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GPs' attitudes on a healthy lifestyle:

a survey of GPs in Flanders

Abstract

Background
Patients often consider health professionals to be role models for leading a healthy lifestyle but no data is available on tobacco, alcohol, or substance use among GPs in Flanders (northern Belgium).

Aim
To estimate the prevalence of smoking, alcohol, and substance use among GPs, in order to determine factors that influence these habits and to elucidate GPs' attitudes toward a healthy lifestyle.

Design and setting
Online survey-based study in Flanders, Belgium.

Method
Sociodemographic data and individual risk behaviour were collected by an anonymous self-administered questionnaire. GPs and family doctors in training were sent an email request between 1 April and 31 May 2011.

Results
Of 626 responders, 57% were male. The mean age was 45 years. Eight per cent ($n = 50$) were current smokers. Independent risk factors for smoking were: working alone, hazardous alcohol consumption, and smoking cannabis. Fourteen per cent ($n = 86$) consumed alcohol daily and 12% ($n = 73$) admitted at least one episode of binge drinking per month. Being male, cigarette smoking, cannabis use, and long working hours were associated with an increased likelihood of hazardous drinking. Sixteen per cent ($n = 101$) had used sleeping pills and 12% ($n = 72$) had used minor opiates as painkillers in the year before the study. Two-thirds (64%, $n = 399$) of GPs said they would be reluctant to seek medical help if they were misusing drugs or alcohol.

Conclusion
Smoking is uncommon in Flemish GPs; in contrast, alcohol consumption is high. GPs who misuse substances will not seek help readily.

Keywords
alcohol use; general practitioner; smoking; substance use; tobacco use.

INTRODUCTION

Doctors' health behaviour appears to affect patients' attitudes and their motivation to make lifestyle changes.[1–3] Like their patients, however, some family doctors use tobacco, alcohol, and other addictive drugs. This could put themselves, their practices, and the health of the general population at risk; as such, private problems may become a wider social problem.[4–6]

Health behaviours among doctors are a marker of how harmful lifestyle behaviours are perceived in society.[7] In several developed countries for example, smoking among physicians has decreased dramatically. Historically, physicians started smoking earlier because of their higher socioeconomic status; however, when it became clear that smoking is harmful, physicians gave up smoking at a higher rate than the general population.[7–9]

In contrast with tobacco use, many people do not perceive alcohol consumption to be harmful.[10] This may be due to the assumption that regular consumption of a small quantity of alcohol may protect against cardiovascular disease.[10–11] Physicians consume more alcohol than the general population[12] and it has been suggested that the use of opiates and benzodiazepines is five times higher in health professionals than the general public, which could be a result of GPs' familiarity with, and access to, these types of drugs.[13–14] Recreational use of drugs such as marijuana and cocaine is less common among doctors than among the general public.[14] The prevalence of drug and alcohol misuse in health professionals is approximately equal to that of the general public (10–14%).[12]

In Flanders, prevalence data on current smoking, drinking, and drug use among GPs are unknown. This study aimed to determine smoking status, drinking habits, and drug use among primary care physicians. Independent determinants of smoking and hazardous drinking were sought, and GPs were asked about their attitudes toward a healthy lifestyle.

METHOD

Participants and data collection

An online questionnaire that could be disseminated to GPs was created and emailed to Flemish GPs between 1 April and 31 May 2011. Participation was voluntary and anonymous. The website of the Flemish Society of GPs (www.mediwacht.be) and the Interuniversity Centre for Family Doctors (ICHO) provided the electronic contact details of GPs and GPs in training, who were active in 2011. Participating doctors were encouraged to forward the survey to their GP colleagues.

Questionnaire

A cover letter accompanying the questionnaire stated that the purpose of the survey was to know more about substance (smoking, drinking, and drugs) use by family doctors in Flanders. The fact that study participation was anonymous was emphasised. In the introductory email doctors received a password that gave them access to the survey.

The questionnaire was created using an

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How this fits in

Data on substance misuse in GPs are scant and show mixed results. This is the first time to the authors' knowledge that smoking, drinking habits, and substance use have been studied simultaneously in GPs. Compared with the general population, GPs smoke less and drink more. GPs would be reluctant, or find it difficult, to seek medical help if they were misusing drugs or alcohol, and this may influence the quality of care for their patients.

online tool (www.enquetemaken.be) and included questions on:

- GPs' demographics;
- tobacco, alcohol, and substance use;
- attitudes about being a role model;
- advising patients to stop smoking;
- the legal smoking ban in public places;
- the zero-tolerance policy for alcohol in traffic; and
- the willingness to seek medical help, should the GP be misusing substances.

Table 1. Characteristics of responding GPs, *n* = 626

	Male,[a] *n* (%)	Female,[b] *n* (%)	Total, *n* (%)
Age, years[c]			
≤34	65 (18)	137 (51)	202
35–44	38 (11)	71 (27)	109
45–54	125 (35)	42 (16)	167
55–64	115 (32)	17 (6)	132
≥65	16 (4)	0 (0)	16
Household[c]			
Single	29 (8)	34 (13)	63
Single parent	11 (3)	11 (4)	22
Couple (no children)	73 (20)	94 (35)	167
Couple (with children)	236 (66)	123 (46)	359
Other (such as divorced or widowed)	10 (3)	5 (2)	15
Practice[c]			
Alone	187 (52)	50 (19)	237
Duo	54 (15)	52 (19)	106
In group	70 (19)	71 (27)	141
Family doctor in training	48 (13)	94 (35)	142
Location[d]			
Village	245 (68)	186 (70)	431
Town	84 (23)	51 (19)	135
City	30 (8)	30 (11)	60
Hours a week spent working[c]			
<40	30 (8)	51 (19)	81
41–60	160 (45)	187 (70)	347
61–80	143 (40)	26 (10)	169
>80	26 (7)	3 (1)	29

[a]n = 359, 57%. [b]n = 267, 43%. [c]P<0.001, χ^2, degrees of freedom = 1. [d]Not significant.

The time to conduct the survey was approximately 5 minutes. Screening for heavy drinking is very sensitive.[15] Reliable information about alcohol consumption is only likely to be obtained if appropriate survey methods are used. Alcohol use and hazardous drinking were measured using the Alcohol Use Disorder Identification Test-Consumption (AUDIT-C); this comprises the first three questions of the World Health Organization's AUDIT, concerning frequency and the amount of alcohol used, as well as the frequency of binge drinking (defined as 60g of ethanol or ≥5 drinks). Each question was scored 0–4, giving a possible summary score of 0–12. A score of ≥5 was used as an indicator of hazardous drinking, as recommended by the Institute of Health and Society, Newcastle University, UK.[16] Hazardous drinking is defined as a pattern of alcohol consumption that increases the risk of harmful consequences for either the user or others.[17]

Statistical analysis

Prevalence of smoking and drinking behaviours, along with the use of drugs among GPs were calculated using frequency tables. Some of the variables (location, household, type of practice, work hours/week) were categorised. Categorical differences were tested using Pearson's χ^2 test.

For the purpose of logistic analysis, the variables: age, sex, working alone, children, hours worked per week, smoking status, hazardous drinking status, use of cannabis, use of psychotropic medication (anxiolytics, sleeping pills, and antidepressants), and use of minor opiates were dichotomised. The same model of covariables was used for smoking and hazardous drinking. A multivariate stepwise logistic regression was assessed. Statistical significance was set at $P<0.05$. Analysis and statistical processing of the results was performed using SPSS (version 17.0).

RESULTS

Participants

In total, 626 GPs completed the survey; 57% were male and 43% female. The mean age of responders was 45 years. The sample is representative of the GP population in Flanders[18] and their characteristics are outlined in Table 1. Male GPs differed

Table 2. Smoking behaviour among Flemish GPs, *n* = 626

	Male,[a] *n* (%)	Female,[b] *n* (%)	Total, *n* (%)
Never smoker	262 (73)	225 (84)	487 (78)
Former smoker	61 (17)	28 (10)	89 (14)
Current smoker	36 (10)	14 (5)	50 (8)

[a]n = 359. [b]n = 267.

significantly from their female counterparts.

Smoking behaviour

Table 2 shows that most GPs had never smoked (78%), and that male GPs were more frequently former and current smokers compared with their female colleagues (P = 0.003). Of the 50 GPs who smoked at the time of the survey, 25 did so daily; of these, six smoked <10 cigarettes, 17 smoked 10–20 cigarettes, and two smoked >20 cigarettes per day. Eighteen daily smokers (72%) had already tried to stop for health reasons and/or to set a good example as a family doctor. The same reasons for quitting were given by former smokers.

Smokers were more frequently male, single and worked alone. Hazardous drinking and binge drinking more than once a month occurred more frequently in smokers than in those who had never smoked (P<0.001).

Cannabis use was exclusively attributed to current and/or former smokers (22%).

In a multivariate logistic regression analysis, current smokers more frequently worked alone, drank hazardously, and used cannabis than those who had never smoked (Table 3).

Drinking behaviour

Fourteen per cent (n = 86) of responders consumed alcohol daily and 12% (n = 73) admitted at least one episode of binge drinking per month. Compared with male GPs, female GPs drank less often, drank smaller amounts, and were less prone to binge and hazardous drinking (Table 4). Table 4 summarises alcohol use and levels of hazardous drinking among Flemish GPs. Almost all GPs drank alcohol in the year prior to completing the questionnaire. Regular drinkers were defined as those people who consumed 1–2 glasses per occasion and did so 2–4 times a month or 2–3 times a week. Binge drinking occurred in almost half the responders, although for most of those this was not on a regular basis.

One-third of GPs could be considered a hazardous drinker based on their AUDIT-C scores (Table 4). Hazardous drinking occurred most frequently (62%) in younger (<34 years), male GPs. Independent determinants of hazardous drinking were: being a male, not working alone, working >60 hours a week, being a current smoker, or using cannabis (Table 5).

Table 3. Significant predictors of current positive smoking status in GPs

	OR	95% CI	*P*-value
Hazardous drinking	4.19	2.06 to 8.52	<0.001
Cannabis use	10.02	3.30 to 30.48	<0.001
Working alone	2.74	1.26 to 5.94	0.011

Logistic regression including the following covariates: sex (male, female); age (≤45 years, >45 years); practice (alone, in group); household (children, no children); workload (≤60hours/week, >60hours/week); hazardous drinking (yes, no); cannabis use (yes, no); psychotropic drug use (yes, no); minor opiate use (yes, no). OR = odds ratio.

Substance use (medication and illegal drugs)

In total, 128 GPs (20%) said they had used psychotropic medication in the year prior to completing the questionnaire. Sleeping pills were most popular (n = 101, 79%), followed by anxiolytics (n = 34, 27%) and antidepressants (selective serotonin reuptake inhibitors or serotonin norepinephrine reuptake inhibitors) (n = 24, 19%).

Of all 626 GPs, 16% (n = 101) used sleeping pills, 12% (n = 72) minor opiates (codeine and dextropropoxyphene), 5% (n = 34) anxiolytics, and 4% (n = 24) antidepressants. Only three male doctors had used major opiates (oxycodone and fentanyl) in the year prior to completing the questionnaire. Six male and three female doctors stated that they had used amphetamines, cocaine, ecstasy, or methylfenidate.

There was no association between psychotropic medication use and smoking, or psychotropic medication use and hazardous drinking or cannabis use. However, there was a significant association with opiate use (P = 0.01). Cannabis was exclusively (n = 25, 4%), used by GPs aged <34 years. Cannabis users were significantly more likely to be smokers and problem drinkers (p<0.001) .

Habits towards a healthy lifestyle

Almost all GPs (92%) believed they should be role models for patients and society. However, 64% (n = 399) stated they would find it difficult to seek help if they thought they had a problem with excessive alcohol and/or drug use.

The majority of GPs (85%) asked patients about their tobacco use and advised them to stop smoking. Since 2011, there has been an

Table 4. Alcohol use and hazardous drinking (AUDIT-C-score ≥5) among Flemish GPs, *n* = 626

	Male, *n* (%)	Female, *n* (%)	Total, *n* (%)
Drinking frequency	*n* = 359	*n* = 267	*n* = 626
Never	14 (4)	20 (7)	34 (5)
Once/month maximum	14 (4)	36 (13)	50 (8)
2–4 times/month	77 (21)	110 (41)	187 (30)
2–3 times/week	105 (29)	63 (24)	168 (27)
≥4 times/week	71 (20)	30 (11)	101 (16)
Daily	78 (22)	8 (3)	86 (14)
Typical quantity of drinking[a]	*n* = 345	*n* = 247	*n* = 592
1–2	207 (60)	195 (79)	402 (68)
3–4	117 (34)	43 (17)	160 (27)
5–6	18 (5)	8 (3)	26 (4)
7–9	2 (1)	1 (0.4)	3 (1)
≥10	1 (0.3)	0	1 (0.2)
Binge drinking frequency[b]	*n* = 345	*n* = 247	*n* = 592
Never	147 (43)	169 (68)	316 (53)
Less than monthly	123 (36)	63 (26)	186 (31)
Every month	59 (17)	14 (6)	73 (12)
Every week	16 (5)	1 (0.4)	17 (3)
Daily/almost daily	0	0	0
Hazardous drinking[c]	*n* = 359	*n* = 267	*n* = 626
	169 (47)[d]	43 (16)[d]	212 (34)[d]

[a]Number of drinks 10–15g ethanol per occasion. [b]≥5 drinks (≥60g ethanol/day). [c]AUDIT-C score: ≥5. [d]P<0.05, χ^2 degrees of freedom 1, AUDIT-C high or low within sex. AUDIT-C = Alcohol Use Disorder Use Identification Test-Consumption.

overall smoking ban in bars and restaurants in Belgium; 83% (*n* = 521) of GPs supported this measure. However, significantly more non-smokers (87%) than ex-smokers (76%) or current smokers (56%) supported the current smoking ban (*P*<0.001).

The proposed legislative amendment for stricter alcohol control while driving (that is, reducing the alcohol limit while driving from a blood alcohol concentration of 0.5 to 0) was not well received; only 28% of responders supported this draft legislation. Significantly fewer doctors who drank hazardously agreed (16%) than non-hazardous drinkers (35%) (*P*<0.001).

Table 5. Significant predictors of hazardous drinking in GPs

	OR	95% CI	*P*-value
Male sex	5.85	3.64 to 9.40	<0.001
Smoking	4.17	2.08 to 8.36	<0.001
Cannabis use	5.91	1.92 to 18.19	0.002
Not working alone	1.67	1.07 to 2.59	0.023
High workload	1.64	1.07 to 2.51	0.022

Logistic regression including the following covariates: sex (male, female); age (≤45 years, >45 years); practice (alone, in group); household (children, no children); workload (≤60hours/week, >60hours/week); current smoker (yes, no); cannabis use (yes, no); psychotropic drug use (yes, no); minor opiate use (yes, no). OR = odds ratio.

Comparison with the general population

The prevalence of smoking, drinking, and illegal drug use among the Flemish general population is based on the Belgian Health Survey of 2008.[19]

A positive current smoking status was three times more common among the general population (22%) than among GPs (8%), and a greater proportion of GPs tried to quit smoking than the general population (72% versus 63%). However, only 5% of the GPs had not drunk alcohol in the year prior to completing the questionnaire compared with 18% in the general population. Cannabis consumption in the year prior to completing the questionnaire was almost identical in GPs (4%) and the general population (4.6%). The use of amphetamines, cocaine, ecstasy, or methylfenidate was generally low in both GPs (1%) and the general population (1.5%).

DISCUSSION

Summary

Compared with the general population, cigarette smoking and the smoking of cannabis is less prevalent in GPs. However, GPs drink alcohol more frequently. Those working alone are more likely to be smokers. A possible explanation is that they are often male, older, and started working in an era when smoking was pervasive; peer pressure in group practice may stifle smoking habits sooner. Hazardous alcohol and/or cannabis use are also related to smoking.

Nearly all responders said they drink alcohol on a regular basis and at a moderate level. Hazardous drinking occurred in one-third of the studied population; male sex and younger age were associated with this. In the present study, results showed that long working hours increased the risk of hazardous drinking.

Sleeping pills and minor opiates were the most frequently used self-prescribed drugs. Cannabis was only used by GPs aged <34 years, while amphetamines, cocaine, ecstasy, or methylfenidate were consumed rarely (*n* = 6; exclusively male GPs). The majority of GPs reported seeing themselves as role models for their patients. Two-thirds of responders said it would be difficult, or they would be reluctant, to seek help if they were misusing substances.

Strengths and limitations

The main strength of this study is that, to the authors' knowledge, it is the first to investigate simultaneously the prevalence

of smoking, drinking habits, and substance use among a substantial number of GPs in Flanders. Studies that examine the prevalence of tobacco, alcohol, and other substance use simultaneously among doctors are limited.

Data were collected via an online self-administered questionnaire. This method is susceptible to errors such as responders' desire to give socially acceptable answers; an under-reporting of alcohol consumption by 40–60% is not unusual.[20] Taking this into consideration, the volume of alcohol consumption may be much greater in reality.

It was not possible to determine the exact response rate to the survey because GPs were encouraged to forward the questionnaire to their GP colleagues (therefore the total number of GPs receiving questionnaires was not known); this is an important shortcoming. In addition, response bias must be taken into consideration. However, it should also be noted that the reverse is also possible: in an anonymous questionnaire, responders may often give more genuine answers to sensitive questions than they would if they were identifiable.

Another limitation is that a large proportion of responders (23%) were young physicians in training, who may have influenced the overall data. For example, young doctors were the only ones who smoked cannabis.

The study compared prevalence data from the doctors with prevalence data, conducted from a study in 2008, in the general population. More recent data were not available. This comparison should, therefore, be interpreted with caution.

A strength of the study is that the AUDIT-C tool was used because of its brevity and clarity; this has been thoroughly validated and is widely used.[21]

Comparison with existing literature

There is a strong link between the use of tobacco and the use of alcohol and/or cannabis.[22] The smoking prevalence among physicians is reported to be <10% in the US, Scandinavian countries, the Netherlands, the UK, and Australia.[23] A review from the literature found high alcohol consumption prevalence rates among doctors.[12] Long working hours increased the risk of hazardous drinking; this could be due to fatigue and work stress factors leading to job dissatisfaction[24–25] or burnout.[26] A 2010 report showed that younger Norwegian and German doctors have lower rates than older doctors of binge and hazardous drinking.[27]

The amphetamine and cannabis use in this study is in line with US data.[28] As in Flanders, sleeping pills and minor opiates were the most frequently used self-prescribed drugs by US doctors.[14] A Belgian survey of 1500 medical specialists of all kinds,[29] based on the research model, showed comparable results with respect to smoking prevalence (8%) and drinking habits (95%). Specialists were more likely to drink alcohol on a daily basis compared with GPs (20% versus 14%) and used anxiolytics more often (9% versus 5%).

Implications for research and practice

More research needs to be conducted on alcohol prevention in physicians. With the help of reliable data such as these, better ways of planning preventive and interventional strategies for doctors with problems could be implemented. To build a good care system for doctors it is important to know which group is the most vulnerable and which factors influence an unhealthy lifestyle. Countries such as the UK, Canada, and Australia, are developing programmes to identify and treat physicians whose performance is impaired or who are disruptive, and some healthcare organisations (National Clinical Assessment Service in the UK, and the Canadian Medical Association) are targeting prevention and promoting wellness.[30] It would be of great significance if Belgian policymakers, with the aid of physicians, should not only promote healthy behaviour in patients but in doctors as well. Coping strategies and stress management should be incorporated in medical training. Every doctor should have a family doctor, trained to take care of colleagues with psychological or substance-misuse problems; by doing so, a solid and well-structured healthcare system for doctors could be created. It is very difficult when a doctor becomes a patient. Indeed, patients consider doctors as role models for a healthy lifestyle.[31] However, it has previously been reported that doctors have problems coping with their own physical and psychological weaknesses,[32] which may also prevent them from seeking help when they need it.

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Ethical approval

The study protocol was approved by the Medical Ethics Committee of the University Hospital, Brussels (study protocol number: 143201110615).

Provenance

Freely submitted; externally peer reviewed.

Competing interests

The authors have declared no competing interests.

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