SOME
AREA DEPRIVATION	YES, SOME <sup>†</sup>	YES, SOME <sup>†</sup>	YES, SOME <sup>†</sup>	YES, SOME <sup>†</sup>
ASPIRATIONS	YES, SOME <sup>†</sup>	YES, SOME <sup>†</sup>	YES, SOME <sup>†</sup>	YES, SOME <sup>†</sup>
GENDER	NO	YES, SOME	YES, A LOT	YES, SOME

4.7 Exclusion from school, frequent truanting, and a greater number of evenings out with friends were the three factors that had the largest impact on likelihood to use at least one substance, with all increasing the likelihood of substance use considerably.

4.8 The factors that had the strongest impact on any substance use<sup>20</sup> (ever excluded from school, level of truancy, number of evenings spent with

<sup>19</sup> This table is based on the logistic regression models reported in Table C2. “Yes, a lot” indicates log odds of less than 0.6 or greater than 1.67. “Yes, some” indicates log odds between 0.6 and 1.67 but a significant effect.

<sup>†</sup> indicates that it may be a non-linear relationship or that the direction of the effect is not what might be assumed.

<sup>20</sup> With the exception that number of close friends is not significantly correlated with smoking.

friends, and whether friends are older) were all significantly correlated with drinking, smoking and taking drugs individually.

### Substance Use and Deprivation

The findings in chapter three showed that multiple substance use is higher among pupils living in areas of deprivation.

However, the regression model suggested that once *all other factors are controlled for*, those in the most deprived quintile are slightly, but significantly, *less likely* to use at least one substance.

Whether a pupil lived in a deprived or non-deprived area also made no difference to the number of substances that they used, once all other factors were controlled for.

As discussed in section 3.6, SIMD is an area based measure of deprivation rather than an individual one, so it is perhaps no surprise that personal factors related to the pupil as an individual and their family (e.g. engagement with school, friends, parental monitoring) were stronger in the model.

### Model 2 – What makes those who use two or more substances different to those who use one?

- 4.9 The factors that had the strongest impact in the first model also had the strongest impact in the second model. Figure 4.3 highlights the factors that had the biggest impact on multiple substance use (detailed regression results can be found in Table C3 - Appendix C). Exclusion from school, higher levels of truanting, and a higher number of evenings spent with friends were strongly correlated with multiple substance use over single substance use.
- 4.10 Being male, low maternal knowledge of activities, not taking part in an organised activity, not taking part in a sport, frequently hanging around the streets, and having older friends were also significant in distinguishing between multiple and single substance use.
- 4.11 All these factors were also significant in the first model. This suggests that differences in the drivers of substance use and multiple substance use are more a matter of degree rather than of kind.

Figure 4.3 - Summary of key drivers of multiple substance use among 15 year olds in 2013

	SIGNIFICANT FACTOR IN MULTIPLE SUBSTANCE USE?	
	ANY	MULTIPLE
TRUANCY	YES, A LOT	YES, A LOT
EXCLUSION	YES, A LOT	YES, A LOT
EVENINGS WITH FRIENDS	YES, A LOT	YES, A LOT
AGE OF FRIENDS	YES, A LOT	YES, SOME
NO OF CLOSE FRIENDS	YES, A LOT	YES, SOME
FAMILY AFFLUENCE	YES, SOME <sup>†</sup>	YES, SOME <sup>†</sup>
MATERNAL KNOWLEDGE	YES, SOME	YES, SOME
HANGING OUT IN THE STREET	YES, A LOT	YES, SOME
TAKING PART IN ANY ORGANISED GROUPS	YES, SOME	YES, SOME
TAKING PART IN SPORTS	YES, SOME	YES, SOME
STRENGTHS AND DIFFICULTIES SCORE	YES, SOME	YES, SOME
WELLBEING	YES, SOME <sup>†</sup>	NO
FSM ENTITLEMENT	NO	NO
RURALITY	YES, SOME	NO
AREA DEPRIVATION	YES, SOME <sup>†</sup>	NO
GENDER	YES, SOME	YES, SOME

## 5 Conclusions

As with the main trends in smoking, drinking and drug use, multiple substance use (the use of two or more substance) has decreased over time and is now at an all-time low.



Pupils who use substances now are no more likely to be multiple users than pupils in previous waves of the survey.



The demographic profile of multiple substance users is similar to that of the main substance use trends, and has remained stable over time. 15 year olds and boys are more likely to use two or more substances (but gender gap is closing over time).



Among those who use at least one substance regularly, those that smoke on a regular basis are most at risk of using another substance, whereas those that drink weekly are least likely.



The profile of multiple substance users was broadly in line with the existing literature and has not changed over time.



There were many factors that showed a relationship with multiple substance use across the different themes explored. However, two main themes emerged: engagement with school and unsupervised versus structured leisure time.



Pupils who have low levels of engagement with school were more likely to take two or more substances as were those who spent more of their leisure time unsupervised. These effects remained after all of the other factors were taken into account in the regression model and were best able to predict multiple substance use.

While deprivation was associated with multiple substance use, both at an area and personal level, once all the other factors were taken into account in the regression model, it was not a key driver.



The regression model also showed that there were no fundamental differences between substance users, generally, and those that used two or more substances. The same variables drove multiple substance use as single substance use; it was just a matter of degree.



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# Appendix A – Bases

**Table A.1 – Bases for figure 2.1 – Trends in regular substance use among 13 year olds between 1990 and 2013**

Year	Regular smoking	Drank in the last week	Used drugs in the last month
1990	667	661	-
1992	737	729	-
1994	691	686	-
1996	622	617	-
1998	620	614	619
2000	1207	1199	1205
2002	12094	12145	11899
2004	3469	3497	3441
2006	11571	11757	11809
2008	5314	5269	5348
2010	19004	19184	18965
2013	17060	17284	16644

**Table A.2 – Bases for figure 2.2 – Trends in regular substance use among 15 year olds between 1990 and 2013**

Year	Regular smoking	Drank in the last week	Used drugs in the last month
1990	660	661	-
1992	629	626	-
1994	641	641	-
1996	594	592	-
1998	1116	1114	1115
2000	1163	1162	1161
2002	10219	10472	10393
2004	3335	3378	3320
2006	11009	11166	11197
2008	4625	4589	4634
2010	17701	17803	17503
2013	16053	16209	15805

**Table A.3 Bases for figures 3.6 and 3.7 – Number of substances used by local authority among 15 year olds in 2013**

<b>Local Authority</b>	<b>Base</b>
Aberdeen City	390
Aberdeenshire	668
Angus	407
Argyll and Bute	234
Clackmannanshire	497
Dumfries and Galloway	351
Dundee City	421
East Ayrshire	526
East Dunbartonshire	521
East Lothian	321
East Renfrewshire	765
Edinburgh City	795
Eilean Siar	147
Falkirk	589
Fife	776
Glasgow City	1,575
Highland	643
Inverclyde	168
Midlothian	309
Moray	387
North Ayrshire	425
North Lanarkshire	759
Orkney	162
Perth and Kinross	291
Scottish Borders	657
Shetland	217
South Ayrshire	261
South Lanarkshire	1,055
Stirling	397
West Dunbartonshire	369
West Lothian	446
Scotland	15,605

**Table A.4 Bases for figure 3.23 – Use of two or more substances by whether participate in leisure activities among 15 year olds in 2013**

<b>Activity</b>	<b>At least once a week</b>	<b>Less often</b>
See a friend	12,953	2,238
Go to a friend's house	10,487	4,635
Hang out in the street	5,036	10,055
Go to a concert or gig	1,324	13,776

## Appendix B – Additional tables

Table B.1 – additional table for Figure 3.10 Number of substances used by maternal knowledge among 15 year olds in 2013

	Father's knowledge median or above	Father's knowledge below median
<b>Two or more substances</b>	4	10
<b>One substance</b>	8	14
<b>No substances</b>	88	75
<i>Bases</i>	7377	6677

# Appendix C – Regression

## Interpreting Logistic Regression models

Table C.1 shows a selection of the output from the logistic regression model of whether any substance use. The first two columns indicate the different predictor factors included in the model. All variables have been treated as categorical variables.

The column headed 'Sig.', shows whether the factor is significant. A value of less than 0.05 in this column suggests that this factor is significant. In Table C.1, the figure for female (vs. male) is less than 0.05, it follows that - after controlling for the effect of all other factors in the model - the likelihood among females using at least one of the three types of substance is different from the likelihood among males.

The column headed 'Beta' indicates the direction of the effect. A positive value indicates that those in the category are more likely to use at least one substance, and vice versa. For example, females are less likely than males to take at least one substance as the coefficient is negative.

Logistic regression models compare different categories against a reference category. In Table C.1, large urban area has been set as the reference category for the urban/rural classification, and the other categories are a series of comparisons with this category.

The column headed "Exp(B)" gives the odds ratio. This indicates the size of the effect. The further above 1 that the odds ratio is, the greater the increase in likelihood of using at least one substance. The further below 1, the greater the decrease in the likelihood of using at least one substance. A value of 1 for the odds ratio means that a factor has no effect.

**Table C.1: Logistic regression model of any versus no substance use among S4 pupils 2010 and 2013: selected variables shown.**

		Beta	S.E. of Beta	Sig.	Exp(B)
<b>Gender of respondent</b>	Male			<b>.00</b>	
	Female	-0.17	0.04	<b>.00</b>	.84
<b>SIMD quintiles</b>	1 - Most deprived quintile			<b>.01</b>	
	2	0.10	0.05	.05	1.10
	3	0.18	0.05	<b>.00</b>	1.20
	4	0.16	0.05	<b>.00</b>	1.17
	5 - Least deprived quintile	0.18	0.05	<b>.00</b>	1.20
<b>Urban rural classification based on home postcode</b>	Large urban areas			<b>.02</b>	
	Other urban areas	-0.06	0.04	.09	.94
	Small accessible towns	0.03	0.06	.62	1.03
	Small remote towns	0.10	0.08	.20	1.10
	Accessible rural	0.02	0.05	.67	1.02
	Remote rural	0.16	0.07	<b>.01</b>	1.17
<b>Overall WEMWBS score banded into three categories</b>	Below average mental wellbeing			<b>.02</b>	
	Average mental wellbeing	-0.11	0.04	<b>.01</b>	.90
	Above average mental wellbeing	-0.04	0.07	.53	.96

		Beta	S.E. of Beta	Sig.	Exp(B)
<b>Banded Strengths and Difficulties (SDQ) score</b>	Normal			<b>.00</b>	
	Borderline	0.25	0.04	<b>.00</b>	1.28
	Abnormal	0.34	0.05	<b>.00</b>	1.40
<b>Actively taken part in youth groups</b>	No			.06	
	Yes	-0.09	0.04	<b>.04</b>	.91
<b>Actively taken part in a drama, arts, music or singing groups</b>	No			.10	
	Yes	-0.08	0.05	.10	.92
<b>Actively taken part in none of these</b>	No			<b>.00</b>	
	Yes	0.17	0.06	<b>.00</b>	1.19
<b>Frequency of seeing your friends</b>	At least weekly			.08	
	Less than weekly	-0.16	0.08	<b>.03</b>	.85
<b>Frequency of listening to music</b>	At least weekly			<b>.00</b>	
	Less than weekly	-0.32	0.09	<b>.00</b>	.73
<b>Frequency of watching sports matches</b>	At least weekly			.06	
	Less than weekly	-0.09	0.04	<b>.03</b>	.92
<b>Frequency of going to the cinema</b>	At least weekly			<b>.00</b>	
	Less than weekly	0.24	0.04	<b>.00</b>	1.27
<b>Frequency of hanging around the street</b>	At least weekly			<b>.00</b>	
	Less than weekly	-0.61	0.03	<b>.00</b>	.54
<b>Frequency of doing a hobby</b>	At least weekly			<b>.00</b>	
	Less than weekly	0.22	0.03	<b>.00</b>	1.25
<b>Frequency of going to a friend's house</b>	At least weekly			<b>.00</b>	
	Less than weekly	-0.48	0.05	<b>.00</b>	.62
<b>Frequency of going to concerts or gigs</b>	At least weekly			<b>.00</b>	
	Less than weekly	-0.46	0.05	<b>.00</b>	.63
<b>Frequency of going to church</b>	At least weekly			.37	
	Less than weekly	0.07	0.06	.24	1.07
<b>Frequency of doing sports</b>	At least weekly			<b>.01</b>	
	Less than weekly	0.12	0.04	<b>.00</b>	1.13
<b>Frequency of doing voluntary work</b>	At least weekly			.06	
	Less than weekly	0.11	0.05	<b>.02</b>	1.12
<b>Frequency of using social networking sites</b>	At least weekly			<b>.01</b>	
	Less than weekly	-0.30	0.10	<b>.00</b>	.74
<b>Family status</b>	Single parent			<b>.00</b>	
	Step parent (and one parent)	0.10	0.05	.06	1.10
	Both parents	-0.19	0.04	<b>.00</b>	.83
	Other	0.15	0.08	.07	1.16
<b>Paternal knowledge of activities - banded</b>	Below median			<b>.00</b>	
	Median	-0.20	0.05	<b>.00</b>	.82
	Above median	-0.14	0.04	<b>.00</b>	.87
<b>Maternal knowledge of activities - banded</b>	Below median			<b>.00</b>	
	Median	-0.27	0.04	<b>.00</b>	.76
	Above median	-0.48	0.04	<b>.00</b>	.62

		Beta	S.E. of Beta	Sig.	Exp(B)
<b>How well off would you say your family is?</b>	Very well off			<b>.00</b>	
	Quite well off	-0.11	0.05	<b>.05</b>	.90
	Average	-0.22	0.05	<b>.00</b>	.80
	Not well off	-0.32	0.08	<b>.00</b>	.73
	Not at all well off	0.34	0.14	<b>.01</b>	1.41
<b>Number of close friends</b>	None			<b>.00</b>	
	One	-0.59	0.16	<b>.00</b>	.55
	Two or more	-0.33	0.13	<b>.01</b>	.72
<b>Are your friends older, younger, or about the same age as you?</b>	Older than me			<b>.00</b>	
	Younger than me	-0.44	0.14	<b>.00</b>	.64
	About the same age as me	-0.77	0.07	<b>.00</b>	.47
	Mixed ages	-0.29	0.07	<b>.00</b>	.75
	Don't know	0.26	0.24	.28	1.30
<b>How many evenings spend with friends</b>	0-1 evenings			<b>.00</b>	
	2-3 evenings	0.34	0.07	<b>.00</b>	1.40
	4-5 evenings	0.64	0.07	<b>.00</b>	1.90
	6-7 evenings	1.03	0.07	<b>.00</b>	2.80
<b>How much do you like school at the moment?</b>	I like it a lot			<b>.00</b>	
	I like it a bit	-0.05	0.06	.38	.95
	I don't like it very much	0.09	0.06	.13	1.10
	I don't like it at all	0.23	0.07	<b>.00</b>	1.26
<b>How often feel strained or pressured by the schoolwork</b>	Never			<b>.00</b>	
	Sometimes	-0.19	0.06	<b>.00</b>	.83
	A lot of the time	0.00	0.06	.97	1.00
<b>Truanting</b>	None			<b>.00</b>	
	1-3 times	0.65	0.04	<b>.00</b>	1.91
	4-10 times	1.13	0.05	<b>.00</b>	3.08
	More than 10 times	1.39	0.06	<b>.00</b>	4.03
<b>Ever excluded</b>	No			<b>.00</b>	
	Yes	0.77	0.05	<b>.00</b>	2.16
<b>Aspirations</b>	University			<b>.00</b>	
	FE College	0.05	0.04	.20	1.05
	Apprenticeship	0.29	0.06	<b>.00</b>	1.33
	Working	0.06	0.05	.25	1.07
	Other	-0.07	0.05	.16	.93
	Constant	-0.39	0.25	.12	.68



**Table C.2: Logistic regression model of individual substance use versus not use among S4 pupils 2010 and 2013: selected variables shown.**

		Drinking				Smoking				Drugs			
		Beta	S.E. of Beta	Sig.	Exp(B)	Beta	S.E. of Beta	Sig.	Exp(B)	Beta	S.E. of Beta	Sig.	Exp(B)
<b>Gender of respondent</b>	Male			.26			.06					.00	
	Female	-0.03	0.04	.57	0.98	0.12	0.05	.02	1.13	-0.59	0.05	.00	0.56
<b>SIMD quintiles</b>	1 - Most deprived quintile			.00				.06				.02	
	2	0.09	0.05	.10	1.09	-0.04	0.06	.51	0.96	0.05	0.06	.44	1.05
	3	0.23	0.06	.00	1.26	-0.05	0.07	.49	0.95	0.16	0.07	.02	1.17
	4	0.19	0.06	.00	1.21	0.00	0.07	.94	1.00	0.06	0.07	.36	1.06
	5 - Least deprived quintile	0.21	0.06	.00	1.24	0.14	0.07	.04	1.16	0.20	0.07	.00	1.22
<b>Urban rural classification based on home postcode</b>	Large urban areas			.00				.02				.00	
	Other urban areas	-0.04	0.04	.35	0.96	0.06	0.05	.25	1.06	-0.09	0.05	.06	0.91
	Small accessible towns	0.10	0.06	.09	1.11	0.10	0.08	.21	1.10	-0.22	0.08	.00	0.80
	Small remote towns	0.18	0.08	.02	1.20	0.19	0.10	.06	1.21	-0.27	0.10	.01	0.76
	Accessible rural	0.04	0.05	.45	1.04	0.18	0.07	.01	1.19	-0.23	0.07	.00	0.80
	Remote rural	0.28	0.07	.00	1.32	0.30	0.09	.00	1.34	-0.22	0.09	.01	0.80
<b>Entitled to Free School Meals</b>	Yes			.01				.11				.00	
	No	0.06	0.05	.21	1.06	-0.11	0.05	.05	0.90	-0.30	0.05	.00	0.74
<b>Overall WEMWBS score banded into three categories</b>	Below average mental wellbeing	0.16	0.07	.02	1.17	0.02	0.09	.82	1.02	-0.16	0.08	.05	0.85
	Average mental wellbeing			.00				.00				.00	
	Above average mental wellbeing	0.23	0.05	.00	1.26	0.17	0.06	.00	1.19	0.21	0.06	.00	1.23
<b>Banded Strengths and Difficulties (SDQ) score</b>	Normal	0.24	0.05	.00	1.27	0.37	0.06	.00	1.45	0.16	0.06	.01	1.18
	Borderline	0.00	0.00	.00	0.00	0.00	0.00	.69	0.00	0.00	0.00	.14	0.00
	Abnormal	-0.14	0.05	.00	0.87	0.03	0.06	.67	1.03	-0.11	0.06	.07	0.90
<b>Actively taken part in youth groups</b>	No			.35				.93				.85	
	Yes	-0.05	0.05	.35	0.95	-0.01	0.07	.93	0.99	0.01	0.07	.85	1.01
<b>Actively taken part in a</b>	No			.00				.04				.04	

		Drinking				Smoking				Drugs			
		Beta	S.E. of Beta	Sig.	Exp(B)	Beta	S.E. of Beta	Sig.	Exp(B)	Beta	S.E. of Beta	Sig.	Exp(B)
drama, arts, music or singing groups	Yes	0.19	0.07	<b>.00</b>	1.21	0.16	0.08	<b>.04</b>	1.18	0.16	0.08	<b>.04</b>	1.17
Actively taken part in none of these	No			.18				<b>.01</b>				<b>.00</b>	
	Yes	-0.16	0.09	.07	0.85	-0.27	0.12	<b>.02</b>	0.77	-0.32	0.11	<b>.00</b>	0.73
Frequency of seeing your friends	At least weekly			<b>.01</b>				.29				.06	
	Less than weekly	-0.28	0.10	<b>.01</b>	0.76	-0.13	0.13	.31	0.87	-0.21	0.13	.09	0.81
Frequency of listening to music	At least weekly			<b>.00</b>				.15				.20	
	Less than weekly	-0.23	0.04	<b>.00</b>	0.80	0.03	0.06	.60	1.03	0.09	0.05	.08	1.09
Frequency of watching sports matches	At least weekly			<b>.00</b>				<b>.00</b>				<b>.00</b>	
	Less than weekly	0.17	0.04	<b>.00</b>	1.18	0.41	0.05	<b>.00</b>	1.51	0.33	0.05	<b>.00</b>	1.39
Frequency of going to the cinema	At least weekly			<b>.00</b>				<b>.00</b>				<b>.00</b>	
	Less than weekly	-0.50	0.04	<b>.00</b>	0.61	-0.75	0.05	<b>.00</b>	0.47	-0.71	0.05	<b>.00</b>	0.49
Frequency of hanging around the street	At least weekly			<b>.00</b>				<b>.00</b>				<b>.02</b>	
	Less than weekly	0.30	0.04	<b>.00</b>	1.34	0.18	0.05	<b>.00</b>	1.20	0.02	0.05	.60	1.02
Frequency of doing a hobby	At least weekly			<b>.00</b>				<b>.00</b>				<b>.00</b>	
	Less than weekly	-0.35	0.06	<b>.00</b>	0.70	-0.51	0.08	<b>.00</b>	0.60	-0.47	0.07	<b>.00</b>	0.62
Frequency of going to a friend's house	At least weekly			<b>.00</b>				<b>.00</b>				<b>.00</b>	
	Less than weekly	-0.44	0.05	<b>.00</b>	0.64	-0.35	0.07	<b>.00</b>	0.70	-0.43	0.06	<b>.00</b>	0.65
Frequency of going to concerts or gigs	At least weekly			<b>.01</b>				<b>.03</b>				<b>.00</b>	
	Less than weekly	0.19	0.06	<b>.00</b>	1.21	0.08	0.08	.34	1.08	-0.24	0.07	<b>.00</b>	0.79
Frequency of going to church	At least weekly			.17				<b>.00</b>				<b>.01</b>	
	Less than weekly	0.08	0.04	.07	1.08	0.45	0.06	<b>.00</b>	1.57	0.14	0.05	<b>.01</b>	1.15
Frequency of doing sports	At least weekly			.30				<b>.04</b>				.05	
	Less than weekly	0.08	0.05	.12	1.09	0.16	0.07	<b>.02</b>	1.18	0.16	0.07	<b>.02</b>	1.18
Frequency of doing	At least weekly			.14				.71				.31	

		Drinking				Smoking				Drugs			
		Beta	S.E. of Beta	Sig.	Exp(B)	Beta	S.E. of Beta	Sig.	Exp(B)	Beta	S.E. of Beta	Sig.	Exp(B)
<b>voluntary work</b>	Less than weekly	-0.24	0.12	.05	0.79	-0.09	0.15	.52	0.91	-0.20	0.13	.13	0.82
<b>Frequency of using social networking sites</b>	At least weekly			<b>.00</b>				<b>.00</b>				<b>.00</b>	
	Less than weekly	0.12	0.06	<b>.04</b>	1.12	0.05	0.07	.48	1.05	0.03	0.07	.62	1.03
<b>Family status</b>	Single parent	-0.11	0.04	<b>.01</b>	0.89	-0.33	0.05	<b>.00</b>	0.72	-0.20	0.05	<b>.00</b>	0.82
	Step parent (and one parent)	0.16	0.08	.07	1.17	0.22	0.09	<b>.02</b>	1.25	0.42	0.09	<b>.00</b>	1.52
	Both parents			<b>.01</b>				.05				<b>.00</b>	
	Other	-0.19	0.06	<b>.00</b>	0.83	-0.21	0.08	<b>.01</b>	0.81	-0.24	0.07	<b>.00</b>	0.79
<b>Paternal knowledge of activities - banded</b>	Below median	-0.09	0.04	.05	0.92	-0.06	0.06	.27	0.94	-0.17	0.06	<b>.00</b>	0.85
	Median			<b>.00</b>				<b>.00</b>				<b>.00</b>	
	Above median	-0.24	0.05	<b>.00</b>	0.79	-0.23	0.06	<b>.00</b>	0.79	-0.34	0.06	<b>.00</b>	0.71
<b>Maternal knowledge of activities - banded</b>	Below median	-0.34	0.04	<b>.00</b>	0.71	-0.38	0.06	<b>.00</b>	0.68	-0.60	0.06	<b>.00</b>	0.55
	Median			<b>.00</b>				<b>.00</b>				.16	
	Above median	-0.13	0.06	<b>.02</b>	0.88	-0.12	0.07	.09	0.88	-0.12	0.07	.07	0.88
<b>How well off would you say your family is?</b>	Very well off	-0.32	0.06	<b>.00</b>	0.73	-0.17	0.07	<b>.01</b>	0.84	-0.17	0.07	<b>.01</b>	0.84
	Quite well off	-0.37	0.09	<b>.00</b>	0.69	-0.21	0.11	<b>.05</b>	0.81	-0.17	0.10	.10	0.84
	Average	0.38	0.13	<b>.00</b>	1.47	0.13	0.16	.41	1.14	-0.06	0.16	.70	0.94
	Not well off			<b>.00</b>				.28				<b>.00</b>	
	Not at all well off	-0.75	0.17	<b>.00</b>	0.47	-0.10	0.20	.63	0.91	-0.59	0.19	<b>.00</b>	0.55
<b>Number of close friends</b>	None	-0.31	0.14	<b>.02</b>	0.73	-0.25	0.16	.13	0.78	-0.50	0.15	<b>.00</b>	0.60
	One			<b>.00</b>				<b>.00</b>				<b>.00</b>	
	Two or more	-0.26	0.15	.08	0.77	-0.79	0.19	<b>.00</b>	0.45	-0.44	0.18	<b>.01</b>	0.64
<b>Are your friends older, younger, or about the same age as you?</b>	Older than me	-0.66	0.07	<b>.00</b>	0.52	-0.83	0.08	<b>.00</b>	0.44	-0.79	0.08	<b>.00</b>	0.45
	Younger than me	-0.19	0.07	<b>.01</b>	0.82	-0.35	0.08	<b>.00</b>	0.70	-0.36	0.08	<b>.00</b>	0.70
	About the same age as me	-0.02	0.24	.94	0.98	-0.53	0.28	.06	0.59	0.38	0.27	.16	1.46
	Mixed ages			<b>.00</b>				<b>.00</b>				<b>.00</b>	
	Don't know	0.44	0.08	<b>.00</b>	1.55	0.28	0.11	<b>.01</b>	1.32	0.21	0.10	<b>.03</b>	1.23

		Drinking				Smoking				Drugs			
		Beta	S.E. of Beta	Sig.	Exp(B)	Beta	S.E. of Beta	Sig.	Exp(B)	Beta	S.E. of Beta	Sig.	Exp(B)
<b>How many evenings spend with friends</b>	0-1 evenings	0.73	0.08	<b>.00</b>	2.07	0.80	0.11	<b>.00</b>	2.23	0.56	0.10	<b>.00</b>	1.75
	2-3 evenings	0.93	0.08	<b>.00</b>	2.53	1.42	0.11	<b>.00</b>	4.15	0.82	0.10	<b>.00</b>	2.27
	4-5 evenings			<b>.00</b>				<b>.03</b>				<b>.08</b>	
	6-7 evenings	0.01	0.06	.91	1.01	-0.06	0.09	.52	0.95	-0.03	0.08	.72	0.97
<b>How much do you like school at the moment?</b>	I like it a lot	0.17	0.07	<b>.01</b>	1.19	0.07	0.09	.41	1.08	0.03	0.08	.70	1.03
	I like it a bit	0.34	0.07	<b>.00</b>	1.40	0.13	0.10	.17	1.14	0.14	0.09	.12	1.15
	I don't like it very much			<b>.00</b>				<b>.02</b>				<b>.00</b>	
	I don't like it at all	-0.17	0.06	<b>.00</b>	0.84	-0.06	0.08	.41	0.94	-0.16	0.07	<b>.02</b>	0.85
<b>How often feel strained or pressured by the schoolwork</b>	Never	0.05	0.06	.39	1.06	0.09	0.08	.27	1.09	0.06	0.08	.47	1.06
	Sometimes			<b>.00</b>				<b>.00</b>				<b>.00</b>	
	A lot of the time	0.55	0.04	<b>.00</b>	1.73	0.63	0.05	<b>.00</b>	1.88	0.67	0.05	<b>.00</b>	1.96
<b>Truantiing</b>	None	0.98	0.05	<b>.00</b>	2.66	1.25	0.06	<b>.00</b>	3.47	1.14	0.06	<b>.00</b>	3.12
	1-3 times	1.14	0.06	<b>.00</b>	3.13	1.45	0.07	<b>.00</b>	4.28	1.49	0.07	<b>.00</b>	4.43
	4-10 times			<b>.00</b>				<b>.00</b>				<b>.00</b>	
	More than 10 times	0.50	0.05	<b>.00</b>	1.64	0.96	0.05	<b>.00</b>	2.60	0.87	0.05	<b>.00</b>	2.38
<b>Ever excluded</b>	No			<b>.00</b>				<b>.00</b>				<b>.00</b>	
	Yes	-0.01	0.04	.75	0.99	0.43	0.06	<b>.00</b>	1.54	-0.06	0.05	.26	0.94
<b>Aspirations</b>	University	0.25	0.06	<b>.00</b>	1.28	0.63	0.08	<b>.00</b>	1.87	0.12	0.07	.10	1.13
	Further Education	-0.04	0.06	.46	0.96	0.45	0.07	<b>.00</b>	1.57	-0.24	0.07	<b>.00</b>	0.78
	Apprenticeship	0.01	0.05	.90	1.01	0.37	0.07	<b>.00</b>	1.45	-0.07	0.07	.26	0.93
	Working	-1.35	0.26	<b>.00</b>	0.26	-2.54	0.31	<b>.00</b>	0.08	-1.11	0.30	<b>.00</b>	0.33
	Other			.26				.06				<b>.00</b>	
	Constant	-0.03	0.04	.57	0.98	0.12	0.05	<b>.02</b>	1.13	-0.59	0.05	<b>.00</b>	0.56

**Table C.3: Logistic regression model of multiple substance use versus single substance use among S4 pupils in 2010 and 2013 who used at least one substance: selected variables shown.**

		Beta	S.E. of Beta	Sig.	Exp(B)
Gender of respondent	Male			<b>.00</b>	.00
	Female	-0.23	0.07	<b>.00</b>	.79
SIMD quintiles	1 - Most deprived quintile			.08	.00
	2	-0.01	0.08	.86	.99
	3	0.00	0.09	1.00	1.00
	4	-0.06	0.09	.52	.95
	5 - Least deprived quintile	0.18	0.09	<b>.04</b>	1.20
Urban rural classification based on home postcode	Large urban areas			.39	.00
	Other urban areas	0.07	0.06	.30	1.07
	Small accessible towns	0.07	0.09	.46	1.07
	Small remote towns	0.02	0.12	.88	1.02
	Accessible rural	-0.07	0.09	.38	.93
	Remote rural	0.19	0.11	.09	1.20
Overall WEMWBS score banded into three categories	Below average mental wellbeing			.61	.00
	Average mental wellbeing	-0.07	0.07	.30	.93
	Above average mental wellbeing	0.02	0.11	.87	1.02
Banded Strengths and Difficulties (SDQ) score	Normal			.17	.00
	Borderline	0.14	0.07	<b>.04</b>	1.16
	Abnormal	0.08	0.08	.28	1.09
Actively taken part in youth groups	No			.45	.00
	Yes	-0.03	0.08	.70	.97
Actively taken part in a drama, arts, music or singing groups	No			.31	.00
	Yes	0.09	0.09	.31	1.09
Actively taken part in none of these	No			<b>.02</b>	.00
	Yes	0.22	0.10	<b>.02</b>	1.25
Frequency of seeing your friends	At least weekly			<b>.01</b>	.00
	Less than weekly	-0.42	0.16	<b>.01</b>	.65
Frequency of listening to music	At least weekly			.34	.00
	Less than weekly	-0.26	0.19	.17	.77
Frequency of watching sports matches	At least weekly			.45	.00
	Less than weekly	0.08	0.07	.22	1.08
Frequency of going to the cinema	At least weekly			<b>.00</b>	.00
	Less than weekly	0.27	0.06	<b>.00</b>	1.32
Frequency of hanging around the street	At least weekly			<b>.00</b>	.00
	Less than weekly	-0.43	0.06	<b>.00</b>	.65
Frequency of doing a hobby	At least weekly			.89	.00
	Less than weekly	0.03	0.06	.64	1.03
Frequency of going to a friend's house	At least weekly			.24	.00
	Less than weekly	-0.16	0.10	.09	.85
Frequency of going to concerts or gigs	At least weekly			<b>.00</b>	.00
	Less than weekly	-0.28	0.08	<b>.00</b>	.76

		Beta	S.E. of Beta	Sig.	Exp(B)
Frequency of going to church	At least weekly			.12	.00
	Less than weekly	-0.08	0.11	.47	.93
Frequency of doing sports	At least weekly			<b>.00</b>	.00
	Less than weekly	0.31	0.07	<b>.00</b>	1.36
Frequency of doing voluntary work	At least weekly			.23	.00
	Less than weekly	0.06	0.09	.47	1.07
Frequency of using social networking sites	At least weekly			.35	.00
	Less than weekly	0.28	0.20	.16	1.33
Family status	Single parent			<b>.00</b>	.00
	Step parent (and one parent)	0.01	0.08	.93	1.01
	Both parents	-0.11	0.06	.09	.90
	Other	0.49	0.13	<b>.00</b>	1.63
Paternal knowledge of activities - banded	Below median			<b>.03</b>	.00
	Median	-0.21	0.10	<b>.03</b>	.81
	Above median	-0.11	0.07	.11	.89
Maternal knowledge of activities - banded	Below median			<b>.00</b>	.00
	Median	-0.16	0.08	<b>.04</b>	.86
	Above median	-0.28	0.07	<b>.00</b>	.76
How well off would you say family is?	Very well off			<b>.02</b>	.00
	Quite well off	-0.26	0.09	<b>.00</b>	.77
	Average	-0.29	0.09	<b>.00</b>	.75
	Not well off	-0.15	0.13	.27	.86
	Not at all well off	-0.30	0.19	.11	.74
Number of close friends	None	0.00	0.00	.27	.00
	One	-0.13	0.25	.62	.88
	Two or more	-0.16	0.20	.43	.85
Are your friends older, younger, or about the same age as you?	Older than me			<b>.00</b>	.00
	Younger than me	-0.12	0.24	.61	.89
	About the same age as me	-0.50	0.10	<b>.00</b>	.61
	Mixed ages	-0.19	0.10	.05	.83
	Don't know	-0.16	0.35	.65	.85
How many evenings spend with friends	0-1 evenings			<b>.00</b>	.00
	2-3 evenings	0.20	0.14	.17	1.22
	4-5 evenings	0.65	0.14	<b>.00</b>	1.91
	6-7 evenings	0.85	0.15	<b>.00</b>	2.35
How much do you like school at the moment?	I like it a lot			<b>.05</b>	.00
	I like it a bit	0.04	0.11	.69	1.04
	I don't like it very much	0.08	0.11	.50	1.08
	I don't like it at all	0.25	0.12	<b>.03</b>	1.29
How often feel strained or pressured by the schoolwork	Never			.12	.00
	Sometimes	-0.05	0.09	.56	.95
	A lot of the time	0.09	0.10	.37	1.09

		Beta	S.E. of Beta	Sig.	Exp(B)
<b>Truancing</b>	None			<b>.00</b>	.00
	1-3 times	0.30	0.07	<b>.00</b>	1.35
	4-10 times	0.74	0.08	<b>.00</b>	2.10
	More than 10 times	1.08	0.09	<b>.00</b>	2.95
<b>Ever excluded</b>	No			.00	.00
	Yes	0.56	0.07	<b>.00</b>	1.75
<b>Aspirations</b>	University			<b>.00</b>	.00
	Further Education	0.15	0.07	<b>.03</b>	1.16
	Apprenticeships	0.25	0.09	<b>.01</b>	1.29
	Working	-0.11	0.09	.22	.90
	Other	0.22	0.09	<b>.01</b>	1.25
	Constant	-1.06	0.39	<b>.01</b>	.35

### **How to access background or source data**

The data collected for this official statistics publication:

are available via the UK Data Archive

### **Complaints and suggestions**

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ISBN 978-1-78544-606-1

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