EPFL

EPFL Student Risk Behaviours Survey

2022

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Executive Summary

The EPFL Risk Behaviours Survey 2022 was undertaken to better understand the risk behaviours of EPFL students with a view to designing appropriate health and well-being supports for them. The project was overseen by a steering committee drawn from the range of relevant services as well as members of the school management and student representatives. The data collection was carried out by ESOPE- Unisanté, and data was anonymised before being returned to EPFL for analysis. The survey was open from 4 April 2022 to 9 May 2022. In total 12,636 students at EPFL were invited to participate. Of these 2,007 people completed usable responses (15.9% response rate).

The survey is broadly representative of the EPFL student population in terms of level of study, and faculty. Women are somewhat over-represented in the survey data as compared to the wider EPFL student population (37.5% of survey respondents, 30.2% of the student population).

Well-being: Well-being was measured using a World Health Organisation measure, WHO-5, which gives a score on a scale from 0 (lowest possible well-being) to 100 (highest well-being). The average score in the survey sample was 54.58; for comparison purposes, we can note that, in EU countries, the average score for the same age group is 70. A score of ≤ 50 has been used to assign a 'screening' diagnosis for depression; in our sample 39.2% of the respondents have a score ≤ 50. Women (50.9), those with a gender other than male or female (50.7), those who identify as LGBQ+ (50.7), and PhD students (51.3) all have scores notably lower than the average for the EPFL sample.

Alcohol Use: Overall 14.1% of respondents do not drink alcohol at all. About half indicate that they drink alcohol less often than once per week. Overall alcohol consumption appears to be lower in the EPFL sample than in the Swiss population of the same age: in the EPFL sample 2.8% of women described behaviour which would be labelled as "chronic risk drinking", as compared to 5.7% of 15-24 year old women in Switzerland more generally. For EPFL men the figure is 0.8% as compared to 4.9% of 15-24 year old men in the wider Swiss population.

Participants were asked if they had experienced problems after drinking alcohol in the last 12 months. About one-eighth (12.9%) indicated that they had experienced problems, rising to 19.4% for those who identify at LGBQ+. The most frequently cited problem is impact on academic performance or class attendance (6.2% of the sample) and damage to possessions or clothes (4.0% of respondents). It is worth nothing that, while other problems were reported less frequently, if the respondents to the survey are representative of the wider student population, then this could reflect quite large numbers of individuals affected by these problems. For example if the survey respondents are representative of the wider student population, then the 1.1% of people who identified that they had sex to which they did not consent after drinking alcohol within the last 12 months would account for about 140 people.

Participants were asked if they knew where to seek medical assistance and other support if they or someone they knew experiences drinking-related problems. Less than half (42.4%) indicated that they did know where to seek such advice.

Drug use: Participants were asked about their use of a range of illicit drugs. Over half had used cannabis with under one-third (29.9%) having used it 4 or more times. Poppers had been tried by 16.5% of respondents while 12.8% had tried inhalable solvents such as nitrous oxide (laughing gas). Overall the reported rate of use of such drugs seems broadly in line with studies of the wider Swiss population.

Similarly for "smart" drugs, (defined as being drugs usually prescribed to treat certain conditions but which some people use them for other reasons, such as to increase concentration, alertness or

attention span etc.), the rate of use in EPFL, 3.3%, appears broadly similar to the wider Swiss data. The drug Methylphenidate (e.g., Ritalin®, Adderall®, Concerta®, Focalin®, Medikinet®, Strattera®) had been used by 1.7% of respondents in the past 12 months.

Participants were also asked about the use of medicinal drugs without a prescription. Overall 10.1% indicated that they were taking such drugs in this fashion (which again seems consistent with what is found in the wider Swiss population) . There are some notable patterns in the use of such drugs: the use rate rises to 14.9% for those who identify as LGBQ+ and to 21.3% for those who identify with a gender other than man or woman. The medicinal drugs most commonly used in this way are tranquilizers, such as benzodiazepines (used more than once in the last year by 2.5% of respondents) and sleeping pills (hypnotics) (used more than once in the last year by 1.6%).

The use of these medicinal drugs without a prescription is associated with lower levels of well-being as measured using the WHO-5. For those who are not using any such prescription drugs, their average score on the WHO-5 is 55.2. For those who are using one such prescription drug without prescription, their average score is 49.7.

There were not many problems reported after the use of drugs, medicines and smart drugs: only 1.4% of respondents, for example, reported an impact on their academic performance, or missing class or work, for example. However the rate of problems cited increased with the frequency of drug use.

Sexual Risk Behaviour: Roughly one-third, 32.0%, of respondents indicated that they had sex with one or more steady or casual partners in the last 12 months without knowing their own STI status. A slightly higher percentage, 36.1%, indicated that they had sex with someone in the last 12 months without knowing their partner's STI status. In both cases, about half of respondents who the question applied to (48.8% when their own status was unknown, 50% when a partner's STI status was unknown) indicated that they always used protection.

Participants were asked if they had ever tested for STIs; 37.4% indicated that they had been tested for HIV and 34% indicated that they had been tested for Hepatitis B, chlamydia, HPV, gonorrhoea, genital herpes or any other STI. For STIs other than HIV, men were less likely to have been tested (29.95%) than women (39.3%) or those with a gender other than male or female (44.2%).

A small but notable proportion of respondents (7.5%) indicated that they did not know what their first course of action would be if they thought they had contacted an STI.

1. Introduction

The EPFL Risk Behaviours Survey 2022 was undertaken to better understand the risk behaviours of EPFL students with a view to designing appropriate health and well-being supports for them. The project was overseen by a steering committee drawn from the range of relevant services as well as members of the school management and student representatives. It was managed by Albertine Kolendowska from the Associate-Vice Presidency for Students Affairs and Outreach. To ensure the anonymity of EPFL students responding to sensitive questions, the data collection was carried out by the survey research unit of the Centre universitaire de médecine générale de santé public, Lausanne (ESOPE- Unisanté), and data was anonymised before being returned to EPFL for analysis.

The survey was launched on 4 April 2022 with an initial closing date of 4 May 2022 and students were invited to participate in a message sent by Unisanté's ESOPE. EPFL encouraged students to participate in the survey through multiple communication channels. There were also two electronic reminders which contained a link to access the survey on 18 April and 4 May 2022. Doctoral students were also contacted by Polydoc (2 May 2022) and students were contacted by Agepoly (5 May 2022). The closing date was extended until 9 May to improve the participation rate.

An invitation to participate was sent to 12,636 students at EPFL. Of these 2,284 people completed the questionnaire. However not all of these agreed to have their data used in the survey. Thus the overall participation was 2,007 people (15.9% response rate).

Demographic Information

There were 2,007 responses to the questionnaire. Of these, 1,620 were Bachelor and Master students, and, of these, 1,579 provided information about their section. The distribution of these responses is provided in Chart 1.1, along with the distribution of students within the EPFL population. As Chart 1.1 shows, the survey responses are broadly speaking representative of the wider EPFL population. While ENAC (Architecture, Civil and Environmental Engineering) and IC (Computer and Communication Sciences) students are marginally underrepresented, and students from SB (Basic Sciences) were marginally overrepresented, the differences are small.

**Chart 1.1: Faculty of respondents and of the EPFL student population**
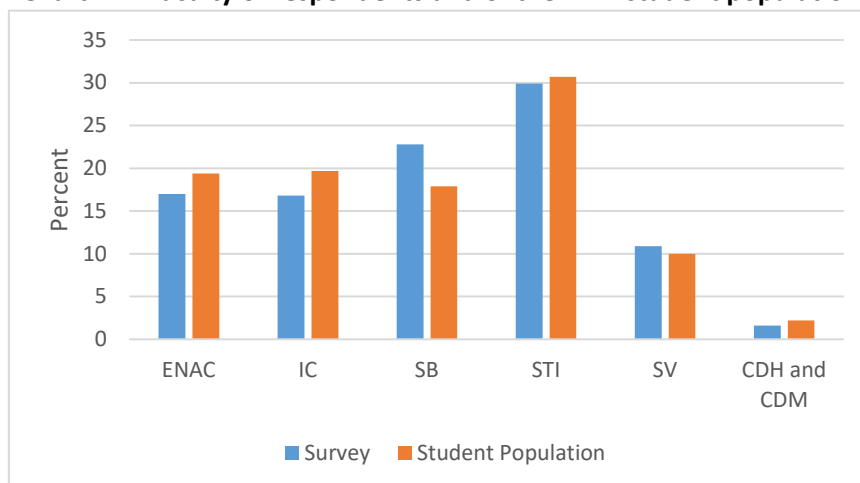
Note: Students provided information about their section and this was recoded into faculty groupings in order to ensure respondents could not be identified in the dataset.

The vast majority of respondents (96.3% of those who responded to the question) identified that they are primarily based on the Lausanne campus.

Chart 1.2 shows the distribution of respondents and of the wider EPFL student population in terms of their level of study. Again, this shows that the survey respondents are broadly representative of the wider student population. Differences between the distribution of student study levels in the survey respondents and the wider population are marginal.

Chart 1.2: Study level of respondents and of the EPFL student population
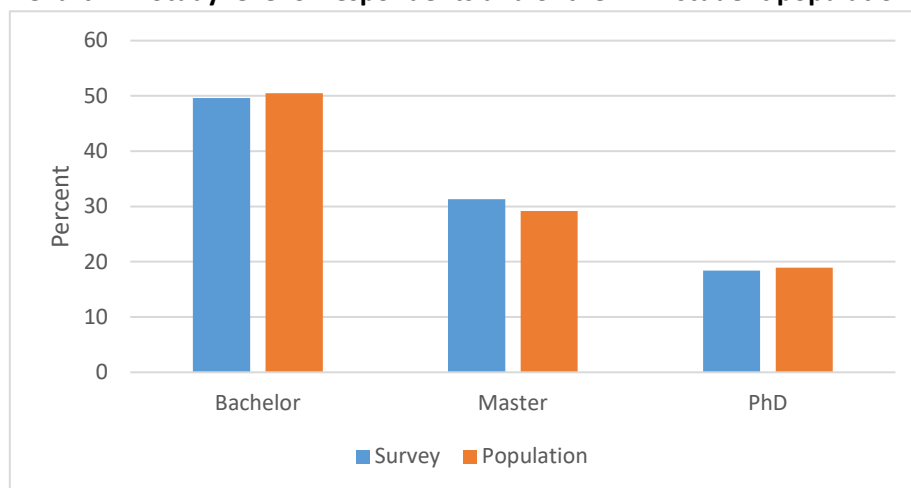
Note: There is some regrouping in the survey dataset, with CMS students regrouped into Bachelor students and Exchange Students regrouped into the Masters category. This was done to ensure that no group was so small as to allow respondents to be identifiable in the dataset.

Of the 2,007 responses, 1,997 provided information regarding their gender. Of these, 37.5% identified as a woman, 58.2% identified as a man, and 4.4% identified as a gender type other than man or woman[1]. In the EPFL student population as whole, students identified as male constitute 69.8% of the population; students identified as female account for 30.2% of the population (genders other than 'male' and 'female' are not reported in the EPFL official statistics). Those identifying as women are, therefore somewhat overrepresented in the sample as compared to the wider population of students.

Participants were also asked about their sexual orientation. In total 1,761 respondents chose to answer this question. Of these 86.7% identified as heterosexual, and the remainder 13.3% identified as either asexual, bisexual, homosexual, pansexual, queer, questioning, and other (hereafter referred to using the acronym 'LGBQ+')[2].

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[1] The question asked "How do you self-identify in terms of gender?". Seven possible answers were provided: Woman, Man, Non-binary, Transgender, Genderqueer, Questioning and Other". Responses other than Man or Woman were recoded into a single category in order to ensure respondents could not be identified in the dataset.

2 The question asked "How do you self-identify in terms of sexual orientation ?" Eight possible answers were provided: Asexual, Bisexual, Heterosexual, Homosexual, Pansexual, Queer Questioning, and Other ". Responses other than Heterosexual were recoded into a single category in order to ensure respondents could not be identified in the dataset, and the acronym LGBQ+ is used to describe this group. The letters in this acronym are fewer than in the more familiar acronyms LGBTQ+ or LGBTQI+. Since the T and I refer to gender identity rather than sexual identity, these terms are included in a different question. The use of the term LGBQ+ is not intended to be exclusionary of those with transgender or other gender identities – merely to reflect that this question refers to sexual and not gender identity.

Respondents were also asked their age. Almost all respondents answered this question (2004 responses): of these 43.8% identified as aged 18 to 21, 48.4% identified as aged 22 to 27 years old, and 7.9% identified as being 28 or older.

Statistical Inference

The survey was a population survey in which the whole population was invited to respond and not a sample survey which targeted only a random sample of the population. Since the respondents are not a random sample of the population, the use of inferential statistics is, strictly speaking, not justified with such data. However, in such situations inferential statistical analyses are often presented as an aid to the reader in understanding the strength and nature of relationships found.

Response rate does not determine the suitability of a data set for the use of inferential statistics. Rather the key feature is the overall sample size. In this case, the numbers of responses in the survey are certainly sufficient to make reasonably satisfactory statistical inferences.

In social surveys, it is normal to assume that those who respond are drawn at random from the wider population unless there is evidence to suggest that there is some systematic bias in the sample. As has been shown above, the sample is representative of the wider body of students in terms of the faculty in which they are registered and their level of study. Men are underrepresented in the survey responses.

This report follows the practice of earlier EPFL doctoral, campus, and respect survey reports in presenting some inferential statistics as an aid to the reader in understanding the strength and nature of relationships found. Readers are encouraged to treat these with appropriate caution in light of the representativeness and biases evident within the sample.

2. Well being

Participants were asked about their well-being using the WHO-5 well-being index. First the responses were tested to see if the factor structure of the index was sustained in this sample. For a single factor[3], Cronbach's α = 0.884. Cronbach's α of greater than 0.7 is generally taken to indicate an acceptable level of reliability for such psychometric measures. In this case the analysis suggests a valid and reliable scale providing an overall measure of well-being for this sample.

An overall score for well-being was calculated, and re-scaled on a zero to 100 scale with zero indicating lowest measured level of well-being and 100 indicating the highest. Well-being was more or less normally distributed in the sample (Chart 2.1), with an average (arithmetic mean) well-being score of 54.58. According to Topp, Østergaard, Søndergaard, & Bech[4] a score of ≤ 50 has been used to assign a 'screening' diagnosis for depression. In our sample 39.2% of the respondents have a score of under 50. They also note that a score of ≤ 28 has been used to more restrictively indicate the level of well-being of respondents with a major depression. In our sample 13.8% of respondents had a score of ≤ 28.

Chart 2.1 Well-being in the respondents
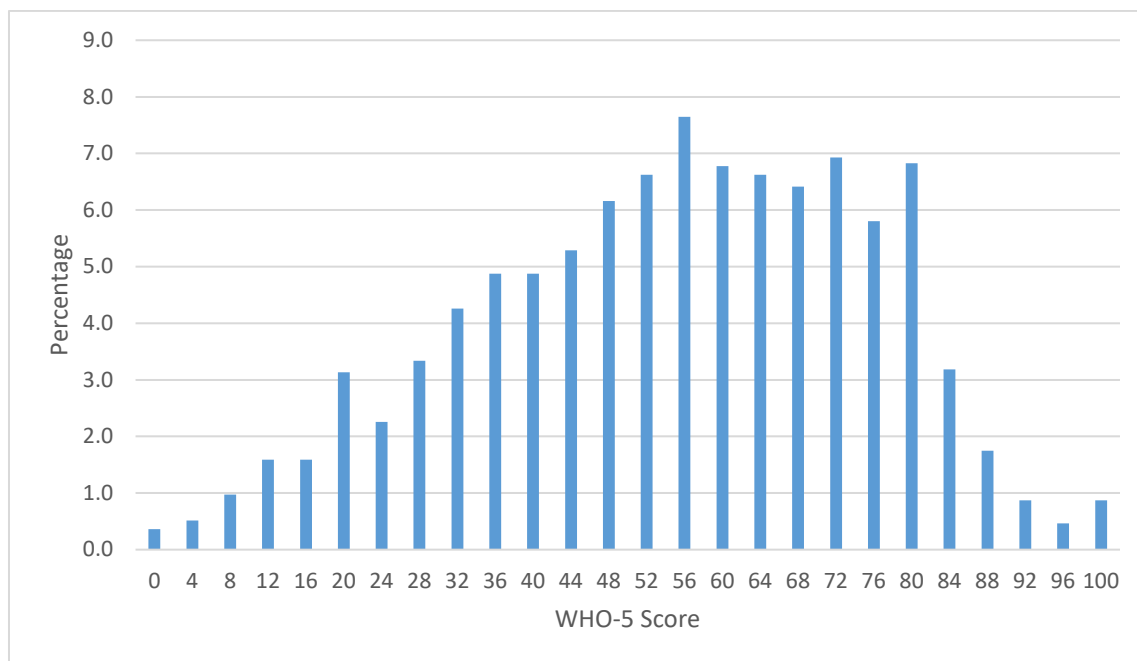
There were some notable differences in well-being scores:

- Women and those with a gender other than man or woman report lower levels of well-being than do men students; the difference in each case is three-tenths of a standard deviation (weak to moderate in size) and the differences are statistically significant.

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[3] Using Principal Component analysis, the first factor had an eigenvalue of 3.443 and explained over 68% of the variance in the data. The second factor had an eigenvalue of .59 and explained only a further 12%. Using Kaiser's criterion, this suggested that a single factor structure was a good fit for the data, which is what was expected based on the prior factor structure.

[4] Topp C.W., Østergaard S.D., Søndergaard S., & Bech P. (2015). The WHO-5 Well-Being Index: A Systematic Review of the Literature. *Psychotherapy and Psychosomatics*, 84, 167-176.

- LGBQ+ students have a lower level of well-being than heterosexual students. Again the differences are not large (expressed as a proportion of standard deviation) but are statistically significant.
- PhD students have a statistically significantly lower well-being score than Master and Exchange students.

These differences are outlined in Table 2.1 below.

Table 2.1: WHO-5 Well-being score for different social groups among the respondents

	Mean average	Differences between social groups
Gender identity		
Women	50.9	Man/Woman: d=0.307; p<0.001
Other gender	50.7	Man/Other gender: d=0.298; p=0.014
Men	57.2	
Sexual identity		
LGBQ+	50.7	LGBQ+/Heterosexual: d=.260; p<0.001
Heterosexual	56.1	
Level of study		
Bachelor and CMS	54.5	PhD/Masters: d=.251; p<0.001
Exchange and Masters	56.4	
PhD	51.3	
Faculty of study		
ENAC	55.3	Differences not statistically significant
IC	52.8	
SB	55.1	
STI	56.5	
SV	57.3	
CDH and CDM	53.9	

For comparison purposes, we can look at the average scores for a range of countries for the 18-34 year old cohort from the 2016 European Quality of Life survey[5].

- The EU-wide mean average score for people aged 18-24 is 70, ranging from a high of 82 (Bulgaria), to a low of 56 (Sweden). Germany has a mean average of 67 and France has a mean average of 73.
- The EU-wide average for those aged 25-34 is a little lower, at 66. The mean averages for this age cohort are 65 for Germany, and 68 for France.

The EPFL sample has, on average, a lower well-being score on this measure than all these comparison countries.

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[5] Data from https://www.eurofound.europa.eu/data/european-quality-of-life-survey
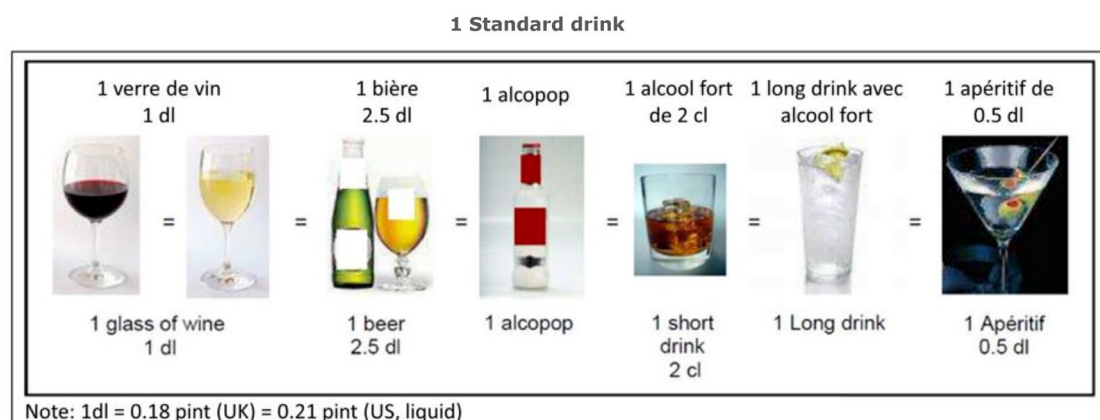
3. Alcohol consumption

Overall alcohol consumption

Participants were asked how often do they usually drink alcohol. Responses are in Table 3.1. About one-sixth (14.1%) of respondents indicate that they never drink alcohol. Almost half (48.8%) report that they drink alcohol less often than once per week.

Table 3.1: Frequency of drinking alcohol among respondents

	Number	Percentage
Never	282	14.1
Once a month or less	313	15.6
Two or three times a month	384	19.1
1 day per week	337	16.8
2 days per week	345	17.2
3 days per week	207	10.3
4 or more days per week	138	6.9
Total	2006	100

Participants were also asked how many standard drinks they have on average on days when they drink alcohol (a graphic was provided to respondents to indicate to them what constitutes a standard drink – see below). The question was not applicable to 14.1% of respondents who indicated that they never drank alcohol. A further two-thirds (61%) of respondents indicated that they would have on average one to three standard drinks on days when they drink alcohol. Taken together, this means three-quarters of all respondents indicated that they had fewer than four standard drinks on average on days when they drink alcohol. At the other end of the spectrum, 7.6% of students indicate that they have on average six standard drinks or more on days when they drink alcohol.

1 Standard drink

1 verre de vin 1 dl	1 bière 2.5 dl	1 alcopop	1 alcool fort de 2 cl	1 long drink avec alcool fort	1 apéritif de 0.5 dl
1 glass of wine 1 dl	1 beer 2.5 dl	1 alcopop	1 short drink 2 cl	1 Long drink	1 Apéritif 0.5 dl

Note: 1dl = 0.18 pint (UK) = 0.21 pint (US, liquid)

In case you had 5 dl beer or a double schnapps, then it makes 2 standard drinks.

The answers to the two questions on frequency of drinking and average amount drank per session allows us to compute an average alcohol consumption per week (frequency of drinking alcohol multiplied by average number of standard drinks per day on which alcohol is taken). The data is represented in Chart 3.1. It shows that the majority of the respondents consume 0 to 2 standard units of alcohol on average per week. Overall the pattern is quite similar across all genders. Because the distribution of alcohol consumption is far from normal, the median is a more representative

value for central tendency in this case than the average [i.e. the arithmetic mean]: the median consumption of alcohol units per week for men and women is, in both cases, 2 units and for other genders is 2.25 units. At the same time, there are fewer women who have high levels of alcohol consumption as compared to men and other genders: The 75th percentile rank for women is 4 (i.e. 75% of women drink 4 or fewer standard units on average per week), while for men the 75% percentile figure is 6 standard units, and for other genders it is 8.

A similar pattern appears looking at different levels of study: the median figure for Bachelor, Master and PhD students is 2 standard units per week. However, the 75th percentile figure is 5 standard units for Bachelor and CMS students, 6 standard units for Master and exchange students and 4 for PhD students. In other words, overall alcohol consumption is very similar across study levels but there are fewer PhD students with high levels of consumption than is the case in Bachelor and Master groups.

There are few notable differences in alcohol consumption patterns between students in terms of their faculty of study, or in terms of their sexual identity (heterosexual or LGBQ+).

Well-being is also not a useful predictor of alcohol consumption[6].

**Chart 3.1: Average Alcohol consumption per week**

Note: '1' represents greater than '0' and less than or equal to '1', '2' represents greater than '1' and less than or equal to '2' and so on. Since values are calculated by multiplication, values at most prime numbers equal zero. This gives the appearance of peaks at adjacent values such as 6, 12 and 18.

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[6] The correlation is effectively zero: r=0.053

Reasons for drinking alcohol

Participants were also asked for their reasons for drinking alcohol. The question was phrased as follows: "Think back to all the times you drank alcohol (beer, wine, spirits, etc.). From the list below, please select the most common reason(s) why you decided to drink (choose up to 3)". Their responses are presented in Chart 3.2, with percentages calculated only for those who indicated that they do sometimes drink alcohol (i.e. excluding those for whom the question does not apply).

Chart 3.2: Reasons why those who drink alcohol do so (up to 3 could be chosen)
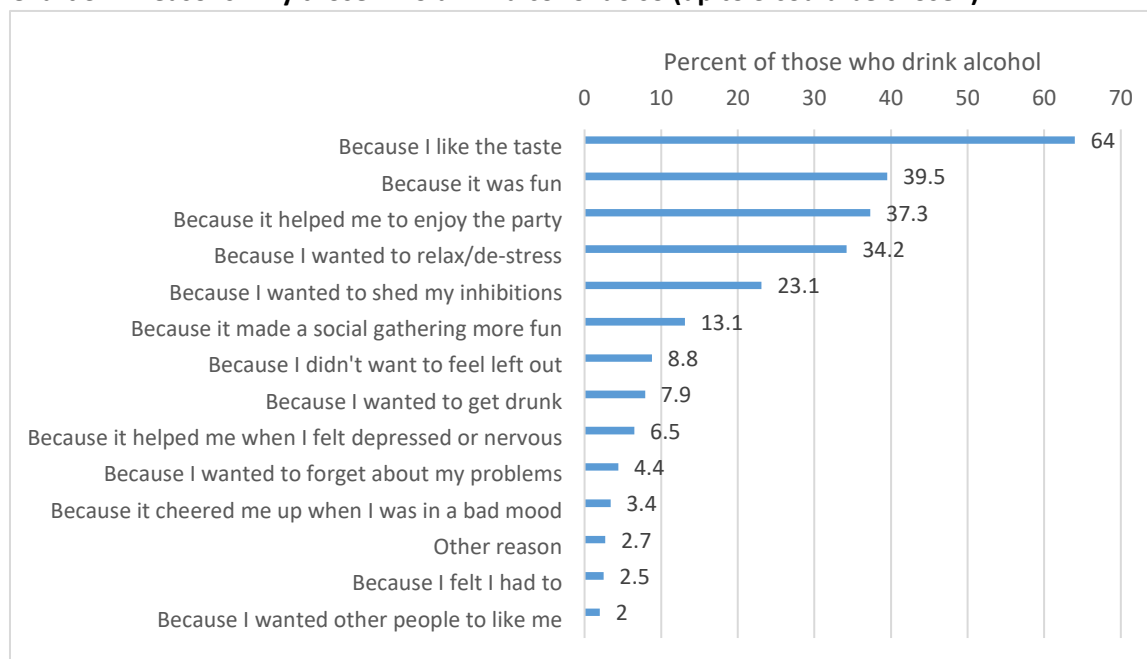
There were some differences across social groups in their reasons for drinking alcohol. The proportion of LGBQ+ people indicating that they drink because it helped when they were depressed or nervous is 13.2%, as compared to 4.9% for heterosexual respondents ($\chi^2 = 21.538$; $df = 1$; $p < 0.001$). Men (40.6%) are more likely than women (32.8%) and those with another gender (32.0%) to say they drink because it helps them to enjoy a party ($\chi^2 = 10.991$; $df = 2$; $p = 0.004$), while women (10.9%) are more likely to say they drink because they didn't want to feel left out, when compared to men (7.8%) or those who identify with another gender (5.3%) ($\chi^2 = 6.091$; $df = 2$; $p = 0.048$).

There were notable differences in the reasons identified for Bachelor, Master and PhD students to drink alcohol. These differences are presented in Chart 3.3. Some of these differences ("Because it helped me to enjoy the party" vs "Because it made social events more fun" may simply reflect the differences in the way in which social events are named at Bachelor/Master and at PhD level [i.e. 'party' vs 'social event']). Notable other differences are that Bachelor and CMS students and Master and Exchange students are more likely to say that they drink because it helps them shed their inhibitions (25.5% for both groups as compared to 12.4% for PhD students), while PhD students are more likely to say they drink to relax or de-stress (41.2%) as compared to Master and Exchange students (34.2%) or Bachelor and CMS students (31.3%).

Chart 3.3: Reasons why those who drink alcohol do so (up to 3 could be chosen), broken down by level of study
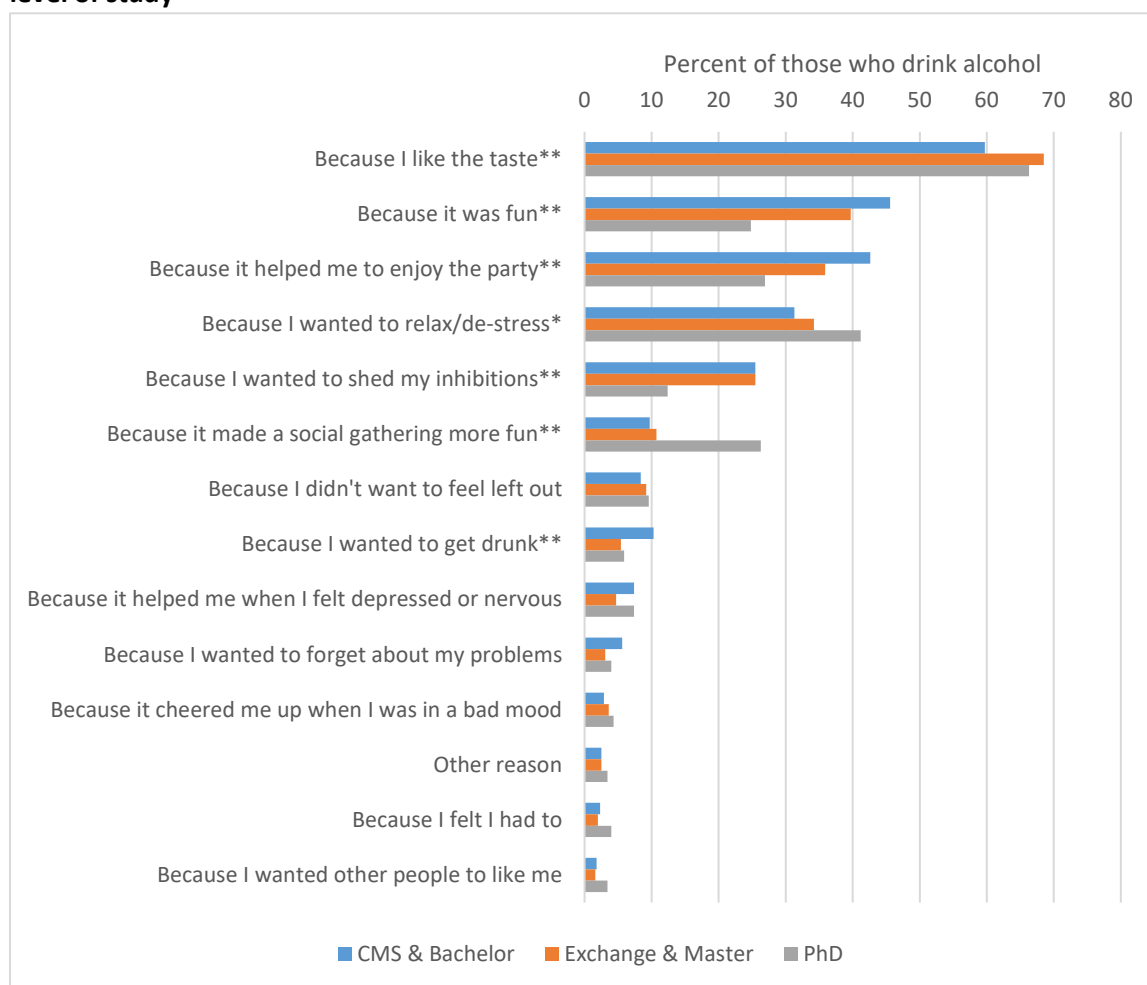
Note: * indicates difference statistically significant at the p=0.05 level and ** indicates difference statistically significant at the p=0.01 level (using χ^2 test of independence).

Alcohol related problems

While the overall distribution of alcohol consumption is broadly similar for all gender groups, this actually translates into differences in 'chronic risk drinking', due to the differences in recommended alcohol intake in Switzerland. The Office fédéral de la santé publique (OFSP) defined chronic risk drinker as 4 or more standard drinks per day for men and 2 standard drinks per day on average for women[7]. In the sample 2.8% of women drink more than 2 standard units per day on average, as compared to 0.8% of men who drink more than 4 units per day, on average. The figures for the EPFL sample are lower than for the comparable age range in the wider population (5.7% of 15-24 year old women and 4.9% of 15-24 year old men in the wider Swiss population are identified as having chronic risk drinking, using this measure[8]). For those with other genders, 3.5% drink more than 2 standard units per day, and 0.2 % drink more than 4 standard units per day.

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[7] Since the recommendations are based on biological sex, there are no recommended limits for other genders.
[8] https://faits-chiffres.addictionsuisse.ch/fr/alcool/consommation/consommation-risque.html and
https://www.bag.admin.ch/bag/fr/home/zahlen-und-statistiken/zahlen-fakten-zu-sucht/zahlen-fakten-zu-alkohol.html

Students were also asked how often they would have six or more standard drinks on a single occasion. For women, 22.3% indicate that they drink more than 6 standard drinks at least once every month. For men, the comparable figure is 38.8% and for other genders it is 37.3%. This level of alcohol consumption would exceed that which is categorised as constituting occasional risky drinking ("consommation ponctuelle à risqué"), defined by the OFSP as 4 or more standard drinks for a woman, or 5 or more standard drinks for a man over a few hours, at least once per month.

Table 3.2: How often respondents drink more than 6 standard drinks on a single occasion

	Women %	Men %	Other genders %	Total sample %
Do not drink alcohol ever	14.0	14.1	13.8	14.1
Do drink alcohol, but never more than 6 on a single occasion	23.3	7.2	10.2	13.3
less than once a month	40.3	40.0	38.7	40.0
every month	16.6	25.1	22.7	21.8
every week	5.4	13.1	13.3	10.2
every or nearly every day	0.3	0.6	1.3	0.5
Total	100	100	100	100

Respondents were asked if, in the last 12 months, they had experienced any problems after drinking alcohol. About one-eighth (12.9%) indicated that they had experienced problems. Having experienced problems is associated with the level of alcohol consumed: the median number of standard drinks per week for those who did not report problems in the last 12 months was 2, while for those who did report problems it is 3.25 (Kruskal-Wallis Test Statistic=806.197, df=2; p<0.001). In other words, and unsurprisingly, people who generally drink more are more likely to have experienced problems.

The problems they experienced are identified in Chart 3.4. The most frequently experienced problem is "it affected my academic performance or caused me to miss work or class" with 6.2% of respondents identifying that they had experienced this problem. Damage to possessions or clothes was experienced by 4.0% of respondents identifying this problem, while 3.2% reported having an accident or getting injured and 2.4% reported losing something such as money. It is worth nothing that, while other problems were reported less frequently, if the respondents to the survey are representative of the wider student population, then this could reflect quite large numbers of individuals affected by these problems. For example if the survey respondents are representative of the wider student population, then the 1.1% of people who identified that they had sex to which they did not consent after drinking alcohol within the last 12 months would account for about 140 people.

There are some differences in how different categories of respondents described their experience of problems after drinking alcohol. Those who identify as LGBQ+ are more likely to report experiencing problems (19.4%) as compared to those who self-identify as heterosexual (11.0%), ($\chi^2 =$ 13.448; $df = 2$; $p = 0.001$). The detailed responses regarding the type of problems they experienced are in Chart 3.4b. For other categories studied (gender; faculty of origin, level of studies) the differences between different groups were few and were not statistically significant.

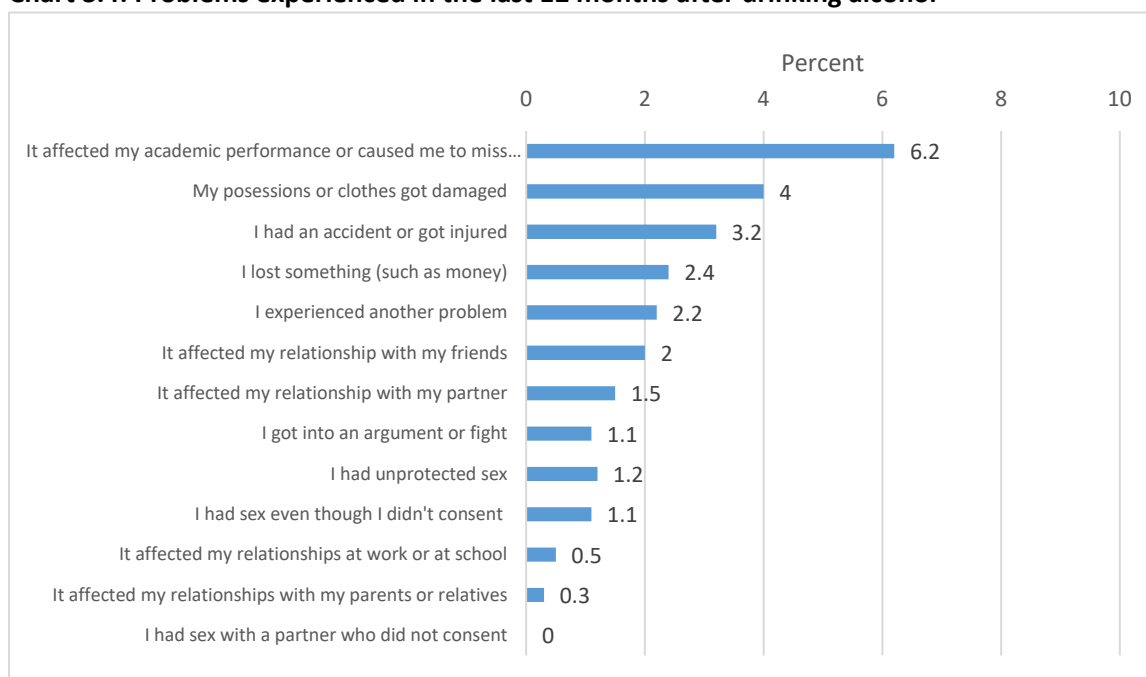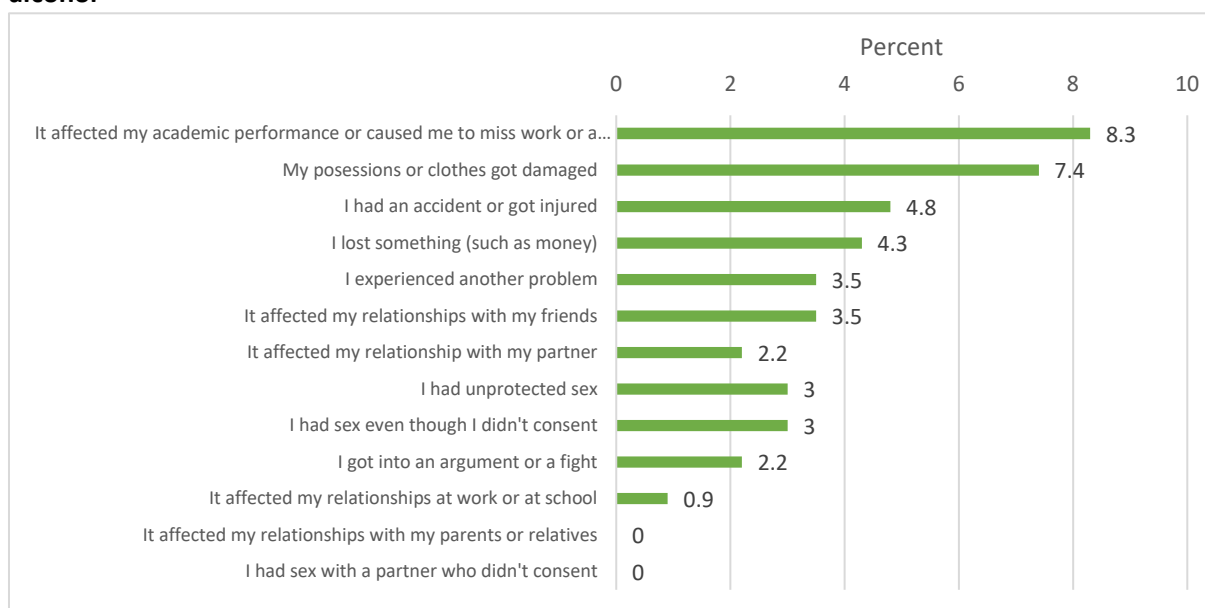**Chart 3.4: Problems experienced in the last 12 months after drinking alcohol**

Percent

Problem	Percent
It affected my academic performance or caused me to miss…	6.2
My posessions or clothes got damaged	4
I had an accident or got injured	3.2
I lost something (such as money)	2.4
I experienced another problem	2.2
It affected my relationship with my friends	2
It affected my relationship with my partner	1.5
I got into an argument or fight	1.1
I had unprotected sex	1.2
I had sex even though I didn't consent	1.1
It affected my relationships at work or at school	0.5
It affected my relationships with my parents or relatives	0.3
I had sex with a partner who did not consent	0

Chart 3.4b: Problems experienced by LGBQ+ respondents in the last 12 months after drinking alcohol

Percent

Problem	Percent
It affected my academic performance or caused me to miss work or a…	8.3
My posessions or clothes got damaged	7.4
I had an accident or got injured	4.8
I lost something (such as money)	4.3
I experienced another problem	3.5
It affected my relationships with my friends	3.5
It affected my relationship with my partner	2.2
I had unprotected sex	3
I had sex even though I didn't consent	3
I got into an argument or a fight	2.2
It affected my relationships at work or at school	0.9
It affected my relationships with my parents or relatives	0
I had sex with a partner who didn't consent	0

Participants were also asked if they had experienced problems in the last 12 months after someone they know had drank alcohol – 13.9% indicated that they had experienced such problems. Respondents were asked where this has taken place. Responses are in Chart 3.5. Such problems are reported most frequently as happening at private parties or at social gatherings. Again, however, it is worth reiterating that, If the survey is representative of the wider population, even small percentages can account for relatively large numbers of people. For example, the 2.2 % who indicate that they experienced a problems in the last 12 months after someone they knew drank alcohol at a party or social gathering on the EPFL campus would account for some 280 people having experienced such a problem within the last 12 months.

Chart 3.5: Location of problems experienced in the last 12 months after someone else you know drank alcohol
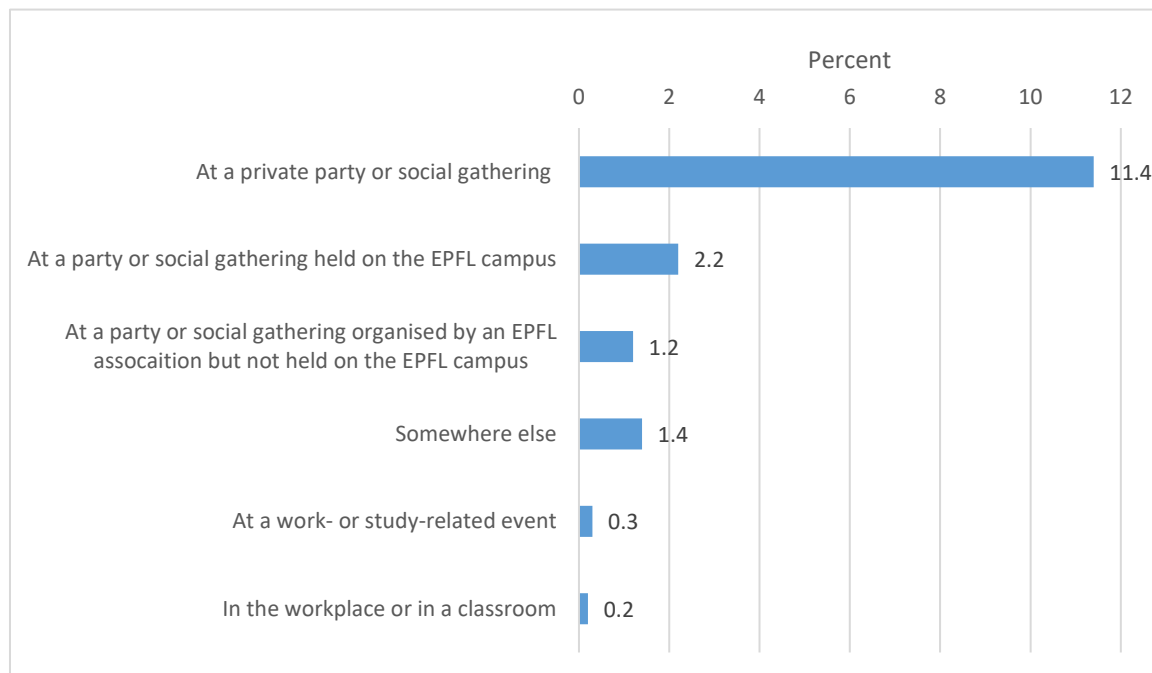
Again, the likelihood of experiencing problems in the last 12 months when someone you know has drank alcohol is higher for those who identify as LGBQ+ (18.8%) than it is for those who identify as heterosexual (12.9%) ($\chi^2 = 5.932$; $df = 1$; $p = 0.015$). For other social categories (gender; faculty or study) differences are fewer and are not statistically significant. PhD students are a little less likely to report someone they know experiencing problems after drinking alcohol than other students (10.6% for PhD students as compared to 13.9% for Master and Exchange students and 15.2% for CMS and Bachelor students), however this difference is marginally non-significant (p=0.066).

Finally in this section, participants were asked if they knew where to seek medical assistance and other support if they or someone they knew experiences drinking-related problems. Less than half (42.4%) indicated that they did know where to seek such advice. PhD students (38.3%) and Master & Exchange students (39.7%) were less likely to know where to seek such advice as compared to CMS and Bachelor students (45.9%). There were no other notable differences across social categories such as gender, sexual identity, or faculty of study.

Participants were also asked if they had ever discussed their own or someone else's (a friend, relative colleague or fellow student) drinking. About one-seventh (15.2%) indicated that they had spoken to 'Family or close friends' and 2.4% indicated they had spoken to a peer (coach, mentor, student

representative, etc.), while 1.2% indicated they had spoken to a healthcare provider outside EPFL. Other groups such as EPFL HR, EPFL Health Point, their supervisor, occupational health team, EPFL student affairs office, social counsellors or psychotherapeutic team were identified by fewer than 0.5% of respondents.

Participants were asked if the COVID-19 pandemic had affected how much alcohol they drank. Of the 1,714 respondents who saw the question as relevant to them (i.e. those who drank alcohol), 53.4% reported no change, 26.4% reported drinking less, 9.8% reported drinking more and 1.4% reported that they did not drink before the pandemic, but now do.

4. Other drug use

Illicit drug use

Participants were asked if they had ever taken any of a list of drugs, and if so, how often. The responses are presented in Table 4.1.

Table 4.1: Drug use, and frequency of use

	Never	1-3 times	4 or more times
Hallucinogenic fungi (Magic mushrooms), psilocybin, peyote, mescaline	93.6	5.3	1.2
Other hallucinogens (e.g. LSD, PCP/Angel Dust, 2C-B, 2C-I)	95.1	3.2	1.7
Salvia divinorium	98.9	0.9	0.2
Amphetamine/Speed, Amphetamine Sulphate (e.g. Dexedrine, Benzedrine)	97.0	1.9	1.1
Khat	99.8	0.2	0.0
Methamphetamine (Yaba, crystal meth (ice))	99.3	0.6	0.2
Poppers (amyl nitrate, butyl nitrate)	83.5	10.7	5.7
Inhalable Solvents (e.g. nitrous oxide (laughing gas), glue, toluol, ether or gasoline)	87.3	8.8	4.0
Ecstasy (MMDA)	92.6	4.5	2.9
Cocaine, Crack, Freebase	96.5	1.9	1.5
Heroin, Morphine, Opium	99.1	0.6	0.3
Ketamine (Special K), DXM, (Bexin®)	97.8	1.4	0.8
Methadone	99.9	0.1	0.0
GBH, GBL, 1,4 butandiol (BDO)	99.3	0.6	0.1
"Bath salts", research chemicals or "legal highs" (e.g. MPVD, mephedrone, butylone, methedrone)	99.4	0.3	0.3
Spice or other smokable mixtures containing synthetic cannabinoids (alternatives to cannabis)	96.2	2.7	1.1
Cannabis	49.1	20.9	29.9
Other	98.5	1.0	0.5

Cannabis is the most widely used of all the drugs listed here with a little over half (50.9%) of respondents indicating that they have tried it at least once. Under one-third (29.9%) have tried it four or more times. Poppers (amyl nitrate, butyl nitrate), have been tried by 16.5% of respondents, while 12.8% have tried inhalable solvents (such as nitrous oxide [laughing gas]).

For many of the drugs listed above the numbers in the sample who have ever taken them are so small as to make comparisons across social categories meaningless. However in some cases differences can be seen. Women are more likely to have never taken cannabis (53.5%) as compared to men (46.4%) and other genders (44.2%). Women are also more likely to have never taken Ecstasy (95.5%), hallucinogenic mushrooms (96.2%) other hallucinogenic substances (97.5%), poppers

(86.0%), and inhalable solvents (89.8%). Overall the rates reported for EPFL students do not seem to be all that different to those reported for the wider Swiss population[9].

There are few differences in drug use between faculties although cannabis use is a little more prevalent in ENAC (37.3% of respondents have used it 4 or more times as compared to 29.9% for the respondents as a whole).

There are some differences between different levels of study in terms of cannabis use, with fewer Bachelor and CMS students (52.6% have never tried it) and PhD students (49.4% have never tried it) having tried cannabis as compared to Master and Exchange students (43.8% have never tried it while 33.0% have tried it four times or more). PhD students are more likely to have tried cocaine at least once (6.2%) as compared to CMS and Bachelor students (2.8%) and Exchange and Master students (2.8%), as well as more likely to have tried Amphetamine/speed (tried at least once by 5.3% of PhD students as compared to 2.6% of CMS and Bachelor students and 2.4% of Master and Exchange students).

PhD students are, on the other hand, less likely to have ever tried inhalable solvents (8.4%, as compared to 11.7% for Bachelor and CMS students and 16.4% for Master and Exchange students), and less likely to have ever used poppers (7.9% as compared to 17.4% for Bachelor and CMS students and 19.7% for Exchange and Master students).

There are no notable differences in drug use between sexual orientations (heterosexual and LGBQ+) There are also no evident associations between overall well-being (WHO-5) and use of these drugs.

Medical drugs used without prescription

Participants were asked if they were currently using, without prescription, any drugs which are normally available only on prescription. The question said: "People sometimes use the following medicines and substances for various reasons without being prescribed them, such as to relax, to feel better, to enjoy themselves, to get high or simply to see what effect they have. Are you currently using any of these substances and, if so, how often?". Overall 10.1% indicated that they were taking such medical drugs without prescription. Again, this seem to be broadly in line with the wider patterns found in research in Switzerland[10]. The percentage rises to 14.9% for those who identify as LGBTQ+, which is significantly higher than for those who identify as heterosexual (8.5%) ($\chi^2 = 13.257$; $df = 2$; $p < 0.001$), and to 11.7% for women and to 21.3% of those who identify as a gender other than man or woman, significantly higher than for those who identify as men (8.3%) ($\chi^2 = 26.593$; $df = 4$; $p < 0.001$).

Usage rates for specific medical drugs used without prescription are in Table 4.2.

There are some gender differences in the specific medical drugs which are used without prescription (Table 4.3). There are also some differences associated with sexual orientation, however these differences are not large. PhD students are a little more likely to use antidepressants and sleeping pills in this fashion than other students, but again the differences are not large. There are no notable differences across different faculties.

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[9] See for example Baggio, Stéphanie ; Studer, Joseph ; Mohler-Kuo, Meichun ; Daeppen, Jean-Bernard ; Gmel, Gerhard (2013) Profiles of drug users in Switzerland and effects of early-onset intensive use of alcohol, tobacco and cannabis on other illicit drug use https://www.zora.uzh.ch/id/eprint/79176/9/baggio-smw.pdf
[10] See for example https://www.c-surf.ch/en/60.html

Table 4.2: Participants reported use of other drugs at present

	Never	Once	More than once
Sleeping pills (hypnotics), such as benzodiazepines (Dalmadorm®, Rohypnol®, Halcion®), barbiturates, chloral hydrate (Nervifene®), zopiclone, zolpidem (lmovane®, Stilnox®)	97.1	1.3	1.6
Tranquilizers, such as benzodiazepines (Valium®, Xanax®, Librax®, Temesta®, Normison®, Demetrin®, Dalmadorm®) or muscle relaxing products	95.8	1.7	2.5
Strong painkillers (other than over-the-counter painkillers such as aspirin or paracetamol), such as those containing buprenorphine (Tamgesic®), codeine (Benylin®), opioids (Fentanyl, Hydrocodone, Jurnista®, Palladone®, Targin®, OxyContin®, Vicodin®, Dilaudid®) or dextromethorphan (Bexin®)	96.2	2.3	1.5
Stimulants and amphetamines, such as amphetamine sulfate (Adderall), atomoxetine (Strattera®), methylphenidate (Ritalin®)	97.7	0.8	1.6
Antidepressants (Remeron®, Fluoxetine®, Citalopram®, Trimin®)	98.2	0.6	1.2
Beta blockers, such as propranolol (lnderal®), atenolol (Atenil®, Tenormin®), metoprolol (Lopresor®)	99.2	0.4	0.4
Other (please specify below)	99.2	0.2	0.6

Note: Participants could respond using eight options ranging from 'never' to '4 or more times a week'. However in all cases the rate of usage is low enough to make it meaningless to report across all these categories, so the number of categories has been reduced to three. Some rows add to more than 100%, due to rounding up of percentages for small values in multiple categories.

Table 4.3: Current use of medical drugs more than once in the last year without prescription

	Difference statistically significant	Women % (774)	Men % (1126)	Other gender % (87)
Sleeping pills (hypnotics), such as benzodiazepines (Dalmadorm®, Rohypnol®, Halcion®), barbiturates, chloral hydrate (Nervifene®), zopiclone, zolpidem (lmovane®, Stilnox®)	p<0.001	2.6	0.6	6.9
Tranquilizers, such as benzodiazepines (Valium®, Xanax®, Librax®, Temesta®, Normison®, Demetrin®, Dalmadorm®) or muscle relaxing products	p>0.001	3.2	1.6	7.0
Strong painkillers (other than over-the-counter painkillers such as aspirin or paracetamol), such as those containing buprenorphine (Tamgesic®), codeine (Benylin®), opioids (Fentanyl, Hydrocodone, Jurnista®, Palladone®, Targin®, OxyContin®, Vicodin®, Dilaudid®) or dextromethorphan (Bexin®)	p=0.021	2.4	0.7	3.5
Stimulants and amphetamines, such as amphetamine sulfate (Adderall), atomoxetine (Strattera®), methylphenidate (Ritalin®)	p=0.024	0.8	1.7	4.7
Antidepressants (Remeron®, Fluoxetine®, Citalopram®, Trimin®)	p<0.001	2.2	0.5	2.4
Beta blockers, such as propranolol (lnderal®), atenolol (Atenil®, Tenormin®), metoprolol (Lopresor®)	Not significant	0.7	0.3	0.0
Other (please specify below)	Not significant	0.5	0.7	1.3

The use of these medicinal drugs without a prescription is associated with lower levels of well-being as measured using the WHO-5. For those who are not using any such prescription drugs, their average score on the WHO-5 is 55.2. For those who are using one such prescription drug without prescription, their average score is 49.7 (noting that a score of ≤ 50 has been used to assign a 'screening' diagnosis for depression). For those who are using more than one such prescription drug in this way, the average score is 41.2.

"Smart" Drugs

Participants were also asked about their use of "smart" drugs. The question asked was the following: "In the past 12 months, have you used any of the following smart drugs* other than to treat a medical condition? If so, how often?)". The footnote to explain the term smart drug read as follows: "Smart drugs are medicines that are prescribed to treat certain conditions. But people sometimes use them for other reasons, such as to increase concentration, alertness or attention span, to boost mental energy, to enhance working and learning memory, or to relieve exam-related stress. Taking medicines other than when prescribed by a qualified health professional can be harmful to your health." Respondents could choose between eight different frequencies ranging from 'never' to 'four or more times per week'.

For all smart drugs listed the rate of use was 3.3% of all respondents (the c-surf Swiss study found the overall use rate for college students was a comparable 3.8%[11]). The drug Methylphenidate (e.g., Ritalin®, Adderall®, Concerta®, Focalin®, Medikinet®, Strattera®) had been used by 1.7% of respondents in the past 12 months. Of these, 1.1% used it no more than 3 times in the last year. For all other smart drugs listed (see appendix 1), at least 99.5% of respondents indicated that they had never used them.

Problems after using drugs

Overall, 54.7% of respondents had taken at least one of the drugs, medicines or smart drugs listed in this survey. Participants were asked if they had ever experienced problems after using drugs, medicines or smart drugs. While this question was relevant to these 54.7% of respondents, only 42.1% of respondents actually answered the question as one that was relevant to them. Further analysis indicates that quite of few of those who had taken cannabis and other illicit drugs infrequently treated the question as not relevant to them.

Of those who saw the question as relevant to them, 10.8% (i.e. 4.5% of all respondents) said that they had experienced problems. Having experienced problems was associated with the frequency of having used drugs. For example, 46.7% of those who have used cocaine 4 times or more indicated that they had experienced problems after taking some drugs, as compared to 10.5% for those who had taken it 1 to 3 times (a similar pattern is evident for other drugs).

There are no evident patterns in problems experienced across different social categories. That is, the rate of problems is quite similar for men, women and those with another gender identity; for those with heterosexual and LGBQ+ identities; for different faculties; and PhD students, Masters students and Bachelor students.

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[11] https://www.c-surf.ch/en/60.html

The problems which participants reported experiencing are presented in Table 4.4. The most frequently cited problem was that it affected academic performance or caused the respondent to miss work or class. This is cited as an issue by 1.4% of the overall respondents and by 3.3% of those who had taken some drug at least once. All of the other negative outcomes listed (except the 'catch all' category of 'other') were identified by less than 1% of respondents, and by less than 2% of those who indicated they had taken some drug.

Participants were asked if the COVID-19 pandemic had affected their use of drugs, medicines and smart drugs listed in the survey. Of the respondents who saw the question as relevant to them (which was 31.4% of all respondents), 71.9% said their use had not changed, 9.8% said they were using them more, while 12.2% indicated they were using them less. The remainder indicated that they did not know.

Table 4.4: Problems experienced after taking drugs, medicines without prescription, or smart-drugs

|	% of all respondents	% of those who saw the question as relevant	% of those who had experienced problems after taking some drugs
It affected my academic performance, or caused me to miss work or a class	1.4	3.4	32.9
My possessions or clothes got damaged	0.5	1.2	11.8
I lost something (such as money)	0.3	0.7	7.1
I had an accident or got injured	0.6	1.6	15.3
I got into an argument or fight	0.1	0.2	2.4
It affected my relationships with my friends	0.8	1.9	18.8
It affected my relationships with my parents or relatives	0.3	0.8	8.2
It affected my relationships at work or at school	0.1	0.2	2.4
It affected my relationship with my partner	0.6	1.4	14.1
I had unprotected sex	0.5	1.2	11.8
I had sex even though I didn't consent	0.2	0.6	5.9
I had sex with a partner who didn't consent	0.1	0.2	2.4
Other problem	1.9	4.7	45.9

5. Sexual risk behaviour

The questionnaire was focused only on risk behaviour, not on people's behaviour more generally. Hence all the questions in this section refer to sexual risk, including sex when their or their partner's STI status was unknown, unprotected sex, and testing for STIs. It does not address other aspects of the respondents' sexual or romantic lives.

Participants were asked if in the past 12 months they had had sex with a partner without knowing their own STI status. A footnote explained STI as follows: "sexually transmitted infections (STIs) are infections caused by bacteria, viruses and parasites transmitted through penetration or other sexual contact. Examples include HIV/AIDS, gonorrhea, chlamydia, hepatitis B, genital herpes and human papillomavirus (HPV)". Those who indicated that they had done so were asked if they had used protection, defined in a footnote as follows: "Protection" means an external or internal condom (sometimes referred to incorrectly as a male or female condom) designed to protect you and your partner(s) from catching STIs."

Roughly one-third, 32.0%, of respondents indicated that they had sex with one or more steady or casual partners in the last 12 months without knowing their own STI status. A slightly higher percentage, 36.1% indicated that they had sex with someone in the last 12 months without knowing their partner's STI status. Their reported use of protection is presented in Chart 5.1. In both cases, about half of respondents who the question applied to (48.8% when on status was unknown, 50% when a partners STI status was unknown) indicated that they always used protection. The distribution frequency of use of protection is similar in both cases.

Chart 5.1: Responses to the question "did you use protection?", asked to those who had sex with a partner in the last 12 months when their or their partner's STI status was unknown
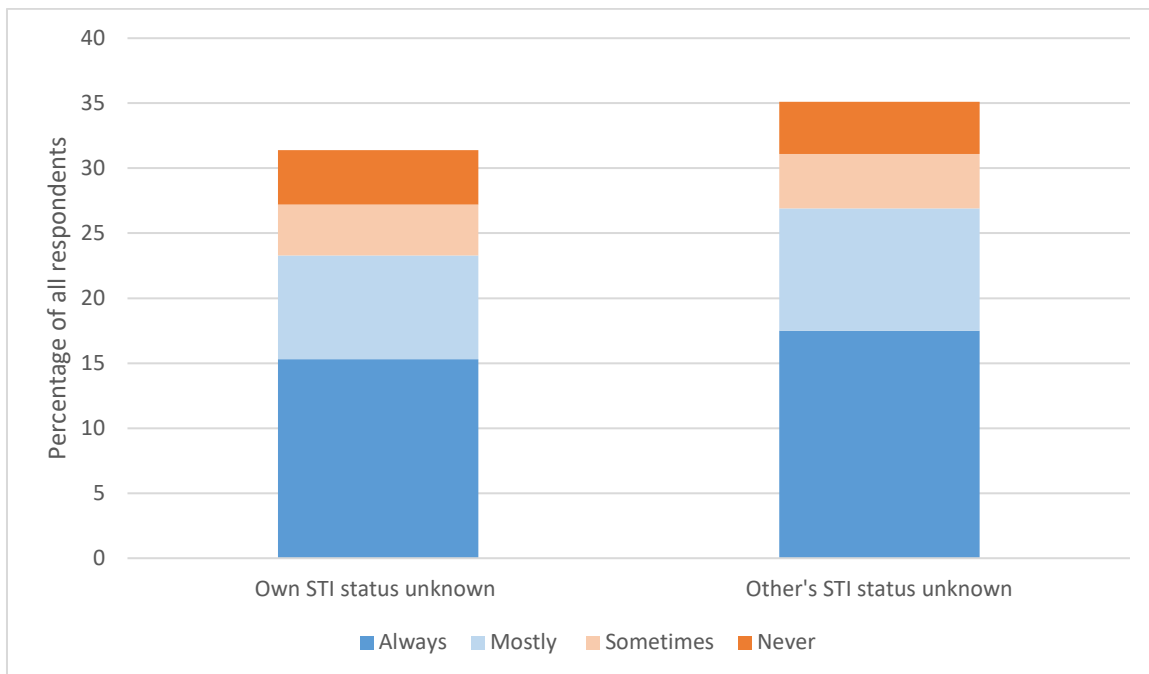
For this question, there is some interaction between gender and sexual identity in how respondents answered these questions. For women, 38.3% of heterosexual respondents indicated that they had had sex without knowing their partner's STI status, as compared to 50.0% of LGBQ+ women (a statistically significant difference: ($\chi^2 = 5.472$; $df = 1$; $p = 0.019$). For men, the comparable

figures are 33.1% for heterosexual men and 34.8% for LGBQ+ men (effectively no difference). For those with a gender other than man or woman, the differences were also not statistically significant.

There were also no statistically significant differences between genders in the use of protection in this circumstances, once controlling for sexual orientation. Likewise, there were not statistically significant differences between sexual orientations in the use of protection in this circumstance, once controlling for gender.

Participants were asked if they had ever tested for HIV; 37.4% indicated that they had been tested. Those who identified as LGBQ+ were more likely than heterosexual respondents to have been tested (45.2% to 36.1%) ($\chi^2 = 7.174$; $df = 1$; $p = 0.007$). There were no notable differences in terms of gender identity or section. PhD students (45.6%) and Master and Exchange students (46.3%) were more likely to have been tested than Bachelor and CMS students (28.5%) ($\chi^2 = 64.394$; $df = 2$; $p < 0.001$).

Participants were also asked if they had ever tested for Hepatitis B, chlamydia, HPV, gonorrhoea, genital herpes or any other STI; 34.0% indicated that they had. Again, those who identified as LGBQ+ were more likely to have been tested (42.9%) than those who identified as heterosexual (32.3%) ($\chi^2 = 9.964$; $df = 1$; $p = 0.002$). There were also gender differences in this question with 42.4% of those who identified with a gender identity other than male or female having been tested, as compared to 39.3% of women and 29.9% of men ($\chi^2 = 20.315$; $df = 2$; $p < 0.001$). The rates were again higher for PhD students (44.0%) as compared to Master and Exchange students (41.7%) and CMS and Bachelor students (25.4%) ($\chi^2 = 64.348$; $df = 2$; $p < 0.001$). There were no notable differences across faculties.

Participants who had indicated that they had been tested were asked the reason for their test. The results are in Chart 5.2. The most common reason is as part of a general health check-up (29.6%) but about 10% of respondents indicated that they were tested because they were concerned that they may be putting themselves (10.5%) or a partner (9.1%) at risk.

Chart 5.2: reasons for having tested for an STI
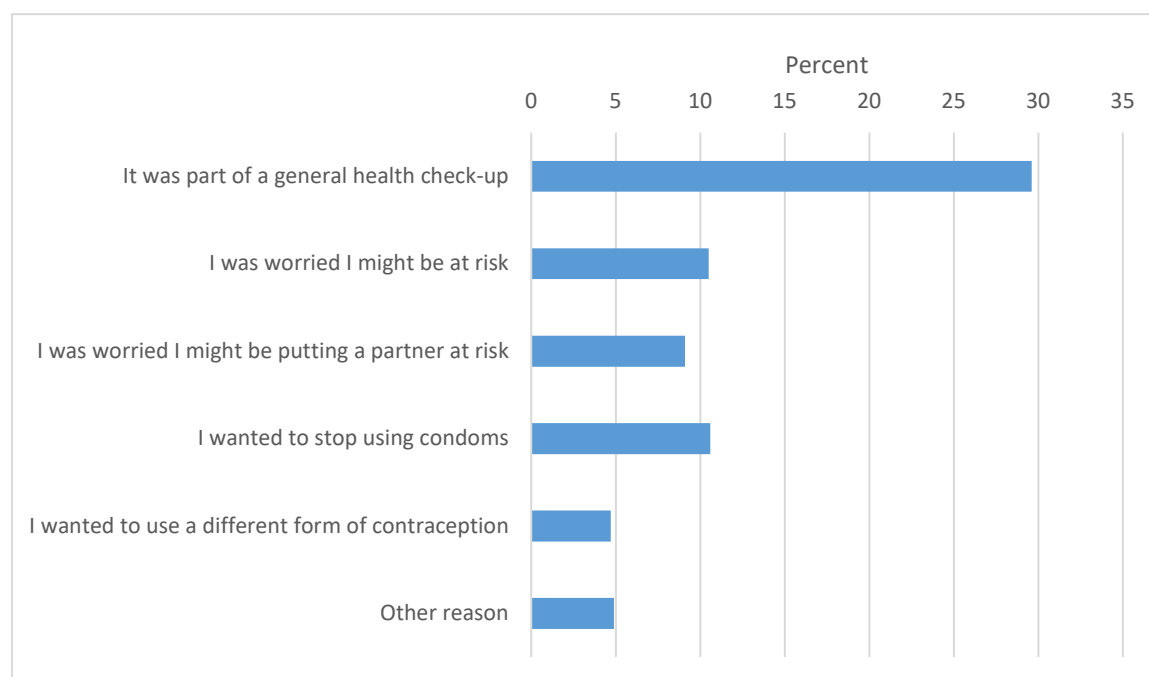
Participants were also asked "If you thought you contracted an STI, what would your first course of action be (choose one only)?". The results are presented in Chart 5.3.

While the majority of respondents indicated that they would seek medical support of some kind, it is notable that 7.5% indicate that they don't know what they would do, while 10.1% indicate that they would research online.

Chart 5.3: First course of action if they thought they had contracted an STI
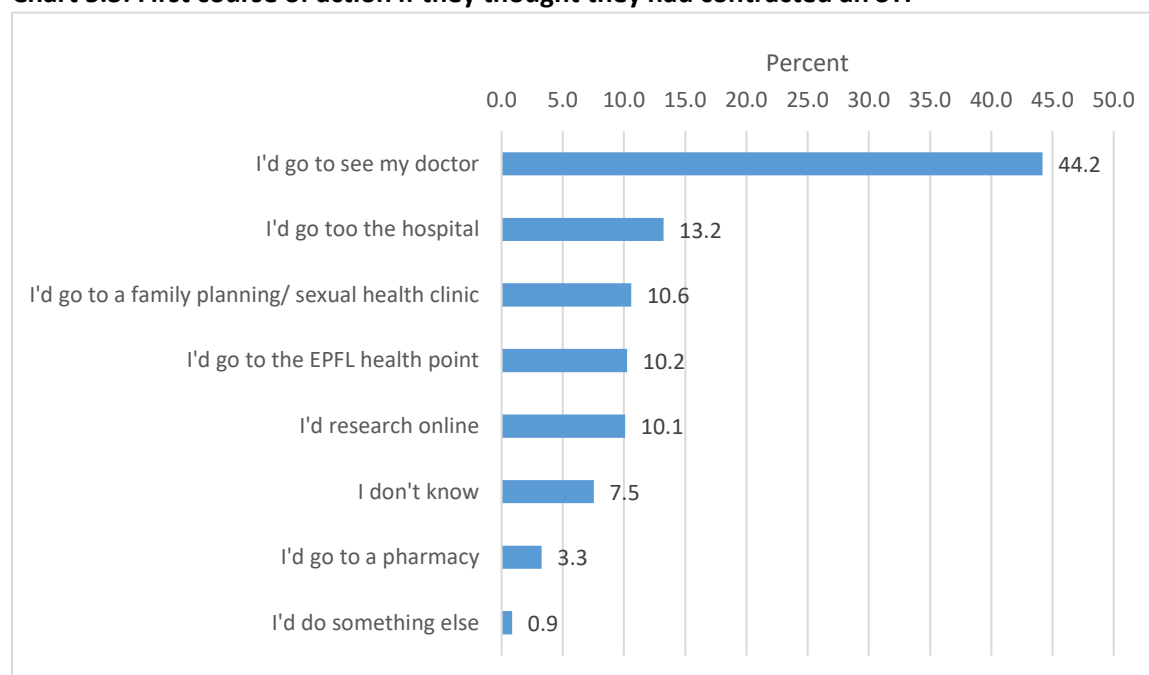
Appendix 1: Smart Drugs listed in the questionnaire

- Modafinil (e.g., Modasomil®, Vigil®); adrafinil (e.g., Olmifon®); armodafinil (e.g., Nuvigil®))
- Methylphenidate (e.g., Ritalin®, Adderall®, Concerta®, Focalin®, Medikinet®, Strattera®)
- Antidepressants (e.g., venlafaxine (Efexor®), fluoxetine (Fluctine®, Fluocim®, Fluoxifar®, Fluxet®, Prozac®), reboxetine (Edronax®, Solvex®), mirtazapine (Remeron®, Remergil®), Bupropion (Wellbutrin®), duloxetine (Cymbalta®), citalopram (Seroprom®), sertraline (Zoloft®))
- Alzheimer's and dementia medications, such as donepezil (Aricept®), rivastigmine (Exelon®), galantamine (Reminyl®), memantine (Axura®), piracetam (Nootropil®)
- Antidiuretics, such as desmopressin, vasopressin (Nocutil®, Octostim®, Minirin®)
- Parkinson's disease medications, such as selegiline (Jumexal®, Deprenyl®)
- Beta blockers, such as propranolol (Inderal®), atenolol (Atenil®, Tenormin®), metoprolol (Lopresor®)
- Other (please specify below)