OBSERVATOIRE FRANÇAIS DES DROGUES ET DES TOXICOMANIES

French Monitoring Centre for Drugs and Drug Addictions

Updates on current research

TENDANCES

www.ofdt.fr

n° 62

November 2008

Drugs use in the students, unemployed and active working of 18-25 years old

An analysis of the results of the INPES 2005 Health Barometer allows the three population groups to be compared.

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There are many surveys and studies on drug use in adolescents or pupils in secondary schools [1-3], as drug use likely to continue into adulthood begins in adolescence. Contrastingly, such surveys and studies are fewer in students in higher education: this is a population for which no national sampling frame exists and for whom there are fewer opportunities to question the individuals than in secondary schools.

The few student surveys [4-6] reveal particularly widespread use of alcohol, tobacco and cannabis in this group although these studies have a relatively low participation rate and do not enable a comparison between these students and other populations.

Adult population representative inquiries enable us to get around this difficulty by offering large samples containing a sufficiently large number of students to be able to perform a valid statistical analysis. They also provide a control population of similar age which is not present in surveys limited to students [4, 6].

This issue of Tendances describes the use of psychoactive substances by students, the unemployed and those in active work in the 18-25 age group in France in 2005 and compares the three groups against each other: it also describes a few changes since 2000[1].

1. This includes the analyses developed in Le rôle du statut social et professionnel dans les usages de drogues des hommes et des femmes de 18-25 ans, Legleye S, Beck F, Peretti-Watel P, Chau N (2008), Revue d'épidémiologie et de santé publique, 2008, 56, 345-355.

I Methodological information I

Health barometers are multi-subject, national representative telephone surveys conducted by Inpes (using a sampling plan) on two levels (household then individual).

In 2005, the sample consisted of 30,514 people between 12 and 75 years old. The methodological details are described in the work presenting the results [7]. A total of 3,308 people between 18 and 25 years old were selected: 1,290 were pursuing higher studies and gave their level of educational attainment, 1,480 were working and 538 were unemployed. There were more females in higher studies than males (53.1% vs. 42.8%, p<0.0001). A proportion (18.0%) of the students also reported that they worked to fund their studies. The average age of the students was 20.2 years old (standard deviation (SD=2.0 years). There were more males in the group of those in active work (57.9% vs. 48.9% amongst the students, p<0.0001) and they were older (average 22.7 years, SD =1.9 years). Two thirds of the people (65.5%) had open-ended contracts, 20.9% were on fixed term contracts, 9.0% were in temporary job positions and 3.2% were working for themselves. 1.4% did not describe their type of work contract. The average age of the unemployed group was 22.1 years old (SD=2.3 years) with a clear female predominance.

The group with the highest level of qualifications was the student group, and the highest proportion of bac + 5 qualifications was found in this group (11.5% vs. 4.0% and 6.5%, p<0.001). They were more likely to live in large towns where more university campuses were located, particularly in towns with more than 200,000 people. More of those in active work were living with a partner than the unemployed or students. There were more members of the unemployed group who had given up the conventional landline telephone in favour of a mobile phone although very many of the students were ex-directory.

Finally, there was no difference in the proportion of people stating that they had no religious conviction between the groups (average 55%), although there were more Muslims amongst the unemployed (23% vs. 14.7% of those in active work and 13.2% amongst the students, p<0.05), compared to the proportion of Catholics (20.7% vs. 27.8% among those in active work and 30.7% among the students, p<0.05). The proportion of other religions reported was similar in all three groups (average 2%).

Variable user proportions depending on educational and occupational status and gender

The analysis showed that those in active work in the 18-25 age group drank more alcohol than students or the unemployed (table 1). Conversely, more of the unemployed smoked daily, followed by the employed persons group, themselves followed by the students. For cannabis, only regular use was found to be significantly higher among the unemployed. Experimentation with other illegal drugs was equal in the three groups (11.2%), although more people experimented with ecstasy, cocaine and particularly heroin in the unemployed group. In addition, 4.3% of the sample reported that they had taken an illegal drug other than cannabis during the previous year, again this finding being reported more often by the unemployed than by the other categories.

Far higher use of all of these substances was found in males in all three of the population groups studied. Daily smoking was very common in the male unemployed group (57.4%) and far more common than in the male student group (24.4%); regular alcohol use appeared to be more widespread in the working population group although male students drank less regularly or excessively, (i.e. at least six glasses on one occasion, a behaviour labelled as binge drinking), than the workers or unemployed and were not more often drunk. Cannabis use was relatively uniform apart from its regular use, far more widespread in the unemployed, who also reported high use of other drugs. Students often came behind the active workers. Findings were different in the female population: smoking seemed to be more widespread among the working population, and the unemployed in particular, and alcohol consumption was similar in the three groups. However, drunkenness was far more common among the students. The same finding applied to cannabis use, reported more often by the students than those in active work or the unemployed. On the other hand, the results for other illegal drugs were similar between the three groups.

Fewer student users, more unemployed users

Logistic analysis (table 2) confirmed that the students were less often smokers or regular drinkers of alcohol than the active working group. They did not however report fewer episodes of binge drinking: in fact they reported more episodes of drunkenness. For cannabis, no significant differences were found apart from use during the previous twelve months. The unemployed smoke just as often, but are less likely to be regular drinkers, and they never significantly differ from the active working population for any of the other indicators for alcohol use or drunkenness. The same applied to their cannabis use. On the other hand, considerably more had used other illegal drugs during the last twelve months (Adjusted odds ratio -OR=1.9). Smoking was less common amongst the students compared to those in active work for both sexes.

Higher studies are associated with more common use in females

After adjusting for the effects of gender, these general results are slightly misleading as for most use studied a significant interaction was present between gender and the educational and occupational status of the respondents. In other words, it would be better to consider separate analyses for each sex. Amongst males, regular alcohol use and binge drinking were less common in students although this was not the case for females: in addition, among the males, there was little difference in episodes of drunkenness depending on educational or occupational status, although drunkenness was far more common in female students than the female working group.

The same effect was seen for cannabis: no significant difference between male active workers and students but increased use amongst female students. In men, regular cannabis use alongside use of other illegal substances over the last year appeared to be far more common in the unemployed than in active workers. This finding did not apply to females. Finally, the high levels of use of other illegal drugs during the previous year in the unemployed were more pronounced among males than females.

The high frequency of drunkenness amongst students is to a large extent due to female students and, conversely, the apparently low prevalence of regular alcohol use among students appeared to be due particularly to males.

Table 1 - Use of psychoactive substances in students, those in active work and the unemployed between 18 and 25 years old (%)

	Ensemble					Hommes					Femmes				
	Workers	Students	Unemployed	P	Total	Workers	Students	Unemployed	P	Total	Workers	Students	Unemployed	P	Total
	N=1480	N=1290	N=538			N=776	N=559	N=227			N=704	N=731	N=311		
Daily smoking	43.5	24.0	50.7	***	37.1	47.2	24.4	57.4	***	40.6	37.9	23.6	44.0	***	33.0
Regular alcohol	13.1	7.0	7.5	***	9.8	19.8	10.9	11.9	***	15.3	3.0	3.1	3.2	Ns	3.0
≥ 1 drunkeness (12 months)	37.5	35.7	32.4	Ns	35.9	49.1	44.7	49.1	Ns	47.5	19.7	26.6	16.0	***	21.9
≥ 3 drunkeness (12 months)	16.7	17.9	13.8	Ns	16.6	24.0	24.2	22.0	Ns	23.7	5.5	11.5	5.7	***	8.1
Binge drinking (a) ≥1/month	26.3	20.9	23.8	**	23.8	37.0	29.4	36.4	**	34.2	10.0	12.3	11.4	Ns	11.3
Cannabis 12 months	22.3	24.5	22.3	Ns	23.2	28.7	30.6	31.8	Ns	29.9	12.6	18.3	12.8	*	15.1
30 days	14.0	14.8	14.1	Ns	14.3	18.9	19.5	23.6	Ns	19.8	6.5	10.2	4.7	**	7.7
regular (≥ 10 / 30 days)	9.2	8.5	11.8	Ns	9.3	12.4	10.9	19.3	**	12.9	4.3	6.1	4.4	Ns	5.1
Ecstasy (lifetime)	4.6	2.6	6.7	***	4.2	6.2	3.2	10.1	***	5.7	2.1	2.0	3.4	Ns	2.3
Poppers (lifetime)	4.7	5.8	7.1	Ns	5.5	5.6	6.5	9.3	Ns	6.5	3.3	5.0	4.9	Ns	4.3
Mushrooms (lifetime)	4.0	3.3	4.5	Ns	3.8	5.3	4.7	7.9	Ns	5.5	2.0	1.9	1.1	Ns	1.8
Cocaine (lifetime)	3.7	2.2	5.3	**	3.4	4.5	2.7	8.2	***	4.4	2.5	1.8	2.5	Ns	2.2
Heroin (lifetime)	0.8	0.4	2.9	***	1.0	1.1	0.7	4.6	***	1.5	0.5	0.2	1.2	Ns	0.5
Illegal excluding cannabis lifetime	10.7	10.5	14.0	Ns	11.2	13.3	13.0	19.5	*	14.2	6.7	8.1	8.7	Ns	7.7
Illegal excluding cannabis year	4.0	3.6	6.9	***	4.3	5.2	4.5	10.4	***	2.0	2.2	2.8	3.4	Ns	0.8

*Legend: *, **, ***: Chi2 test significant at 0.05, 0.01, 0.001.*

(a) Binge drinking: At least 6 glasses on one occasion

Source: Health Barometer 2005, INPES, OFDT interpretation.

More unisex user behaviour among students

This work shows that drug use between the two sexes is more similar in students than in workers or even the unemployed. This is shown by the OR associated with males in the three situations studied (table 2, right hand column): use of tobacco, alcohol (including episodes of drunkenness) and cannabis during the year or previous month is seen less in males among the students than among the workers. A statistical comparison shows these differences to be significant. Conversely, the differences between the unemployed and workers are not significant.

2000-2005 Changes: user levels falling in students but not in females

In 2000, 44.3% of workers between 18 and 25 years old smoked, 33.9% of students and 37.4% of the unemployed (p<0.001), compared to 43.5%, 24.0% and 50.7% in 2005 (p<0.001). Daily smoking has therefore remained stable amongst workers, falling significantly by 29% amongst students but rising significantly by 36% amongst the unemployed.

The fall in alcohol use involves students more than workers: regular consumption amongst students has fallen from

14.9% to 7% between 2000 and 2005 (i.e. a fall of eight points or 53%) whereas in workers it has fallen over the same period from 21.2% to 13.1% (i.e. a fall of eight points or 38%). In the unemployed the fall is large, regular use falling from 20.7% to 7.5% (i.e. a fall of thirteen points or 64%). The percentages of repeated episodes of drunkenness have increased from 13.6% to 16.7% in workers, from 9.6% to 13.8% in the unemployed and 14.5% to 17.9% in students: here again we see a convergence of behaviour despite a general rising trend.

The percentages of cannabis users during the previous year were 20.0% in workers, 30.4% in students and 22.8% in the unemployed (p<0.001) [8]. Differences were less marked in 2005 and were no longer significant at the 0.05 threshold: 22.3% for workers, 24.5% for students and 21.4% for the unemployed. When examined in more detail, regular cannabis use increased slightly less quickly in students between 2000 and 2005 (from 6.0% to 8.6% or an increase of two and a half points or 43%) than in workers (from 5.8% to 9.1% or an increase of more than three points or 57%). These changes differ between the sexes: the proportion of episodes of drunkenness during the previous twelve months fell from 54.1% to 44.7% (p<0.05) in male students but remained stable, increasing from 25.8% to 26.6% in females. Similarly, the numbers of regular cannabis smokers remained stable in male students (10.2% in 2000 vs. 10.9% in 2005), whereas it has increased considerably in female students (from 2.5% to 6.5%, p<0.05). Overall, from the perspective of alcohol, tobacco and cannabis use, the situation in students in the 18-25 age group appears therefore to have improved between 2000 and 2005 compared to workers and particularly compared to the unemployed of the same age, whose tobacco use appears to have increased markedly. From this perspective, however, the situation of female students has deteriorated.

Table 2 - OR adjusted for sex and age for occupational status and associated with males

		All N=3 308			Males N=1 562			Females N=1 746			OR associated with males
		OR	IC95	%	OR	IC95	%	OR	IC95	%	
Daily smoking	Workers	**-1-**			**-1-**			**-1-**			**1.7**
	Students	**0.5**	0.4	0.6	**0.4**	0.3	0.5	**0.6**	0.4	0.7	1.0
	Unemployed	1.2	1.0	1.5	1.3	0.9	1.7	1.2	0.9	1.6	**1.7**
Regular Alcohol	Workers	**-1-**			**-1-**			**-1-**			**8.1**
	Students	**0.6**	0.5	0.9	**0.5**	0.4	0.8	1.3	0.7	2.4	**3.7**
	Unemployed	**0.7**	0.5	1.0	0.6	0.4	0.9	1.2	0.6	2.4	**3.9**
At least 1 episode ok drunkeness (year)	Workers	**-1-**			**-1-**			**-1-**			**4.1**
	Students	1.2	1.0	1.4	1.0	0.8	1.2	**1.4**	1.1	1.9	**2.4**
	Unemployed	0.8	0.7	1.0	0.9	0.7	1.2	0.8	0.6	1.1	**4.5**
At least 3 episodes ok drunkeness (year)	Workers	**-1-**			**-1-**			**-1-**			**5.7**
	Students	**1.5**	1.2	1.8	1.2	0.9	1.6	**2.3**	1.5	3.5	**2.8**
	Unemployed	0.9	0.7	1.2	0.8	0.6	1.2	1.1	0.6	1.9	**4.4**
Binge drinking (a) at least one per month	Workers	**-1-**			**-1-**			**-1-**			**5.3**
	Students	0.8	0.7	1.0	**0.8**	0.6	1.0	1.0	0.7	1.5	**3.3**
	Unemployed	0.9	0.7	1.1	0.8	0.6	1.2	1.0	0.6	1.5	**4.4**
Cannabis (year)	Workers	**-1-**			**-1-**			**-1-**			**3.1**
	Students	**1.2**	1.0	1.5	1.1	0.8	1.4	**1.5**	1.1	2.0	**1.9**
	Unemployed	1	0.8	1.3	1.0	0.7	1.4	1	0.6	1.4	**3.1**
Cannabis (month)	Workers	**-1-**			**-1-**			**-1-**			**3.8**
	Students	1.1	0.9	1.4	0.9	0.7	1.2	**1.5**	1.0	2.4	**2.1**
	Unemployed	1.0	0.7	1.3	1.1	0.8	1.6	0.8	0.5	1.5	**4.9**
Cannabis (regular)	Workers	**-1-**			**-1-**			**-1-**			**3.0**
	Students	0.9	0.7	1.2	0.8	0.6	1.2	1.0	0.6	1.8	**2.0**
	Unemployed	1.3	0.9	1.8	**1.5**	1.0	2.3	0.9	0.5	1.8	**4.8**
All drugs (excluding cannabis year)	Workers	**-1-**			**-1-**			**-1-**			**3.6**
	Students	1.1	0.7	1.6	0.9	0.5	1.4	1.6	0.8	3.4	**1.6**
	Unemployed	**1.9**	1.3	2.9	**2.0**	1.2	3.4	1.9	0.8	4.3	**3.7**

Adjustment is made for sex and age (continuously). Figures in bold are the significant OR at 0.05 (Wald test)

(a) Binge drinking: At least 6 glasses on one occasion

Source : Health Barometer 2005, INPES, OFDT interpretation

Discussion

As illustrated by the particular case of unemployment, lack of work is more often associated with greater use of alcohol, tobacco and illegal drugs in males rather than females. Rising socio-economic status, and particularly occupational and social status, is associated with increased user rates in women (unlike men) [9]. The paradoxical results found in students may be partly explained using this framework. Students are a priori more likely to have rather good social positions later on, and in particular, to have senior administration jobs. Female students are different from their working counterparts, unlike their male equivalents. This leads to some convergence in the use of psychoactive substances between males and females which appears to go hand in hand with the dynamics of more uniform social roles which are greater in the higher classes than in the general population [9, 10]. The reason for the female overuse of some substances which are socially relatively well accepted by female students remains to be established, although these results help to identify the extent of the social sex ratios in determining the use of psychoactive substances and therefore health inequalities in adulthood.

These results put in perspective the results of some surveys in students conducted in France [4-6], but also across the Atlantic which show that grossly excessive alcohol consumption behaviour is more widespread [11], particularly because the students' perceptions of the dangers of alcohol use are very different [12].

They also put into perspective some recent media coverage of heavy alcohol use in student parties which is not perhaps as widespread as we might think.

Some limitations, however, do need to be pointed out. Students are firstly a difficult population to reach even with a network of surveyors such as INSEE in the population census [13]. Some of them were able to escape the telephone questionnaire despite more of them having access to mobile phones [14]. The same problem might concern the unemployed as well. Furthermore, the students come from rather wealthy social backgrounds [15, 16] and comparing them to workers of the same age therefore comes up against a certain differential of social recruitment which the health barometer is not able to take into account.

Some individual features are not known, such as disposable income and the frequency of partying, which are not present in the questionnaire but are liable to influence drug use. Similarly, several studies have highlighted the adverse role of difficult working conditions, insecure social circumstances and the lack of corporate responsibility on the misuse of alcohol or drugs in many workplace environments [17-19]. This may explain the higher propensity of some workers or working students to smoke or use cannabis or alcohol.

In parallel, differences in educational status, access to telephones etc. may explain some of the results. We did, however, confirm using logistic methods that the comparison between working students and non-working students is always insignificant for the uses studied, apart from daily smoking, which was far more common in the working students (OR=1.7 [1.26; 2.32]). Similarly, all of the results (apart from drunkenness which was more common in students and for which the OR was no longer significant) were consistent in the models incorporating living with a partner, type of telephone, size of town of residence, qualification level (Bac, Bac+2, Bac+3, Bac+4 and above) and stated religion.

Conclusion

Having a job does not appear to protect the young people between 18 and 25 years old questioned in 2005 from the use of psychoactive substances, particularly tobacco and alcohol. Students use these less often than their working counterparts and their uses of cannabis and of other illegal drugs do not appear higher. The analysis shows large gender differences. Overall, the males use such substances more than the females, although the differences compared to the females are a lot smaller in students compared to working people because of overuse by female students, whereas levels are more similar in males. The unemployed have a similar prevalence of regular alcohol use to that of students although they use other drugs such as cannabis more than other young people of the same age. Finally, the comparison between the 2000 and 2005 findings shows that the unemployed, and to some extent, females, show the worse changes in health terms, which raises the question of renewing attention to social health inequalities in prevention activities.

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Printing
Imprimerie Masson / 69, rue de Chabrol 75010 Paris

ISSN 1295-6910
Legal publication registration

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