

Tobacco, alcohol and cannabis consumption during early adolescence

Results from the French section of the 2006 HBSC survey

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Introduction

This issue of Tendances presents the initial results from the French section of the HBSC survey (Health Behaviour in School Aged Children) carried out in 41 countries or regions throughout the western world. This survey is coordinated by the medical department of the Toulouse Education Authority¹, with the cooperation and support of the Inpes and of the OFDT. In 2006, for the second time ever, it carried out a national survey of students aged 11, 13 and 15 in mainland France concerning their health-related behaviour and the consumption of psychoactive products [1].

By highlighting early adolescence, HBSC provides a vital contribution to the monitoring of drug use underway since the late 1990s via the OFDT. Thus, the School Survey Project on Alcohol and Other Drugs (ESPAD) monitors drug and alcohol use among school-

The term "experimentation" refers to the fact that the individual has already consumed a product at least once during his life. This notion therefore encompasses current users but also those having simply tried a product, or having stopped taking it. The other indicators cover the last 30 days. These are: **recent usage** (at least one consumption occasion) **the regular use** of alcohol or cannabis (at least 10 consumption occasions) and **daily usage** (at least once a day). These thresholds are based on a reasoned choice, but nevertheless contain a certain arbitrary element, and do not take account of the diversity of usage patterns and their rhythms.

children aged 16 in 35 European countries including France [2], while the National Defence Preparation Day Health & Behaviour Survey (ESCAPAD) provides an overview of 17-year old French youngsters whether at school or otherwise [3,4]. By comparing the findings of these three surveys, we get an overview of drug usage patterns right throughout adolescence.

The analyses presented here have been carried out by the OFDT as part of the partnership existing with HBSC since the 2002 sur-

Table 1 Experimentation with tobacco, alcohol, and cannabis according to gender and age (%)

		Boys	Girls	Sex ratio	All	Ratio 1	Ratio 2
Alcohol	11 y.o.	64	54	1.2 ***	59		
	13 y.o.	74	71	1.0 ns	72	1.2***	
	15 y.o.	84	83	1.0 ns	84	1.2***	1.4***
Tobacco	11 y.o.	10	5	1.9 ***	8		
	13 y.o.	30	29	1.1 ns	29	3.8***	
	15 y.o.	52	57	0.9 *	55	1,9***	7.2***
Drunkenness	11 y.o.	9	4	2.3 ***	6		
	13 y.o.	17	14	1.2 ns	16	2.5***	
	15 y.o.	44	38	1.2 **	41	2.6***	6.6***
Cannabis	11 y.o.	1	1	2 ns	1		
	13 y.o.	5	4	1.3 ns	5	4.4***	
	15 y.o.	30	25	1.2 *	28	5.7***	25.0***

Guide: * ** *** and ns: chi-2 test for the comparison between the sexes, significant at the thresholds 0.05, 0.01, 0.001 and non-significant respectively. Ratios 1 and 2: ratio of the levels between the generations

Source : HBSC 2006, analysis by the OFDT

1. Run by Dr Navarro, this survey was carried out under the scientific supervision of Dr Godeau.

vey. They concern only the use of psychoactive products and will be accompanied by other themes in the report to be published in 2008 [5]. After having presented the breakdown of experimentation trends between 11 and 15 years and shown that most teenagers have never consumed illegal products, the description will be focusing on children aged 15 years for whom the questions are far more detailed. Finally, a number of related factors such as the perceived state of health or socialisation will provide bases for discussion.

The breakdown of use during adolescence

Experimentation

The product with the highest declared levels of experimentation is alcohol. It is followed by tobacco, alcoholic drunkenness, cannabis and finally other drugs (Table 1). Alcohol appears very early on, as 59% of 11-year olds state that they have already consumed it whereas barely 8% state that they have already smoked a cigarette. Consequently, the rise in the experimentation level recorded between the ages of 11 and 15 is low for alcohol (being multiplied by just 1.4 between these two generations), higher for tobacco and drunkenness (with the ratio being 1 to 7) and very high for cannabis (a ratio of 1 to 25). Experimentation with tobacco remains high at the age of 15 (55%) despite the major reductions noticed among teenagers [6, 7] and adults [8] over recent years.

Overall, the “experimenters” are more often male although we also see major variations according to the types of products concerned and the age of the teenagers. Consequently, for legal products, including the incidence of alcoholic drunkenness, the overrepresentation of boys, as measured by the sex ratio, is particularly striking at 11 years old, with the gender variation narrowing at the ages of 13 and 15.

In short, although boys tend to experiment earlier and girls later, the latter tend to experiment more intensively, at least up to the age of 15. For tobacco, there is even a slightly higher

propensity for female experimentation at this age.

At the age of 11, fewer than half of all youngsters (41%) state that they have never experimented with any form of psychoactive product (Figure 1). This proportion of abstainers falls sharply with age as only 13% fall into this category at the age of 15. These high levels are chiefly due to alcohol. If alcohol is removed from the equation, experimentation with other products remains extremely marginal. A major change occurs after the age of 13, with almost 6 out of 10 youngsters aged 15 (56%) having already experimented with tobacco or illegal drugs, and almost 3 out of 10 (28%) stating that they have already consumed a legal product (tobacco or alcohol) and at least one illegal product.

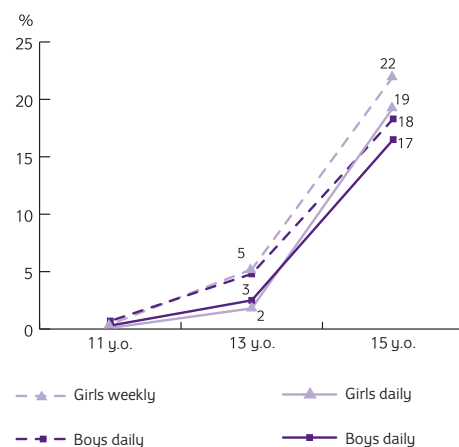
Tobacco consumption

The consumption of tobacco on a weekly basis is virtually inexistent at the age of 11 (Figure 2). At the age of 13, half of those who smoke tobacco on at least a weekly basis are daily consumers. This concerns only 5% of youngsters (girls to the same extent as boys). At the age of 15 however, one teenager in five is smoking tobacco on at least a weekly basis, and mostly on a daily basis with girls being slightly more numerous (22% vs. 18%, $p < 0.05$), although the difference for daily use is insignificant.

Main alcoholic drinks consumed

The questionnaire made it possible to identify five types of alcoholic drink (cider, wine and champagne, beer, premixes and strong alcohol) in addition to a residual category referred to as “other alcohol” (Figure 3). Cider is by far the most frequently consumed alcohol “at the moment” (whether consumed rarely, from time to time or often), ahead of wine and champagne, followed by beer and premixes, and finally “other alcohol” and spirits. Nevertheless, the breakdown of these drinks varies according to the age group. At the ages of 11 and 13, two groups of drinks stand out: cider followed by wine and champagne, which are far more frequently consumed, and in the

Figure 2 - Weekly or daily tobacco consumption by sex and age (%)

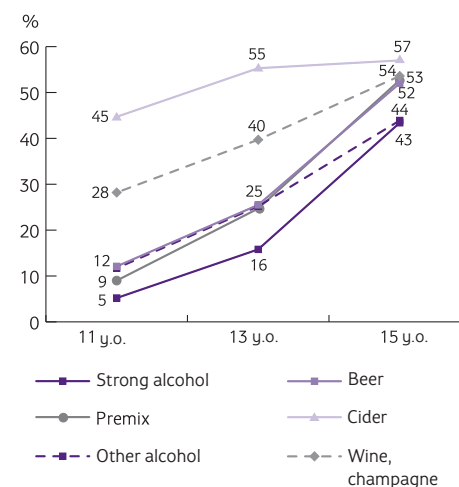


Guide: 22% of 15-year old girls stated that they smoke tobacco each week, of whom 19% stated that they smoke it daily.

	11 y.o.	13 y.o.	15 y.o.
All (daily)	0	2	18
All (weekly)	1	5	20

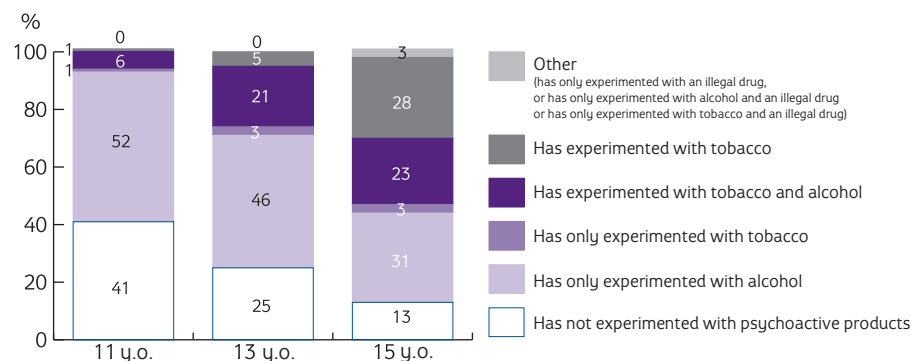
Source : HBSC 2006, analysis by the OFDT

Figure 3 - Types of alcoholic drinks currently consumed by age (%)



Source : HBSC 2006, analysis by the OFDT

Figure 1 - Experimentation with multiple psychoactive products by age (%)



Source : HBSC 2006, analysis by the OFDT

Reading: at 11 years old 52% of students have used at least once alcohol but not other psychoactive product. But 1% of students have already used alcohol at the same time as smoking tobacco and using another illicit product, including cannabis.

other group, beer, premixes and “other alcohols” with spirits lagging behind. At the age of 15, the variations are sharply reduced, although spirits and “other alcohol” continue to trail the rest. It therefore appears that the tastes or consumption opportunities of the youngest consumers lead to a marked preference for sweet, low alcohol drinks such as cider rather than stronger and bitterer drinks such as wine, spirits or beer.

2 Premixes are ready-to-drink mixtures of fizzy drinks and spirits with an alcoholic volume of around 5%, chiefly aimed at youngsters.

3 This is the term used in the questionnaire to refer to spirits, as the latter expression is largely unknown by teenagers.

Premixes do not appear to be more popular than beer or spirits even if they have a higher distribution level than the latter. We should note that even if this ranking changes significantly by the end of adolescence, congruent observations were noted in 2003 among a population group aged 11 to 17 [2] and more recently in 2005 among a group aged 17 [4]. Moreover, there appears to be very few differences between girls and boys for the type of alcoholic drinks consumed.

Consumption at the age of 15

The questionnaire issued to students aged 15 is more detailed, and makes it possible to document the use of illegal products other than cannabis.

Table 2 - Recent usage levels for tobacco, alcohol and cannabis at 15 years of age

	Boys	Girls	sex ratio	All
Tobacco (occasionally)	10	13	0.8*	12
Tobacco (daily)	17	19	0.9ns	18
Alcohol (during the month)	60	57	1.1 ns	58
Alcohol (regularly)	11	5	2.1***	9
Got drunk during the month	20	12	1.7***	16
Cannabis during the month	14	11	1,3*	12
Cannabis (regularly)	5	2	2.7***	3

Occasional smoker: at least once a month but fewer than one cigarette per day.

Guide: *, **, *** and ns: chi-2 test for the comparison between the sexes, significant at the thresholds 0.05, 0.01, 0.001 and non-significant respectively

Source: HBSC 2006, analysis by the OFDT

Tobacco, alcohol and cannabis

At the age of 15, tobacco smoking is more widespread among girls than among boys. However, although the proportion of daily smokers varies very little according to sex, daily consumption appears to be more intensive among boys, who state more often than girls that they smoke at least six cigarettes per day and in particular more than 20 (19% compared to 11%, p<0.05, with 15% of youngsters being concerned).

Almost 6 out of 10 students aged 15 report that they have drunk alcohol during the last 30 days and slightly under 1 in 10 drinks it regularly. The overrepresentation of boys is particularly high for regular consumption and alcoholic drunkenness, which concerns 1 youngster out of 6 over the same period. Similarly for cannabis, the variations between genders are particularly marked and increase with the consumption frequency. At the age of 15, the regular consumption of cannabis lags far behind that of alcohol (3% vs 9%).

Illegal and misused products

With the exception of cannabis, users of illegal or misused drugs tend to be rare (Table 3). The most frequently reported products are inhaled products (glue, solvents, etc.) accounting for 5% of users, followed by cocaine or crack (3%), amphetamines, “medicines taken as drugs” (according to the wording on the questionnaire) which are all round 2%, and finally heroin and LSD which are both below 1%. A residual category of “other products” was mentioned by 8% of youngsters, although no further details are known. In particular, the psychotropic or illegal nature of the substances is uncertain, as is the extent to which they overlap with substances already mentioned, particularly for cannabis which is known under a variety of local names according to its nature, its source of origin and its quality. It should be specified that such users are comparable to experimenters given the age of the respondents.

For all these products, the sex ratio is close to 1 and the variation between the sexes is insignificant, even for ecstasy and amphetamines (1.6 and 1.5 respectively), with the exception of “medicines taken as drugs” for which the experimenters have a high propensity to be girls as is the case for psychotropic medicines in general during adolescence [4]. These insignificant variations are chiefly due to the low number of experimenters concerned at this age, for which the initiation process is not quite complete. As such, this result is generally similar to that observed for cannabis experimentation at the age of 11, which tends to be rare and equally distributed among the sexes.

The variations between the sexes identified in HBSC at the age of 15 for daily consumption of tobacco (sex ratio=0.9) or regular consumption of alcohol (2.1), appear to be lower than those measured in ESCAPAD at the age of 17, in 2005 (1.0 and 2.9 respectively) although this does not apply for the regular use of cannabis (2.7 vs 2.4). This contrast must be viewed against the distribution differential for these products during adolescence: at the age of 15, the prevalence of regular alcohol consumption is similar to that measured at the age of 17 (9% vs 12%), that of daily tobacco addiction exceeds half (18% vs 33%) but that of regular cannabis consumption stands at just a third (3% vs 11%). This result suggests that up to a certain stage of the drug initiation process, boys and girls have be-

Table 3 - Rates of use during the last twelve months of illicit drugs and misused medicines taken as drugs at 15 years old (%)

	Garçons	Filles	sex ratio	Ensemble
Products to inhale	5	5	0.9 ns	5
Cocaine or crack	3	3	1.1 ns	3
Amphetamines	3	2	1,5 ns	2
Medicines used as drugs	1	3	0.3***	2
Ecstasy	1	1	1.6 ns	1
Heroin	1	1	1.2 ns	1
LSD	1	1	0.9 ns	1

Guide: *, **, *** et ns: chi-2 test for comparison between genders, significant at the thresholds 0.05, 0.01, 0.001 et non significant respectively.

Source: HBSC 2006, analysis by the OFDT

haviour patterns far more closely matched than is the case later, and that the interpretation of the sex ratio should take account of the age or the distribution calendar for the products.

Perceived sociability and health in relation to the use of psychoactive products

The survey makes it possible to describe certain aspects of the teenagers' lifestyles. Consequently, at the age of 15, more than one teenager in five (22%) states that he/she spends evenings with friends at least three times a week whereas just over a third (35%) state that they never do so (Table 4). The relationship between this level of sociability and the use of psychoactive substances is extremely significant: the proportion of regular users varies by a factor of 4 to 5 with the frequency of evenings out, which underlines the social nature of such usage.

The vast majority of youngsters aged 15 have a very positive opinion of their health. This opinion is negatively correlated with the use of psychoactive products, particularly tobacco. Health problems related to the use of psychoactive substances are generally only perceptible after several years' use. This result may therefore demonstrate the existence of consumption related to stress and anxiety. Finally, some teenagers may have assimilated the public health message associating the

Table 4 - The regular use of tobacco, alcohol and cannabis according to the number of evenings spent with friends and perceived health levels (%)

		Tobacco	Alcohol	Cannabis
Number of evenings spent with friends during the last seven days	None (35 %)	8	4	2
	1 to 2 (43 %)	18	8	3
	3 et plus (22 %)	33 ***	17 ***	7 ***
Perceived health	Excellent or good (85 %)	15	8	3
	fairly good or poor (15 %)	34 ***	12 *	6 **

Guide: 34.8% stated that they did not spend any evenings with friends over the last 7 days. Among these, 7.8% are daily smokers, *, **, *** and ns: chi-2 test significant at the thresholds 0.05, 0.01, 0.001 and non-significant respectively.

Source: HBSC 2006, analysis by the OFDT

consumption of psychoactive products with health problems. From this point of view, young consumers may therefore be expressing their awareness of the risks they are taking for their future health, an issue which requires further exploration.

Conclusion

■ These initial results clearly show the predominance of alcohol during adolescence. It is quite probable that the high levels of cider, wine or champagne use are explained by their consumption within the family environment, which is certainly much less the case with other drinks. These are either virtually unknown to adults (such as premixes) or have an image far removed from that considered suitable for teenagers in the eyes of adults, such as spirits or beer.

■ Despite the preventive measures, including a ban on tobacco sales to the under 16s in force since 2004 (we should point out that the ban on smoking in bars and restaurants only came into force after the survey), experimentation with tobacco remains relatively common, and daily tobacco consumption concerned more than one 15-year old pupil in five in 2006.

■ The rise in tobacco addiction among adolescent girls has been confirmed, and has today resulted in a pattern of tobacco addiction which occurs slightly later among girls than among boys, but which is more frequent at the age of 15.

■ Cannabis remains the leading illegal drug experimented and used at the age of 15. Experimentation with cannabis remains rare between the ages of 11 and 13, but rises sharply between 13 and 15.

■ With the exception of cannabis, experimentation with illegal or misused substances remains marginal. Most commonly, these are inhalation products and (among girls) "medicines taken as drugs". This finding stresses the early age at which differences emerge between

the sexes where the consumption of psychotropic medicines are concerned, and the important role played by the family environment as a factor in the initiation to some products or behaviours. Let's point on the other hand that the use of inhalation products is generally limited to experimentation, and quickly abandoned as the youngster gets older.

This document does not seek to make a comparison with the results from the previous edition of the survey [1] due among other things to major changes introduced in the questionnaire in order to harmonise it with other French surveys. However, this will be addressed in the report to be published [5]. That said, the results may be compared to those from other surveys carried out within the OFDT framework. As an example, some levels of experimentation with illegal drugs identified in HBSC at the age of 15 in 2006 appear to be close to those measured in ESCAPAD in 2005 at the age of 17 [4], particularly those for cocaine and amphetamines (2.5% and 2.2% respectively in ESCAPAD). This result probably indicates that the distribution of these products became more extensive or began to occur at an earlier age between 2005 and 2006, although caution is required as differences in the questions and interview methods, in addition to the recent nature of the HBSC surveys may be the cause of a certain vagueness regarding the answers due to a lower level of awareness of these products. For all the substances, the comparison with the results of the ESPAD 2003 survey [2] which describes pupils aged 15 has highlighted variations which, although minimal, are fairly difficult to interpret in view of the remarks above. Nevertheless, the levels of experimentation and of regular use of cannabis at the age of 15 are generally the same as those measured at the same age in ESPAD in 2003 (27.4% and 3.6% respectively) which seems to suggest a stagnation of use levels between these dates.

The HBSC survey is an international survey carried out every four years since 1982, under the auspices of the European office of the World Health Organisation (WHO). Currently, more than 41 countries or regions take part, chiefly in Europe, collecting data on behaviour and practices considered prejudicial or favourable to the health of pupils aged 11, 13 and 15, using a standardised methodology. HBSC is self-administered, strictly anonymous, and carried out in the classroom under the supervision of a specially trained researcher. France has participated in this survey since 1994. The sample, which was initially limited to the Midi-Pyrénées and Lorraine regions was extended nationally in 2002.

In 2006, 9,000 schoolchildren in mainland France from CM2 (the fifth year of primary school) to the first year at Lycée (Secondary/High school) in public establish-

ments or private establishments under contract with the state were interviewed. After filtering the data, the final sample included 7,154 pupils (50.3% of whom were girls) almost uniformly distributed among the 11, 13 and 15-year old age groups.

The medical department of the Toulouse Education Authority handles the national coordination for this project, working with the Inserm U558, the Ministry of Education's school education department (DESCO), the department of studies and forecast planning (DEP) and the HBSC development association, with the INPES handling the publication of the report for France. For its part, the OFDT is one of the financial backers for the project and has contributed to preparing the section of the questionnaire concerning legal and illegal drugs, in addition to its analysis.

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