

sports, and sleep quality. The hospital anxiety depression (HAD) scale¹⁰ was used to measure subjective anxiety and depression. Demographic questions were also included.

The anonymous and voluntary questionnaire took about 20 minutes to complete. EW visited each participating university and administered the questionnaire to classes of second-year students (or third [penultimate] year in Scottish universities), usually at the beginning or end of lectures during the spring term. The response rate was nearly 100% (EW could explain the purpose of the investigation and give information when requested on the topics in the questionnaire).

Most of the results are presented as descriptive statistics. There were no major differences in the results from individual universities. Associations between variables were analysed by χ^2 tests.

Results

Alcohol drinking

11% of both men and women did not drink (table 2). Among drinkers, "sensible" levels (1–14 units per week for women, and 1–21 for men^{11,12} were exceeded by 61% of men and 48% of women. Hazardous drinking (36 or more units per week for women and 51 or more for men) were reported by 15% of drinkers (20% of the men, 10% of the women). "Binge drinking", defined as drinking over half the "sensible" number of units per week in one session,¹³ was reported by 31% of men and 24% of women. The most commonly reported reasons for drinking were: pleasure (89% of men, 92% of women), habit (31, 22%), to increase confidence (22, 33%), anxiety/stress (17, 21%), and social pleasure (16, 12%). These reasons were selected by the students from ten options including "other"; multiple reasons could be given.

There were ethnic differences in alcohol use. Only 3% of the 300 non-white students reported drinking hazardous levels, and 52% of these students were non-drinkers (6% of white students were non-drinkers).

Cannabis and other illicit drugs

Use of cannabis was most frequently reported (table 3). 60% of the men and 55% of the women reported having used cannabis once or twice, and 20% of the sample (23% of men and 16% of women) reported regular (weekly or more often) use. Again there was an ethnic difference: 80% of non-white students compared with 39% of white students reported never having used cannabis; only 7% of non-white students said they took cannabis regularly.

Use of any illicit drug was reported by 59%. The most commonly used drugs, after cannabis, were LSD (18%), amphetamine (19%), Ecstasy (13%), magic mushrooms (16%), and amyl/butyl nitrate (15%). 34% of students had taken two or more illegal drugs, including cannabis, with

Level of use (units)	Men (n=1610)	Women (n=1447)
Weekly use		
Mean	31.8	17.3
Median	26 (1–195)	14 (1–96)
0	10.9% (176)	10.6% (153)
1–14	22.5% (363)	46.5% (673)
15–21	12.3% (198)	16.9% (245)
22–28	12.4% (200)	10.9% (158)
29–35	10.3% (166)	5.7% (82)
36–50	15.9% (256)	7.3% (105)
>50	15.6% (251)	2.1% (31)

Alcohol units: 1 pint strong beer/lager=3 units; 1 pint ordinary beer/lager=2 units; 1 glass wine=1 unit; 1 measure of spirits=1 unit (1 UK pint=0.57 L, 1 UK measure of spirits = 25.0 mL in England, 35.0 mL in Scotland). 18 individuals of unstated sex excluded.

Table 2: Alcohol drinking

Drug	Once or twice	>once or twice	Regularly
Cannabis	12.9% (398)	24.4% (751)	19.8% (610)
LSD	8.0% (246)	8.4% (258)	1.2% (38)
Amphetamines	7.1% (219)	8.0% (247)	3.5% (107)
Cocaine/crack	3.7% (115)	1.3% (41)	0.4% (11)
Ecstasy	5.0% (155)	5.2% (160)	2.7% (83)
Magic mushrooms	10.1% (312)	5.2% (161)	0.4% (11)
Amyl/butyl nitrate	8.6% (263)	5.5% (170)	0.8% (23)
Barbiturates	1.9% (57)	0.5% (16)	0.1% (4)
Heroin/morphine/opium	2.6% (81)	0.5% (16)	0.1% (3)
Steroids	0.6% (18)	0.3% (10)	0.2% (6)
Other drugs	1.1% (34)	0.4% (12)	0.3% (9)

Regularly—at least once a week. LSD=lysergic acid diethylamide, Ecstasy=methylenedioxymethylamphetamine, magic mushrooms=*Psilocybe semilanceata*.

Table 3: Use of cannabis and other illicit drugs

19% having used four or more. Reported use of all illicit drugs was 4% greater in men than in women. Intravenous use was reported by 0.3% of the sample, but none used this route regularly.

First experience with any illicit drug, including cannabis, occurred before entering university in 46% of the students; 13% after entrance. The most common reasons for taking illicit drugs, including cannabis, were: pleasure (75% of men, 72% of women), social pressures (19, 18%), anxiety/stress (13, 14%), and other, usually curiosity (21% of both men and women). There were significant positive associations between cannabis use and tobacco smoking and alcohol drinking (table 4) and between cannabis use and use of other illicit drugs, including LSD, amphetamines, and Ecstasy (table 5).

Other lifestyle variables

The frequency of current smoking (more than one cigarette or cigar per week) was 26% in men and 25% in women. Among cigarette smokers, mean daily consumption was 10.6 and 9.8 cigarettes, respectively. The mean age for starting smoking was 16.5 years in both sexes (range 7–24 years). 51% of current smokers were also regular cannabis users (table 4).

Caffeine use was reported to be low (<100 mg per day) in 37% of the students, medium (100–400) in 37%, and high (>400 mg) in 26%.

Use of prescribed tranquillisers, sleeping pills, or antidepressants (prescribed for more than 2 days since starting university) was reported by 3% of men and 7% of women. Proprietary medicines were taken once a month or more by 40% of men and 71% of women. Vitamins and mineral supplements were used daily by 20% of men and 28% of women.

Smoking status	Use of cannabis			
	Never	Once or twice	>once or twice	Regularly
Men				
Never	409 (13.8)*	33 (22.4)	33 (30.9)	9 (21.4)
Tried a few	175 (23.2)	117 (25.8)	200 (37.6)	81 (34.7)
Ex-smoker	20 (29.2)	12 (22.2)	53 (37.5)	41 (39.1)
Current smoker	41 (21.6)	27 (38.7)	109 (39.8)	240 (40.0)
Women				
Never	417 (8.4)	22 (12.8)	26 (17.3)	8 (20.7)
Tried a few	177 (13.4)	121 (15.6)	146 (17.9)	37 (17.7)
Ex-smoker	21 (17.8)	24 (15.4)	45 (17.9)	34 (18.0)
Current smoker	39 (18.3)	35 (19.0)	136 (21.7)	158 (24.9)

Relation between cannabis and tobacco: χ^2 for men and women, $p < 0.0001$. Table shows number in each cell and, in parentheses, mean weekly units of alcohol drunk. Regularly—at least once a week. 18 individuals of unstated sex excluded and 11 sets of data on smoking missing.

Table 4: Association between cannabis, tobacco, and alcohol use

Use of:	Use of cannabis			
	Never	Once or twice	>once or twice	Regularly
LSD				
Never	1301	377	597	258
Once or twice	9	14	101	122
>once or twice	6	6	53	193
Regularly	0	1	0	37
Amphetamines				
Never	1304	378	574	246
Once or twice	6	12	94	107
>once or twice	4	7	67	169
Regularly	2	1	16	88
Ecstasy				
Never	1304	387	640	346
Once or twice	9	2	65	79
>once or twice	1	6	38	114
Regularly	1	3	8	71

Regularly=at least once a week. Relation between cannabis versus LSD, amphetamines, or ecstasy: χ^2 , $p < 0.0001$.

Table 5: Association between cannabis use, LSD, and Ecstasy

Exercise and sleeping

Daily, twice weekly, or weekly physical exercise was reported by 73% of men and 62% of women. The remainder took exercise only monthly or "hardly ever".

68% of students reported that they slept 7–8 hours per night; 7% spent 9 or more hours sleeping, and 24% reported 5–6 hours of sleep. 24% complained of difficulty in going to sleep, 21% complained that they woke early and were unable to go back to sleep, and 45% said that they were unable to wake up properly. 31% had no sleep problems.

Anxiety/depression

The greatest proportion of high anxiety scores occurred among the 77 mature women students (table 6). 32 (53%) of those aged 26–40 and 9 (53%) of those aged over 40 had scores of 11 and above. The mean scores for depression were also highest in the mature women students: 6.5 in women aged 26–40 and 5.7 in women aged over 40. There were no significant associations between anxiety scores and smoking, or use of alcohol, cannabis, or other illicit drugs.

Discussion

Our main finding was that many university students, across faculties and throughout the UK, are drinking alcohol above sensible limits,^{11,12} taking cannabis, and experimenting with other illicit drugs. The same trend has been observed among young people generally in the UK.^{2–6} Our sample of university students also had high levels of anxiety which did not relate to drinking or drug-taking, which was also reported in a more limited survey of Newcastle upon Tyne medical students.⁸

	Men (n=1610)	Women (n=1447)
Anxiety		
Mean (SD), range	7.6 (4), 0–21	9.2 (3.9), 0–21
<8	54.0% (867)*	36.5% (526)
8–10	22.8% (366)	27.9% (404)
11–14	17.3% (278)	25.4% (366)
>14	6% (96)	10.2% (147)
Depression		
Mean (SD), range	3.9 (3.0), 0–20	4.1 (3.0), 0–20
>8	12.1% (195)	14.8% (214)

*Number. 18 individuals of unstated sex excluded, 4 sets of data missing in women and 3 missing in men.

Table 6: HAD scores

As with all questionnaire studies, reliability and accuracy must be assessed. Our questionnaire was anonymous and, to obtain high participation, it was administered during a scheduled lecture by one of us who explained the purpose of the investigation and stressed its anonymity and voluntary nature. Almost all the students present at each session completed the questionnaire. The number of non-attenders is not known, but students who do not attend lectures are probably high-level users of alcohol or drugs. If so our results may have underestimated the situation. Discussion with students after the questionnaire sessions indicated that their reports were generally accurate. We restricted our survey to second-year university students because these represented a homogeneous population who had presumably adjusted to university life and were free of the stresses of final-year examinations. We think it unlikely that students radically change lifestyles in subsequent university years.

The new limits of sensible drinking proposed by the UK Department of Health¹⁴ have been criticised in that they apply mainly to men over 40 and postmenopausal women and retention of the previous limits has been advocated.^{12,15–17} Nevertheless, of those who drank, 42% of men and 26% of women in our sample exceeded the new limits, and the previous limits were exceeded by 61% and 48%, respectively. Binge drinking¹³ also featured in undergraduate life, being reported by 31% of men and 24% of women. Similar findings have been reported in university students and the potential health risks and the connection with antisocial behaviour have been stressed.^{8,18–20} Binge drinking may carry health risks even in those whose weekly consumption is within sensible limits.²¹ We do not know whether excessive drinking at university paves the way for future problem drinking, but heavy drinkers in college may be more likely than light drinkers to have alcohol problems in later life.²² The most prominent reason for drinking was pleasure, which was more important than social pressure or stress/anxiety.

Our survey also confirmed previous studies^{7,8,23,24} showing that the use of cannabis is common and has increased^{8,24} among UK university students. 60% of the men and 55% of the women we surveyed reported cannabis use, and 20% of the students reported regular use (weekly or more often). Health and social hazards associated with cannabis use, especially with the stronger preparations used today, are now recognised.^{25–28} We found a significant association between the use of cannabis and other illicit drugs, and LSD, amphetamines, Ecstasy, and amyl/buytl nitrate had each been used by 13–18% of the students and 34% had tried several drugs. As in other reports,^{3,4} many of the students (46%) had started using cannabis or other drugs before university; a further 13% had their first experience at university. As with alcohol, cannabis and other drugs were mainly taken for pleasure (over 70% and, less commonly, 20%, from curiosity).

University life is undoubtedly stressful for some students and high levels of anxiety and stress have been reported in students.^{8,29} We were nevertheless surprised to find anxiety scores on the HAD scale above 10 in 23% of men and 35% of women. Such a score is usually taken to denote "probable" clinical anxiety in psychiatric outpatients.¹⁰ We do not know why we found high levels of anxiety but the highest levels were found in mature women students (aged 26 to over 40), many of whom had domestic responsibilities. Anxiety scores were not associated with drinking, drug taking, or financial debt.

Drugs and alcohol were taken mainly for pleasure and were perceived as a normal part of life for many students, rather than being a manifestation of anxiety.

Our findings suggest a need for better education about alcohol, drugs, and general health in universities. This requirement has already been urged for medical students,³⁰ but should be extended to all faculties, and could be done through student-health services. Although it has yet to be proved that education on health risks has an effect in changing student lifestyles,^{31,32} universities may be lacking in their responsibilities towards students if they do not make such knowledge available. In addition, health-care facilities within universities should be better promoted. Longitudinal studies on the relevance of present student lifestyles to future health are needed. Cohorts have been followed up in various countries³³⁻³⁶ but geographic, social, cultural, and educational differences, as well as differences in the populations under study, limit their relevance to UK university students. We wait to see how far today's pleasure-seeking undergraduates will become in their maturity healthy, sober, and law-abiding citizens.

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