

D.6. Tobacco and substance abuse

Popping smart pills: prescription stimulant misuse by university and college students in Flanders

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Background

In the USA, between 7 and 16% of the students use stimulants in a non-medical way. In European countries, data on this phenomenon are scarce. Yet, apart from the question of unfair competition during the exams, the misuse of prescription stimulants can also have detrimental health effects.

Methods

In Flanders, a large-scale repeated quantitative survey among university and college students was performed. This survey started in 2005 in the Antwerp students. In 2009, a follow-up was done, also including the Ghent students. In March 2013, a third wave of the survey was performed, covering almost all Flemish students (n = 210,000). Questions were asked on the prevalence and frequency of licit and illicit drug use, negative consequences, mental health and context of substance use. In the third wave, a module has been included more specifically on attitudes toward stimulant use during the examination period.

Results

In total, 18,000 students filled out the questionnaire in 2009. Ever use of stimulants was 6.9%, past year use was 4.3%. The ever use in males was twice as high (9.6%) compared to females (4.8%). The same held for the past year use: 6.2% and 2.9%, respectively. Only one out of nine students who used in the past year, used these stimulants on a daily basis. Unlike the prevalence and frequency of alcohol use and illicit drug use, the use of prescription stimulants in university and college students was much higher during the examination periods compared to the academic year and the holidays. Of the past year stimulant users, almost 80% used stimulants at least weekly and 52.7% used daily during the examination period (compared to 13.6% and 20.0% of daily users during holidays and academic year, respectively). Extrapolations to the total group of Antwerp and Ghent students, indicate that about 3,000 students use stimulants on a daily basis during the examination period.

Conclusions

A substantial part of Flemish university and college students uses stimulant medication as a 'learning pill'. Monitoring this phenomenon is important to develop the appropriate prevention and information campaigns. During the EPH-conference, the third wave results will be presented.

Key messages

- A substantial part of Flemish students uses prescription stimulants as a 'learning pill'.
- To develop appropriate prevention and information campaigns, quality research data are needed.

Mortality among illicit drug users in Finland: findings from the HUUTI study

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Background

Premature deaths among illicit drug users amount to loss of productivity in a society. In Finland, existing mortality studies are limited by small sample size and focus on certain subgroups. This report examined all-cause mortality and causes of death among large number of treatment-seeking clients during a 14-year period.

Methods

The cohort comprised 4817 clients (3365 males and 1452 females) who sought treatment for illicit drug use at Helsinki Deaconess Institute (HDI) between 1997 and 2008. Clients' data were linked to the national cause of death register to identify all deaths. The follow-up period (or time at risk) was defined as the first day of the first visit to the HDI until death or 31 December 2010.

Results

A total of 496 deaths occurred during 41,567.5 person-years and the crude mortality rate was 1193.2 per 100,000 person-years. The mean follow-up period was 8.6 years (SD = 3.3, range 0.01-13.9 years) and the mean age at death was 33.8 years (SD = 10.2, range 16-68 years). Most deaths (84%, n = 417) occurred among male clients. There were 122 deaths among 15-24 year olds, 189 deaths among 25-34 year olds, 107 deaths among 35-44 year olds, and 78 deaths among clients aged 45 years or older. Two-thirds (65%, n = 322) were deaths from external causes while 35% (n = 174) were from disease-related causes. The four causes which accounted for the greatest number of deaths were accidental poisoning/overdose (n = 165), suicide (n = 108), mental and behavioural disorders (n = 49) and circulatory system diseases (n = 45).

Conclusions

Our findings highlighted the occurrence of death at an early age among illicit drug users. Preventive measures aimed at the leading causes of death will be beneficial in reducing premature deaths.

Key messages

- A 14-year retrospective cohort study identified 496 deaths among 4817 treatment-seeking illicit drug users in Finland via linkage to the national death register. The mean age at death was 33.8 years.
- Most deaths (65%) were from external causes and 35% were from disease-related causes. Accidental overdose, suicide, mental/behavioural disorders and circulatory diseases accounted for the most deaths.

Exploring Substance Use Normalization among Adolescents: A Multi Level Study in 35 countries

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The substance use normalization thesis predicts that adolescent substance users are less likely to report substance use risk factors in high substance use prevalence countries than in low prevalence countries. This study is the first to test whether national population-level alcohol, cigarette and cannabis prevalence rates moderate the strength of the relationship between individual level social and behavioral risk factors and individual level alcohol, cigarette and cannabis use. Data from the 2009/2010 Health Behaviour in School-Aged Children Study (HBSC) provided a sample of 68,045 15 year olds in 35 countries which was analyzed using logistic Hierarchical Linear Modeling (HLM). The strength of the relation between individual level, social and behavioral risk factors and alcohol, cigarette and cannabis use was examined as a function of country level alcohol, cigarette and cannabis use. Consistent with the normalization thesis, the results show that adolescent substance users are less likely to report social and behavioral risk factors in high prevalence countries than in low prevalence countries. However, support for the normalization thesis was only partial in that results show that there are risk factors that predict substance use to an equal degree regardless of country level prevalence rates. The current research shows that the normalization thesis is a useful framework for understanding the contextual aspects of adolescent alcohol and other substance use. The study has implications for drug prevention as it suggests that selective prevention efforts may be particularly useful in low prevalence countries where screening based on risk factors may usefully identify adolescents at most risk for developing drug use problems. This approach may be less useful in high prevalence countries where screening based on risk factors is less likely to satisfactorily identify those at risk for developing drug use problems.

Key messages

- The study establishes that the Normalization Thesis is a useful framework for understanding adolescent drug use.
- The study highlights unique public health policy implications.

Assessing the accuracy of tobacco Industry data on the illicit tobacco trade

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Background

As part of a legal agreement with the EU, Philip Morris International (PMI) is required to commission a yearly report ("Project Star", PS) on the European illicit cigarette trade. PMI uses this data to lobby against public health policies. This paper critically reviews the PS report.

Methods

Review of PS 2010 report. Comparison of data with those from independent sources including a 2010 pan-European survey of 18,056 participants.

Findings

Data covering all 27 EU Member states are entered into an iterative model which appears appropriate. Issues are, however, identified with lack of transparency in the methodological details raising concerns about the quality of the data inputs to the model (for example interview data fail to account for legal cross border sales; illicit estimates rely heavily on tobacco industry empty pack surveys which may overestimate illicit due to their urban bias). The main concern was an over-reliance on data supplied by PMI with inadequate external validation. Eg PMI sales data are validated using PMI prevalence data, yet PMI is unable to provide sales (shipment) data for strategic EU islands that historically played a key role in the illicit tobacco trade and its prevalence estimates differ grossly from independent data. These concerns are in turn reflected in the illicit measurements which, comparison with independent data suggests, exaggerate levels of illicit particularly in countries where cross border shopping is common (Austria, Finland, France) and in Western compared with Eastern European countries.

The iterative model does, however, usefully provide data on the nature of the illicit market independent of seizure data. It suggests that almost a quarter of the illicit cigarette market in 2010 comprised PMI own brands compared with just 5% counterfeited PMI brands. This aspect is hidden in PMI's public representation of the findings.

Conclusions

Due to limitations in data inputs, PS may overestimate illicit in some European countries. Yet the comprehensive model provides useful data on the nature of the illicit trade suggesting PMI's supply chain control is inadequate. PS could be significantly improved with greater transparency, external scrutiny and use of independent data. PMI should be prevented from mis-representing the findings.

Key messages

- Concerns with data inputs suggest the model will overestimate levels of illicit cigarette use particularly in countries where cross-border sales are common and in Western Europe.
- With greater transparency, use of independent data and external scrutiny the model could be improved.

Evolution of socioeconomic inequality in smoking behavior in Portugal: 1987-2006

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Background

In countries where prevalence of smoking is higher among the worse-off, tobacco consumption contributes to socioeconomic (SE) inequalities in health. Southern European countries, however, have traditionally been characterized by a higher prevalence of smoking among high SE groups. We investigated whether this traditional pattern still applied to Portugal by describing the evolution of SE inequalities in smoking between 1987 and 2006.

Methods

We used data from the 4 National Health Interview Surveys (NHIS) carried out so far in Portugal (1987, 1995, 1998/99, 2005/06). Our sample was restricted to people aged 25-79 (N = 135,796). SE status was measured by educational level (in ISCED groups) and income (in quintiles). SE inequalities were measured through odds ratios from logistic regressions on the probability of being current smoker or having stopped smoking, adjusting for sex and age. Analyses were performed separately for men and women.

Results

Educational level had no association with smoking among men in the three first surveys. In 2005/06, it was less common

among men with secondary and tertiary education (OR = 0.76 and 0.55, respectively). Smoking cessation was at all periods significantly less likely among men with no education. Women with secondary and tertiary education were always significantly more likely to smoke (OR = 7.58 and OR = 5.47, respectively, in 2005/06) but also more likely to stop. Income had no significant association with smoking behavior among men except in 2005/06, where richest people had a lower probability of smoking (OR = 0.70). Cessation was significantly more prevalent among high-income men in the last two surveys. Richer women were more likely to smoke and stop smoking in 1998/99 and 2005/06.

Conclusions

Among men, inequality in smoking has become unfavorable to low-education and low-income groups since 2005/06. Among women, an inverse gradient was constantly observed. These results raise serious concerns about future inequalities in health.

Key messages

- The traditional pattern characterized by a higher prevalence of smoking among better-off women, and no socioeconomic gradient among men, persisted in Portugal until the early 2000's.
- The emergence of new social gradients raise serious concerns about future inequalities in health.

Smoking patterns and Depression among Flemish Women during Pregnancy and the Postpartum period

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Background

Symptoms of depression may be an independent contributor to continued smoking during and after pregnancy. Depressed persons may smoke in order to immediately ameliorate their sense of well-being or as a quick reward, which makes

it harder for them to quit smoking compared to non-depressed persons.

We want to obtain insight into the associations between smoking patterns and depressive feelings during pregnancy and postpartum, taking into account several socio-demographic characteristics.

Methods

An observational, prospective, non-interventional study was performed.

Data of 605 women were collected between September 2008 and December 2010 at <16 weeks (T0) and between 32-34 weeks pregnancy (T1) and after 6 weeks postpartum (T2) on the participants' smoking behavior and of their partners, feelings of depression using the Beck Depression Inventory (BDI) and socio-demographic variables (age, educational level, marital status, gravidity, smoking behavior of the partner).

Results

We found significant higher BDI-scores in smokers and initial smokers ($F(4,486) = 12.06$; $p < 0.001$), low educated women ($F(1,496) = 40.39$; $p < 0.0001$), women without a job ($F(1,489) = 6.14$; $p = 0.0136$), pregnant women ($F(2,643) = 40.15$; $p < 0.0001$), women with a smoking partner ($F(1,495) = 5.37$; $p < 0.021$) and women younger than 29 years ($F(1,495) = 7.11$; $p < 0.0079$).

The relationship over time between BDI-score and smoking patterns, taking into account socio-demographic variables, was examined with mixed linear models. Lower educated smokers reported significant more feelings of depression during and after pregnancy compared to smokers with a higher education ($F(8,619) = 2.29$; $p = .02$).

Conclusions

Paying attention to depressive symptoms and offering adapted stop-smoking advice, especially to lower educated women and their smoking partners, might reduce the prevalence of smoking during and after pregnancy.

Key messages

- Recent ex-smokers reported less symptoms of depression compared to (initial) smokers, suggesting that smoking cessation does not aggravate depressive symptoms during and after pregnancy.
- Smoking cessation might be hampered by depressive symptoms and thus interventions that also treat depression may facilitate smoking cessation.