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The use of psychotropic substances after 60 years of age

The processing of data from the 2005 « Health Barometer » (Baromètre santé) survey concerning the use of alcohol, tobacco and psychotropic medicines among senior citizens.

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Around a decade ago, the OFDT introduced a series of surveys intended to monitor the use of psychoactive substances among the population as a whole. The use of such substances by adults is monitored by means of the INPES's Baromètre santé (Health Barometer) survey, in which the OFDT has participated since 2000. This representative national telephone survey is carried out every five years and documents the state of health of the entire population of metropolitan France aged 12 to 75 years old, in addition to their use of psychoactive substances. These substances are mainly used by the younger generations [1], although alcohol, tobacco and psychotropic medicines are also extremely prevalent within the oldest age groups too. Literature in French regarding the use of psychoactive substances is fairly scarce. However, as a result of increases in life expectancy, this section of the population now accounts for a growing demographic segment. The last census identified more than 12 million people aged 60 or over and more than 8 million aged between 60 and 75 years old. Additionally, the impact of the use of psychoactive substances can be greater among members of this population group, whose life expectancy is longer but who are (and see themselves as being) in worse health than previous generations [2].

Just like the survey carried out in 2001 and presented in issue number 16 of Tendances involving the 60-75-year-olds interviewed for the Health Barometer survey in 2000, this analysis is designed in part to bridge this gap by presenting the results of a survey specifically focused on senior citizens based on data from the 2005 Health Barometer survey. Following a description of use patterns among this age group, the analysis will move on to consider a number of related factors and, above all, identify any possible differences resulting from a cessation of professional activity as members of this age group retire.

Major sociodemographic differences between the generations

Whether we are talking about their level of qualification, marital status, education, professional activity or revenues, a host of differences separate the younger and older generations. As an example, the younger generations tend to include far more qualified people. The proportion of people who have not attained

I Méthodology I

The Health Barometer is a national representative telephone survey involving interviewees aged 12-75 years old, the methodology for which is described elsewhere [1]. Here, the term « senior citizens » is used to refer to people aged between 60 and 75 years old, whether retired or otherwise, i.e. a sample of 5,435 people out of a total of 30,514 people surveyed. As this is a survey involving ordinary households, senior citizens living in institutions (retirement homes for example) were not interviewed. However, according to an INSEE survey, the latter account for only 1% of the 60-70 year-olds and 2.5% of the 70-80 year-olds, which in no way adversely affects the representative nature of the sample used here.

The use of the psychotropic medicines identified via the Health Barometer includes the use of anti-psychotics, tranquillisers, sleeping tablets and antidepressants.

The Audit-C test used here was comprised of the following three questions:

1. How often do you drink alcohol?
(Never or once a month, 2 to 4 times per month, 2 to 3 times a week, 4 times a week or more).
2. How many glasses containing alcohol do you consume on a typical day when you drink?
(1 or 2, 3 or 4, 5 or 6, 7 to 9, 10 or more).
3. How often do you drink 6 or more glasses on a particular occasion?
(Never, less than once a month, once a month, once a week, every day or almost).

By adding up the replies, it is possible to propose a score which is highly representative of alcohol abuse and/or dependency. For the purpose of the survey, the trigger threshold is considered as 5 for women and 6 for men, with a maximum of 12 [3].

the level of the baccalauréat (roughly equivalent to the British «A» levels) among senior citizens is well in excess of that noted among the 18-59 age group (71% compared to 49%). The same applies regarding the proportion of widows (14% compared to 1% among younger users), and the proportion of retired people (89% for all senior citizens compared to 23% among the 55-59 year-olds and just 1% among the 45-54 year-olds). Thus, despite the age disparities noted at the time of retirement among individuals and professions, the 2005 Health Barometer confirmed that 60 years of age remains the main age at which professional activity ceases. The socio-professional category (whether current or previous) differs slightly, with a higher percentage of farmers and craftsmen or shopkeepers among the senior citizens, partly as a result of the growing size of the service sector observed within society over recent decades. We should note that a number of individuals did not answer this question, including a high percentage of the «other non-working persons» category, probably because they have never worked or only worked a very long time ago. Finally, the revenue per consumption unit appears to be relatively lower as age increases, which may be a direct effect of retirement. However, we also know that this reduction is significantly less if we take into account real estate or financial assets.

The predominance of the use of legal substances

The use of psychoactive substances varies considerably from one generation to another (Table 1). At 60 years of age, this chiefly concerns legal substances such as alcohol, tobacco, and psychotropic medicines with or without medical prescriptions. The use of cannabis or other illegal substances (such as cocaine, ecstasy or amphetamines, etc) is extremely rare. These characteristics can be explained by a significant generational effect: although alcohol today remains a substance consumed by all generations, cannabis and the other illegal substances are almost exclusively consumed by the youngest generations. Nevertheless, it is likely that as users grow older over the coming years, we will see an increase in cannabis use, firstly among those in their forties but later among senior citizens too, even if age is a factor in the abandonment of cannabis.

The use of tobacco, which remains the most frequently consumed psychoactive substance during the teenage years, tails off in a fairly consistent manner from the age of 20 onwards, the age at which it peaks (Table 1, figures 1 and 2): only 9% of senior citizens stated that they smoked on a daily basis. This reduction is partly due to early deaths caused by smoking.

On the other hand, alcohol appears to be the substance most frequently consumed after the age of 60 (Table 1, figures 1 and 2). Alcohol consumption rises continually in line with the age of the generations observed. Daily alcohol consumption concerns fewer than 1 person in 10 under the age of 40, but 37% of senior citizens (60-75 years old). Paradoxically, the risks of abuse or dependency as measured via the Audit-C test scarcely differ between the generations, unlike the problems caused by alcohol which are more frequently seen at an advanced age [4]. This is chiefly due to the fact that the one-off consumption of a very large quantity of alcohol (i.e. binge drinking) is a practice which tends to decline with age. The table also reveals that senior citizens rarely declare episodes of drunkenness. The use pattern among older users tends to be more regular and less focused on excessive use and episodes of drunkenness [1].

The use of psychotropic medicines (antipsychotics, tranquillisers, sleeping tablets or antidepressants) tends to rise up to the age of 40, before stabilizing at a level of under 25% of users during the year (table 1, figures 1 and 2). The use of antidepressants even appears to be slightly lower among senior citizens than among the 45-60 year-olds (8% vs. 10%). This effect may be due to a propensity on the part of doctors to prescribe fewer antidepressants to more elderly patients, favouring instead other categories of drugs to which they are more accustomed (anxiolytics for example). It may also be the result of lower stress levels following the individual's withdrawal from working life.

Where gender differences are concerned, men aged over 60 tend to use more tobacco and alcohol [1], as is the case for the adult population as a whole. Among senior citizens, the daily use of alcohol is proportionally 2.5 times higher among men than among women (53% compared to 22%). On the other hand, as we have already observed for all generations taken together, the use of psychotropic medicines tends to be higher among women (30% compared to 16% among men, when we consider use during the year).

1995-2005: Sharper reductions in alcohol and tobacco use among men

The daily use of tobacco and alcohol among senior citizens was less frequent in 2005 than in 1995 [1]. This trend is chiefly marked for alcohol, the daily use of which fell from 43% to 37% over the space of 10 years. We should note that alcohol use peaked in 2000 due to use by women which increased significantly among senior citizens

Table 1 - The use of psychoactive substances among 15 - 75-year-olds according to age and gender (%)

		All 15-75 y.o.	Men 15-75 y.o.	Women[3] 15-75 y.o.	All 15-29 y.o.	All 30-44 y.o.	All 45-59 y.o.	All[3] 60-75 y.o.
		n=29 431	n=12 668	n=16 763	n=7 510	n=8 938	n=8 574	n=5 435
Tobacco	Daily	26	30	23***	33	33	23	9***
Alcohol	Daily	14	21	8***	2	7	19	37***
	Audit-C positive	14	21	8***	15	13	16	13***
	Drunkeness/year	15	23	8***	30	16	8	2***
Cannabis[1]	During the year	7	10	5***	19	7	1	0**
Other illegal substances[1,2]	During the year	1	1	0***	2	1	0	0
Psychotropics medicines	During the year	19	13	23***	11	18	24	23

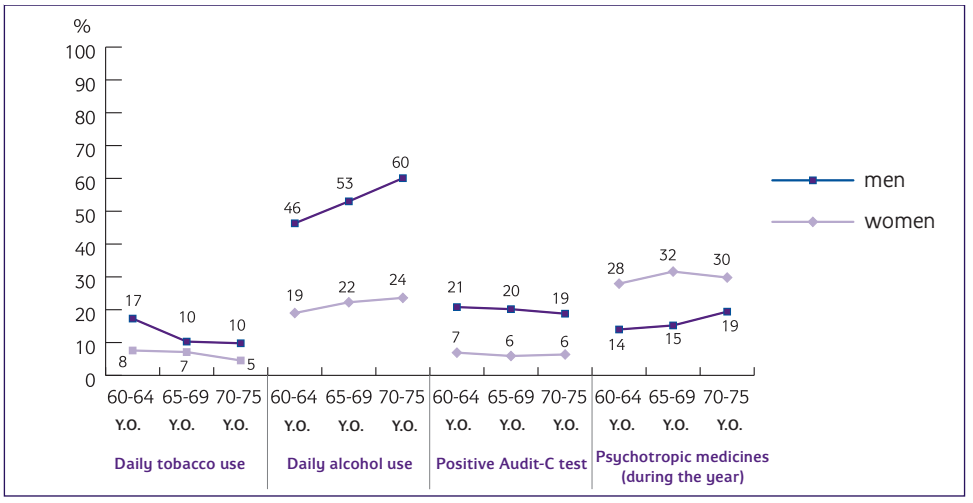
Source: Health Barometer 2005, INPES, OFDT processing

1: The questions concerning cannabis and other illegal drugs were only asked to interviewees aged 15-64 years old.

2: At least one substance from among cocaine, amphetamines, ecstasy, heroin, poppers, LSD and hallucinogenic mushrooms.

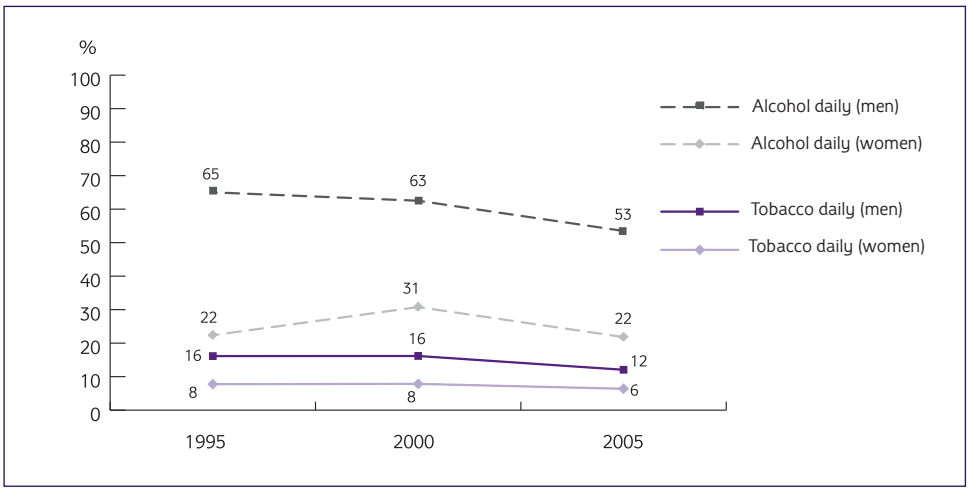
3: Ns,*, **,*** : Chi-2 test respectively non-significant and significant at thresholds of 0.05, 0.01 and 0.001 for comparisons between the sexes and generations.

Figure 1 - The use of alcohol, tobacco and drugs among senior citizens, according to age and gender



Source: Baromètre santé 2005, INPES, OFDT processing

Figure 2 - Changes in the daily use of alcohol and tobacco by senior citizens between 1995 and 2005



Source: Baromètre santé 2005, INPES, OFDT processing

between 1995 and 2000. After stabilising between 1995 and 2000, tobacco use also fell between 2000 and 2005, dropping from 12% to 9%. This decline is due to lower levels of use among men, with a drop of 25% over 5 years in the number of people reporting daily use (12% in 2005 vs. 16% in 2000). As with other sections of the population (including young people), the differences in the levels of tobacco and alcohol use between men and women have tended to narrow among senior citizens. Indeed, compared to 1995, the level of use for women has not declined, with the impact upon their health now comparable to that seen for men [5].

We should point out that the increase in alcohol use with age is chiefly due to the consumption of wine: the percentage of people having consumed wine within the last seven days rises from 21% for the 15-29 age group to 66% among 60-75-year-olds.

The limited impact of the individual's professional situation

The previous results suggest that it would be preferable to «fine tune» the analysis of the factors associated with the main use patterns for psychoactive substances (i.e. legal substances) and, for alcohol, to dispense with the survey into drunkenness and daily use while retaining «at risk» use as measured via Audit-C. Almost three-quarters (72%) of daily users of alcohol aged 60 and over stated that on average they drank 1 to 2 glasses a day. This proportion of moderate users appears lower among the 45-59-year-olds at 58% of daily users. This shows that among this population of senior citizens, daily use does not necessarily mean «at risk» use, hence the decision to only include the Audit-C in this table. This analysis was carried out in two stages. Firstly, by limiting its scope to inactive senior citizens, namely persons aged between 60 and 75 years old, either retired or not working (excluding the unemployed and those with a job) i.e. 95% of all senior citizens. This analysis is shown in table 2. Next, the analysis focused on a comparison between the working/active persons and the retired or unemployed, for the 55 to 64 age group, in order to measure the link between the cessation or loss of a professional activity and the use of psychoactive substances (table 3). Tables 2 and 3 present the bivariate associations between each factor and use patterns, in addition to the multivariate logistic models prepared for all variables, making it possible to produce a measurement based on «all other things being equal».

Among the inactive senior citizens, it also appears that the higher the level of the last qualification obtained, the higher the level of tobacco use (Table 2). Those with a higher education qualification are almost twice more likely to report daily tobacco use than those who have not attained baccalauréat level (12% compared to 7%). This result also remains true in the logistic regressions. On the other hand, no link was observed with the use of psychotropic medicines. For the Audit-C test, the higher education graduates appear to have a slightly higher risk of being «positive» than those who have not attained baccalauréat level. However, this result was not significant in the multivariate analysis.

Living with a partner appears to be related to lower usage levels for tobacco and psychotropic medicines. For both of these substances, living alone appears to provide the ideal conditions for use. We should note that before other variables are checked, those persons living alone following the death of a spouse are in no way different to those living with a partner with regard to their tobacco use, unlike senior citizens living alone for other reasons.

The latter also more frequently score «positive» in the Audit-C test. The logistic regressions confirm these results for the Audit-C and psychotropic medicines. On the other hand, for tobacco, the model shows that living alone without a companion (whether widowed or otherwise) tends to be linked to overuse.

The association with the income per consumption unit differs according to the substance concerned. Although for tobacco and psychotropic medicines, no differences have been noted between the various revenue bands, the association with the risk of alcohol dependency appears to be significant, with 17% of «positives» in the test among those with the highest revenues and 9% among those with the lowest, this result continuing to apply when all other things are equal.

Table 2 - Main use patterns based on socioprofessional characteristics among inactive senior citizens

		Daily use of tobacco		Audit-C test positive		Use of psychotropic medicines during the year	
		%	OR[1]	%	OR[1]	%	OR[1]
Gender	women (réf.)	6	-1-	6	-1-	29	-1-
	men	12 ***	2,4***	20***	3,4***	17***	0,6***
Age	(continuous)		0,9***		1,0 ns		1,0 ns
Qualification	Below bac level	7	-1-	12	-1-	24	-1-
	Baccalaurét level (ref)	11	1,3 ns	14	1,0 ns	21	0,8 ns
	Above bac level	12***	1,4*	15*	0,9 ns	22 ns	0,9 ns
Marital status	living with a partner (réf)	8	-1-	13	-1-	20	-1-
	Alone (non-widowed)	16	2,4***	15	1,4**	31	1,6***
	Alone (widowed)	8***	1,6**	9***	1,1 ns	32***	1,6***
Revenue per consumption unit	< 900 €	8	1,2 ns	9	0,7**	25	1,0 ns
	entre 900 et 1500 €	8	1,2 ns	13	0,7*	23	1,0 ns
	> 1500 € (réf.)	10	-1-	17	-1-	22	-1-
	no reply	8 ns	1,0 ns	11***	0,8 ns	23ns	0,9 ns
Former socio-professional category	farmer	5	0,4*	12	0,9 ns	19	0,7 ns
	craftsman, shopkeeper	10	0,9 ns	17	1,0 ns	17	0,8 ns
	executive (réf.)	13	-1-	19	-1-	19	-1-
	intermediate profession	10	0,9 ns	13	1,0 ns	26	1,1ns
	office worker	6	0,8 ns	9	0,8 ns	27	1,0 ns
	manual worker	10***	1,0 ns	13***	0,8 ns	21**	0,9 ns

Source: 2005 Health Barometer, (INPES), OFDT processing

1: Odds ratio adjusted for all variables in the table. Ns, *,**,*** : Wald's Chi-2 test, respectively non-significant and significant at thresholds of 0.05, 0.01 and 0.001 for the OR.

Table 3 - Main use patterns according to activity status between the ages of 55 and 64

	Daily use of tobacco		Audit-C test positive		Use of psychotropic medicines during the year	
	%	OR	%	OR	%	OR
Comparison between retired/active						
Active/working (réf.)	17	1	16	1	20	1
Retired	12***	0,8 ns	15 ns	1,0 ns	22 ns	1,2 ns
Comparison between unemployed/active						
Active/working (réf.)	17	1	16	1	20	1
Unemployed	23*	1,6*	14 ns	0,9 ns	31**	1,6*

Source: 2005 Health Barometer survey, INPES, OFDT processing

Note: Table 3 does not show all of the variables for the model (these are the same variables as those shown in table 2). Furthermore, we should point out that as the age at which retirement begins was not included in the survey, we firstly carried out the same analysis using closer age bands (i.e. 58-62 years old, and 59-61 years old) in order to limit the "age effect" and we furthermore used a model of the probability of being retired according to sociodemographic characteristics (otherwise known as a propensity score). The results thus obtained did not reveal any major variations. Consequently, only table 3 is shown.

Finally, the link between the use of substances and the former socio-professional category highlighted by the bivariate analysis disappears with the multivariate analysis. In short, apart from a slight under-use of tobacco among farmers, the former socio-professional category for inactive senior citizens has no impact upon the three indicators shown in table 3. This in no way rules out an "exclusion effect" resulting from illness and death occurring before 60 years of age and which visibly varies according to the socio-professional category.

Among the 55-64 year-olds, proportionally fewer retirees than active/working subjects reported that they smoked on a daily basis (Table 3). However, this association is not significant all other things being equal. The arrival of retirement is therefore not connected with the indicators studied (i.e. daily tobacco use, Audit-C and the use of psychotropic medicines during the year). This result contradicts the hypothesis according to which retirees consume fewer psychoactive substances due to the removal of professional stress. On the other hand, the analysis comparing the active/working persons and the unemployed reveals that the latter report higher levels of tobacco and psychotropic medicine use than the active/working group.

Here we should once again stress that additional analyses have shown that the factors associated with the use of psychoactive substances by active/working and retired subjects aged 55 to 64 years old did not differ. The only exception concerns marital life. Its association with the use of psychoactive drugs does not appear to be significant among the active/working subjects although living alone is associated with more frequent reports of use during the year among the retirees (OR = 1.7).

Discussion

It appears that among senior citizens, the higher the qualification level, the higher the levels of tobacco and, to a lesser degree, alcohol use. This is quite noteworthy as it apparently contradicts the current assumption that preventive messages are more likely to be heeded by better educated people. A number of hypotheses may explain this paradox. Firstly, a higher death rate among those from the working classes (and therefore the less qualified) who are more frequently victims of tobacco- and alcohol-related diseases [6]. Next, overuse by women among the better educated sectors of society. Indeed, the use of alcohol and tobacco by women reflects a certain degree of social and economic equality achieved by women during the second half of the previous century [7].

Where professional activity is concerned, the arrival of retirement only appears to be associated with an increase in the use of psychotropic medicines. On the other hand, exclusion from the world of work (in situations of unemployment) is clearly associated with significantly higher levels of tobacco and psychotropic medicine use. This point was already known for young adults [8] and is now confirmed for senior citizens too. Finally, it is also noteworthy that alcohol use is relatively independent of the employment solution for this age group, which is not the case among younger users [8].

With regard to the limitations of this analysis, we should point out that 24% of the men and 19% of the women aged 65 and over have hearing problems, which can make a telephone interview somewhat more difficult [9]. However, this problem is chiefly encountered among those aged 80+, with 40% of people in this age group suffering from such problems. Furthermore, although a certain percentage of elderly people live in medical/social institutions or retirement homes and do not necessarily have a personal telephone line, this only concerns 3% of the 60-75-year-olds while around 12% of those over 75 are concerned. The decision to consider problem use rather than daily use of alcohol as the main indicator is due to the fact that the latter is extremely prevalent but often concerns only low volumes, below the usual recommended limits for senior citizens.

Another limitation of this analysis also requires clarification. The «retirees» category includes some very different people possessing the status of retiree for varying periods, bearing in mind that their retirement may be either voluntary or forced. The 2005 Health Barometer survey does not make it possible to distinguish between these various types of retirees, which would probably have given slightly more qualified results [10]. The next edition of the Barometer scheduled for 2010 will resolve these limitations, by also recording the age at which the person retired.

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