Public Health England

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Knowledge & Library Services (KLS) Evidence Briefing

What research has been done to understand substance misuse within the UK student population, and what interventions have been introduced as a result?

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Question

This briefing summarises the evidence on substance misuse by students at UK universities, published Jan 1st 2017 - Oct 10th 2019.

Key messages

- Cannabis was the most frequently taken drug amongst students, followed by ecstasy, nitrous oxide and cocaine
- New psychoactive substances (NPS) were often used in combination with traditional illegal drugs
- 56% (of 2,810 students) had used drugs, with 39% reporting that they currently use drugs
- There was low use of, and low knowledge about, drugs such as modafinil, Ritalin or Adderall
- Students mainly used drugs for recreational purposes, but other motives included enhancement for sports or academia, the ability to sleep/reduce stress, or to manage illnesses
- 16% of the universities surveyed, incorrectly advised students that the use of drugs is a criminal offence
- Public health policies should include social interventions aimed at generating recreational alternatives to drug taking
- Students should not be disciplined for drug taking that does not constitute a criminal offence, and students found possessing/using drugs in student accommodation should be signposted to appropriate support
- Smart drug use might be reduced by raising awareness about their safety and the fairness of using them for academic performance
- 50% of students surveyed drank alcohol at least once a week, 79% agreed that drinking alcohol is part of university culture, but 78% didn't have to be drunk to have a good time
- One-third (of 7855) students said that their drinking had caused an injury,10-15% had been in a fight, and coping motives were linked to stresses relating to university life and a social drinking culture
- Some students had recently engaged in social non-drinking – benefits were seen as improved health, increased self-esteem and higher quality social life, but some felt it hindered the bonding process; some students were also hostile to social non-drinking
- Alcohol Impact is a social change theory programme designed to foster responsible drinking cultures for students – impacts included 50% increase in non-alcoholic events and 40% decrease in students' exclusion from campus venues
- Promoting the benefits of not drinking alcohol during social occasions, targeting students before they commence their course, and providing credible alternative socialising options that do not involve alcohol may support more moderate drinking in students
- Students viewed themselves as being 'good drinkers' and others as 'bad' drinkers – hence students may not view themselves as a target for alcohol reduction interventions
- Future initiatives to reduce alcohol misuse in students may include changing social normative beliefs, improving familiarity with UK drinking guidelines, motivating students to change behaviour, and tailoring interventions to the cultural context of the target audience

Evidence briefings are a summary of the best available evidence that has been selected from research using a systematic and transparent method in order to answer a specific question.

What doesn't this briefing do?
The findings from research papers summarised here have **not** been quality assessed or critically appraised. This briefing is a neutral presentation of the evidence and does **not** seek to make any recommendations.

Who is this briefing for?
This briefing is to inform the Health and Wellbeing Programme Manager, PHE Yorkshire and the Humber.

Information about this evidence briefing
This briefing draws upon a literature search of the sources Medline, Embase, Psycinfo, Social Care Online, NICE Evidence and Google from 1st January 2017 to 10th October 2019.

47 highly relevant citations were used to produce this evidence briefing.

You may request any publications referred to in this briefing from libraries@phe.gov.uk

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Background

Substance misuse among university students is a public health concern. This briefing draws together research evidence conducted on the substance use by students at universities in the UK, published between Jan 1st 2017 and Oct 10th 2019. It covers alcohol and illegal drug use (including cannabis, cocaine, new psychoactive substances (NPS), smart drugs/pharmacological cognitive enhancers (PCE) and non-medical use of prescription drugs), but not cigarette smoking.

Drug use

"Student drug use is not homogenous and very little is known about the nuances and diversity of their use/non-use beyond prevalence data" p224 (1)

a) Prevalence

Over the last 10 years, there has been an increase in the amount of research on drug use among university students, but much of this has been conducted in the United States (US) (2). In 2018, a review of the literature to determine the current state of knowledge on student drug use specifically in the UK, found 13 UK studies that provided information on the prevalence of drug use, but these were all published prior to 2017 (2).

One substance misuse survey of students has recently been conducted in the UK, from which several research papers have been published – this surveyed over 7000 students from seven universities in Wales (2-5).

The most commonly consumed drugs among students were alcohol and cigarettes, followed by over a quarter of students (26.9%) using cannabis, and about one eighth using ecstasy (14.3%) and nitrous oxide (13.4%); powder cocaine and prescription analgesics were used by about 5% of students (2, 3). NPS were often used in combination with traditional illegal drugs and prescription drugs; in fact, users were more likely to use NPS in combination with illegal or prescription drugs than to use NPS alone (2).

About half of student drug users obtained drugs solely from friends, one-fifth obtained them solely from external dealers, one-quarter used friends as well as external markets, and over one-third of students had sold drugs (3).

Around 10% of students from the survey who used drugs or alcohol reported committing substance-related crimes in the current academic year (4). Those most likely to offend were males, first year students, those who socialised regularly, and those in poor physical or mental health.

A different survey of 3,706 undergraduates at seven universities in England, Wales and Northern Ireland showed that 30% of students reported illicit drug use, which was associated with being male, alcohol misuse and smoking (6).

A National Union of Students (NUS) report on student drug use and institutional drug policies in the UK in 2018 found that 56% of the 2,810 students responding had used drugs at some point, with 39% reporting that they currently use drugs (7). Cannabis was the most frequently taken drug, followed by Ecstasy/MDMA, nitrous oxide and cocaine. Overall, 1 in 10 students responding to the survey had taken drugs. A smaller survey of around 1000 students in the UK found that 71% had not taken illegal drugs during their time in higher education, but 25% had done so in the past year; 53% of students said that their university did not do enough to deter illegal drug use (8). The two surveys had different methodologies and targeted different student populations.

A focus group study of 66 university students (10% non-white, gender equally represented) based in two major urban areas (Greater London and the South West of England) found low use of, and low knowledge about, PCEs such as modafinil, Ritalin or Adderall (9). The authors state that this contrasts with media representations of PCE in the UK where 94% of 142 newspaper articles portrayed PCE as common, increasing, or both (9). They also suggest that in UK universities, PCE risk and resilience is mediated by collective values around competition and prescription drug taking, and soft peer pressure and social norms within friendship groups.

NPS use in males had increased in a sample of mainly university-educated, young respondents, one year after introduction of NPS legislation, whilst health risk awareness had not changed and remained poor (10). The authors concluded that regulation alone had not impacted on health risk awareness, NPS drug demand or culture in their UK survey sample.

A Student BMJ survey in 2017 (823 respondents) found that 7% of medical students had taken a psychoactive substance, such as mephedrone; 20% had taken other illegal drugs. 79% had not taken any illegal drugs whilst at medical school (11). Non-clinical undergraduates were more likely to smoke and use cannabis when compared to clinical undergraduates (12).

A UK survey of prescription drug use showed that self-reported non-medical use of prescription drugs was higher in younger ages, males, and students (13).

Class A drug use among young adults (16-24 year olds) in the general population has been increasing since 2011/12 (14). Young adults were more likely to be frequent drug users than the wider age group. Cannabis was also the most commonly used drug in these 16-24 year olds, in line with the student survey results above. The longer-term trend in cannabis use appeared to be downwards (14). Cocaine was the second most commonly used drug among young adults; trends in cocaine use are prone to fluctuation, making it difficult to interpret short term trends in cocaine use. Around half of all new psychoactive substance (NPS) users were aged 16 to 24.

b) Reasons/motivations for drug use

A university may be a specific 'risk environment' where certain cultural and environmental attributes including distance from parents, the interconnected nature of students and financial insecurity, can provide facilitative conditions for students to use and supply drugs (15).

A systematic review on the motives of university students for illicit use of four different types of prescription medication found that personal enhancement in terms of sports or academic outcomes, the ability to sleep or to reduce anxiety, or to manage pre-existing illnesses, were the most prevalent motives (16). Fewer than half of users took the drugs for pleasure (to party or to get high).

Respondents from the NUS survey were most likely to take drugs at home, in student accommodation, or at house parties (7). Students mainly used drugs for recreational purposes (80%), but also to deal with stress (31%) and to self-medicate for an existing mental health problem (22%). The results also showed that over half of the institutions surveyed could discipline students for behaviour that is not a criminal offence, and 16% of institutions incorrectly advised students that the use of drugs is a criminal offence (7, 17).

University students may seek to enhance cognitive functioning by taking smart drugs in an effort to improve their academic performance; students who believed smart drugs to be harmless, and those who felt they knew how to use them safely, tended to have more positive attitudes towards smart drugs (18).

Medical students appeared to be less likely to misuse drugs, compared with law students at the same university – the authors suggested that perhaps medical students are more aware of the possible dangers of substance use (19).

Around one third of non-clinical and clinical students supported the legalisation of illicit drugs, but 47% of non-clinical students would consider changing their behaviour if illicit substances were legalised compared to 32% of clinical students (12).

A paper exploring the normalisation of drugs states that student drug use is not homogenous and little is known about the nuances and diversity of use or non-use, but concludes that *"…..we have a cohort of university students who are 'drug literate' in the same sense we talk about someone being computer literate or emotionally literate*" (1).

c) Interventions

In the US, social norms approaches to university based drinking and drug misuse interventions have been used - their main approach is to communicate realistic student norms about substance use (4). Other methods used by universities mainly in the US for tackling drug misuse are; health screening and monitoring, which can be used to identify students at risk to provide appropriate responses; brief

motivational interviewing; or increasing extracurricular activities to bring about behavioural change (4).

Public health policies should include social interventions aimed at generating recreational alternatives and opportunities for students, and motivational interviewing interventions could target the primary substance whilst considering other multiple risky substance use behaviours (6).

A review of interventions targeting alcohol, drug and smoking behaviours in university and college students found that intervention efforts targeting students specifically designed to meet the unique needs and motives of specific groups (e.g., athletes, males, females) may be needed (20). However, the effect of university based interventions on frequency of drug use was uncertain due to the limited number of trials found. Also, only four of the trials were conducted on UK students.

The University of Buckingham's vice chancellor, Sir Anthony Seldon, announced that the university was set to become the first in the UK to ask students to sign a contract promising not to take drugs on university property (21).

Policy responses that focus solely on disciplining students fail to recognise the complex reasons that lead people to use drugs and may only serve to further marginalise certain groups of students (7). The NUS report/survey made many recommendations including that students should not be disciplined for drug related behaviour that does not constitute a criminal offence, that students' unions should work collaboratively with educational institutions to review policies that relate to drugs, educational institutions should ensure that all students are able to access adequate mental health support services, and that students found possessing or using a drug in their student accommodation should be signposted to a range of appropriate support (7).

One study stated that universities should be required to consider drug-related harms as part of their risk assessments: "*One possible line of interventions would be for universities to take action within the powers that they have to implement, such as: developing bespoke information campaigns, providing medical advice and in some case treatment, referring students to local agencies, and extending inhouse support services"* (3)

A more thorough understanding of why students take drugs might help in devising university-based drug treatment and prevention programmes - universities could offer alternative stress-reducing interventions, interventions might be implemented to help develop alternative methods of pain management, and programmes that provide accurate information about the harms of prescription drugs might discourage users from starting or continuing their use (16).

A systematic review identified 8 studies (2 from the UK) examining 6 digital interventions aimed at reducing harm from substance misuse in university/college

students – most interventions produced at least one positive harm-reduction measure, with no negative effects, but the quality of the included studies was weak (22).

Students who felt that smart drug use was unfair had more negative attitudes; smart drug use might be reduced through raising awareness of the absence of evidence regarding their safety, and emphasising ethical arguments around the fairness of using smart drugs to potentially enhance academic performance (18).

Alcohol drinking

"Before going to university almost half of young people surveyed thought that students got drunk most of the time" [NUS Alcohol Impact]

a) Prevalence

The latest available NUS National survey of students and alcohol (2017/2018) showed that 50% of students drink alcohol at least once a week, and 79% agree that drinking alcohol is part of university culture, but 78% of students say they don't have to be drunk to have a good night out – this was almost exactly the same as in the 2016/2017 survey (23). When asked who should be responsible for safe drinking at universities, nearly 89% felt that it was the people who drink who should take responsibility (n=1966). 10% claimed to be aware of responsible drinking campaigns at their university (n=213), but only 1% (n=26) had been part of these campaigns.

The prevalence of alcohol and other substance misuse was high among medical and law students at a single UK university e.g. 53%, 60% and 36% of first, second and final year medical students, respectively, scored positive for an alcohol use disorder (19).

A Student BMJ survey in 2017 (823 respondents) found 10% of medical students exceeded weekly alcohol consumption guidance. Heavier drinking was more prevalent in UK medical students' early years at university, but a quarter of respondents claimed to drink no alcohol during an average week (11).

Almost 6% of females reported being the victim of alcohol-related rape while at university compared with 1% of males (5).

A survey of 3,683 students studying at a UK urban university found that 1-5 units of alcohol a week was consumed by 375 males and 1,142 females; 132 males and 126 females consumed more than 20 units per week (24).

There is some evidence that alcohol consumption patterns become safer over time, particularly in advanced year groups, but many UK students continue to drink at potentially harmful levels (25). Norms and expectations supporting alcohol drinking

were prominent and stable, and point to the potential importance of early intervention, especially with incoming students.

16 to 24 year olds in the general population were the least likely to drink alcohol (when compared with other age groups), but when they did drink they were the most likely to binge on alcohol, something that is true for both men and women (26). Since 2005, teetotalism has increased for younger people and fallen for those aged 65 and over - in 2005, 19% of 16-24 years olds drank no alcohol; in 2017 this had risen to 22.8% - this compares to 29.4% and 24.2% teetotal for over 65s in 2005 and 2017 respectively (26).

b) Reasons/motivations for drinking (or not drinking) alcohol

One-third of students (from a total 7855) said that they or somebody else had been injured because of their drinking,10-15% said that they had been in a fight during or after drinking, and coping motives were often linked to stresses relating to university life and a social drinking culture (27). The authors' concluded that "*universities play some part in generating stress for students through work pressures, administrative inefficiencies, and lack of alternative recreational alternatives, which in turn can be linked to excessive alcohol use as a coping strategy…..Universities have tended to turn a blind eye to such risks and in some ways have enhanced them through the provision of campus-based drinking facilities…..One of the most frequently mentioned sources of pressure to drink cited was the role played by the Students' Union and the culture that it perpetrated…..*" (27).

Not drinking alcohol can hinder the bonding process for female, first year undergraduate students, as a result of limited opportunities to socialise when alcohol was not the dominating feature of the event (28).

64% of a sample of 450 students had been exposed to alcohol-related collateral (ARC) harm, including 50% of non-drinkers (29). Two of the main drivers for ARC harm were having family members who drink every day and being influenced by friends drinking habits.

46.2% of female and 42% of male 18–25-year-old university students had recently engaged in social non-drinking (30). Benefits of social non-drinking included improved physical/psychological health; increased self-esteem; higher quality social life and having a productive life.

c) Interventions

Alcohol Impact is a whole-university programme funded by the Home Office, adopting social change theory, designed to foster responsible drinking cultures for students; 28 students' union and institution partnerships have taken part (23). Five thousand students have been involved with the programme, 50 student auditors

have received training and the annual survey has been completed by 46,000 students. Impacts reported were: 50% increase in the number of non-alcoholic events run during welcome week; 40% decrease in students' exclusion from campus venues due to irresponsible drinking; and a 50% reduction in both verbal assaults and major fights occurring during nights out (23).

Alcohol reduction interventions should be tailored to suit the target population – those that highlight the negative consequences of binge drinking may modify intentions for first year undergraduates; in later years, attitudes, self-efficacy and perceived behavioural control predict intentions, suggesting that interventions targeting these variables would be effective in reducing binge-drinking intentions in these groups (31).

While staff favoured alcohol education in a university as acceptable, students rejected it as ineffective and too much like school-based approaches (32). Reduction of alcohol-related harms, through targeted interventions reflecting the range of practices, locations and populations observed in student consumption should be considered (32).

Hostility to social non-drinking was evident in some British university students (30). Promoting the benefits of not drinking alcohol during social occasions where other peers may be drinking may support more moderate drinking among young people – it has been suggested that alcohol campaign messages should "*counter the 'alcohol equals social' narrative by presenting social non-drinking as something linked to higher quality friendships, or might present the case that not drinking during some social occasions might increase the novelty and enjoyableness of alcohol when consumed socially*" (30).

Students from England had significantly higher Alcohol Use Disorders Identification Test (AUDIT) scores, than students from other European universities, suggesting cultural differences in patterns of alcohol consumption and alcohol-related harm (33). The authors suggested that public health policies to reduce harmful alcohol consumption need to be tailored to the cultural context of the target audience.

A brief online self-assessment tool focusing on the short-term negative consequence of student drinking, (OneTooMany) identified three main themes - social consequences, the role of humour, and prompting reflection (34). Interventions designed to reduce risky drinking in young people may benefit from focusing on some of the short-term, embarrassing consequences of excessive alcohol consumption, rather than on reducing unit intake or health harms.

Students viewed themselves as being 'good drinkers' and distanced themselves from others who were 'bad' drinkers (35). They also attributed their own behaviours to situational factors, but described other people as intentionally violent or aggressive. The authors concluded that this may explain why interventions

sometimes fail to reduce student alcohol misuse, as individuals may not view themselves as a target for such interventions.

Financial motives for pre-loading (drinking alcohol at home before going out for the evening) are common, but improving mood and gaining confidence to engage in social situations are also important (36). Students who scored highly in public self-consciousness appeared to be at greater risk of harms from pre-loading. Interventions could incorporate measures to reduce public self-consciousness, in order to reduce alcohol consumption and harms (36).

A public health intervention for ARC harm might be deployed to first year students on entering university to alert them to the risks of ARC harm and to provide them with tactics to mitigate those risks (29).

University students had poor knowledge of alcohol unit-based guidelines and their motivation to adhere to them was low (37). Only half of 614 students had the skills to accurately estimate the alcohol unit content of their recent alcohol consumption. Public health interventions should include improving young adults' familiarity with UK drinking guidelines, provision of information, and efforts to motivate young people to change their behaviour (37, 38).

Alcohol brief intervention (ABI) was no more effective in reducing alcohol consumption and drinking patterns in Scottish undergraduate students than providing an information leaflet about alcohol (39). The authors state that their research contradicts some prior findings of ABI for students, but the majority of ABI research has taken place in the US – the US has a different culture of alcohol consumption in comparison to the UK, as Scottish students drink more frequently, consume more alcohol and engage in binge drinking more often than American students.

Combining self-affirmation, messages based on the theory of planned behaviour (TPB) and implementation intentions had significant effects on the quantity of alcohol consumed, reducing the frequency of binge drinking and harmful patterns of alcohol use over students' first 6 months at university (40, 41). The TBP can be used to inform the design of interventions to change health behaviour.

Female students stated that a facial-ageing, morphing intervention designed to show the effect of alcohol consumption on their skin, had made them think about changing their alcohol consumption behaviours in the future (42).

Collective periods of shared suffering formed a valued aspect of students' hangover experiences, strengthening group identity (43). The authors state that it is important to acknowledge positive as well as negative aspects of students' views on hangovers in public health guidance on young adults' alcohol consumption.

Future initiatives to reduce alcohol misuse in students need to focus on changing social normative beliefs and attitudes around alcohol consumption, and the family

and environmental factors that influence the choice of young adult's alcohol drinking behaviour (44).

Nightclubs target alcoholic drink promotions at students to create a shared experience - this demonstrates how prevention activities need to take into consideration the importance of shared experiences for the students (45).

A review of the effectiveness of college/university delivered interventions found that higher education based interventions were effective for reducing alcohol consumption, blood alcohol concentration, negative consequences related to alcohol consumption and binge drinking (20), although only four of the trials were conducted in the UK.

Some universities provided limited opportunities to socialise when alcohol was not a huge part of the event - this should be addressed by universities, ensuring that a larger number of non-alcohol events are hosted and promoted to help towards alleviating the documented challenges for non-drinkers (28). Targeting students before they commence their course, and providing credible alternative socialising options that do not involve alcohol may help to reduce the pressure students feel to drink in social situations (46).

A meta-analysis of 23 randomised controlled trials (RCTs) found that e-interventions (such as web-based personalised feedback or phone-based interventions) showed a small, significant effect at reducing mean alcoholic drinks per week in students – however, only 3 of the RCTs were set in the UK (47).

Summary

Most of the research evidence on drug misuse within the UK student population is from surveys conducted at English and Welsh universities. Many of the interventions for reducing drug misuse are suggestions or recommendations based on this survey evidence. It has been suggested, for example, that disciplining students over drug-taking may only serve to further marginalise certain groups of students. More research on why students take drugs might help in devising UK university-based prevention programmes.

Drinking alcohol is still a big part of university life. It is suggested that universities need to hold events that do not involve alcohol, or work harder to change student social norms and behaviour where alcohol is concerned.

Example search strategy -

Ovid Medline

1. (substance misuse or substance mis-use).tw,kw.
2. (substance abuse* or substance use*).tw,kw.
3. (alcohol* use* or alcohol abuse* or alcohol consumption).tw,kw.
4. prescription drug*.tw,kw.
5. (drug misuse or drug mis-use or drug abuse* or drug use*).tw,kw.
6. illegal drug*.tw,kw.
7. (binge drink* or excessive drink*).tw,kw.
8. (cannabis or cocaine or ecstasy or hash* or marijuana or weed).tw,kw.
9. (Modafinil or Ritalin or Adderall).tw,kw.
10. (benzodiazepines or Xanax or Alprazolam).tw,kw.
11. nootropics.tw,kw.
12. (amphetamine* or methamphetamine*).tw,kw.
13. (methylphenidate or Provigil).tw,kw.
14. (new psychoactive substance* or novel psychoactive substance*).tw,kw.
15. (mephedrone or spice or GHB or BZP).tw,kw.
16. legal high*.tw,kw.
17. MDMA.tw,kw.
18. nitrous oxide.tw,kw.
19. (crack or heroin or ketamine or LSD).tw,kw.
20. (Zimovane or Valium).tw,kw.
21. (wine or beer or spirit* or vodka or lager).tw,kw.
22. exp Alcohol Drinking/ or exp Drug Misuse/ or Marijuana Abuse/ or exp Cocaine/
23. N-Methyl-3,4-methylenedioxyamphetamine/
24. exp Alcoholic Beverages/
25. Cannabis/ or Nootropic Agents/ or Street Drugs/ or Nitrous Oxide/
26. 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25
27. (student* or universit*).tw,kw.
28. (higher education or college or campus* or further education).tw,kw.
29. (undergraduate* or graduate* or post-graduate*).tw,kw.
30. exp Students/
31. Universities/
32. 27 or 28 or 29 or 39 or 31
33. 26 and 32
34. limit 33 to yr="2017 - 2019

Inclusion/exclusion criteria

Inclusion criteria

- Substance misuse including illegal drugs, non-medical use of prescription drugs and alcohol
- UK University or further education students (18 years and over)
- Published 2017-2019

Exclusion criteria

- Non-UK
- Not English language

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