Access to cheaper cross-border cigarettes may decrease smoking cessation intentions in Germany

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Table 1 Multiple linear regression for monthly cigarette tax stamps or sales, 1999–2006

	Outcome = monthly cigarette sales	
Predictor variables	**Unstandardised β**	**Standardised β**
Intercept	2574105.8	
Average daily temperature	123746.2	0.261**
Excise tax	−8721370.0	−0.825**
Number of days in the month	1280219.4	0.142**
		Adjusted $R^2 = 0.779$

**p<0.00

three consecutive times; each increase coincided with the beginning of fiscal years 2003, 2004 and 2005. Thus, high rates in June and lower rates in July (292 million)[5] may be attributed to wholesale distributors ''hoarding'' cigarettes in June in anticipation of higher prices in July when new tax increases take effect.

All correlations between monthly cigarette sales and the predictor variables were significant; the strongest correlation was for excise tax rate ($r = -0.826$, $p<0.00$). In the regression, cigarette excise tax rate remained the strongest predictor of cigarette sales, followed by the average daily temperature and the number of days in the month, which were also significant (table 1).

These results further support the notion that the recent increases in indoor air restrictions, which force smokers outdoors to smoke,[6] may contribute to the seasonal changes in cigarette-smoking behaviour. Our findings point to the importance of controlling for the number of days in a month when examining seasonality. Previous research suggested that February, a winter month in the northern hemisphere, had the lowest cigarette consumption, but February also has the distinction of being the month with the fewest days. Thus, February's status as the month with the lowest cigarette sales[1] may be because of the weather conditions and also because it has fewer days for distributors to purchase tobacco. Although these data are limited to New Jersey for the period 1999–2006, these results are consistent with previous research[1–4] and add to the evidence that cigarette-smoking behaviour has a seasonality component.

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Flavoured tobacco products with marijuana names

Flavoured tobacco products with marijuana names are sold in gas (petrol) stations in the US. The terms kush and purple haze are common names for marijuana. In addition, many rap artists are using these names in their music to describe specific types of marijuana.

The tobacco products are called blunt wraps. Blunt wraps are similar to cigarette-rolling papers, but are made of tobacco. The tobacco companies selling the products are Royal Blunts (www.royalblunts.com) and True Blunts (www.trueblunt.com), subsidiaries of New Image Global Incorporated (http://www.newimageglobal.com). The brands include True Blunts's kush and Royal Blunts's purple haze (fig 1). Kush is slang for Hindu kush, a type of marijuana. Purple haze is slang for a type of marijuana that is purple in colour. According to the companies, kush has a citrus fruit flavour and purple haze has a grape flavour.

Figure 1 Blunt wrap packaging for True Blunts's kush (left) and Royal Blunts's purple haze (right). The products were obtained from a BP Amoco gas station located in Chamblee, Georgia, USA. Photograph provided by George Crawford.

It is widely known among youth that marijuana smokers use blunt wraps to roll cigars filled with marijuana.

Rappers use the terms kush and purple haze (purp, purple and haze) in their music to describe marijuana. In ''Snap Ya Fingers Remix'', Rapper Sean Paul says, ''rollin' up tha kush''. In ''Top Back'', Rapper TI says ''on this purp I blow''.

It seems that the New Image Global company is working to make marijuana names and their tobacco brand names synonymous, thus linking two behaviours.

Tobacco control advocates should collaborate with policymakers and anti-drug advocates in an effort to prohibit or regulate the sale of tobacco products with marijuana names.

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When cigarette prices increase, some smokers reduce the number of cigarettes they smoke or try to quit, whereas others switch to cheaper brands or tobacco products.[1–4] Another way of avoiding an increase in cigarette price is to purchase cigarettes in other countries where prices are lower. Cross-border shopping of cigarettes is attractive for smokers in Germany because it is centrally located in Europe and cigarettes are more expensive in Germany compared with some neighbouring countries. In December 2004 and September 2005, the German government increased cigarette excise tax by € 1.2 cent per cigarette in each case. The purpose of this study was to test the hypothesis that access to cheaper cigarettes through cross-border shopping may decrease smokers' intention to change smoking behaviour before these price increases.

Computer-assisted face-to-face interviews with a representative sample of the German population were carried out. A total of 6126 people aged 14–93 years were interviewed in November 2004 and August 2005 before each tax increase. As the surveys were identical, both samples were analysed together. The mean sample age was 47.27 years (standard deviation 17.69), with 53.59% women and 1868 (30.49%) reporting to be smokers.

Smokers were asked whether the upcoming tax increase would be a reason to reflect on their smoking behaviour, whether they intended to reduce smoking, quit smoking, switch to a cheaper brand or not to change their behaviour, and where they purchased cigarettes. Those who reported purchasing cigarettes in foreign countries were classified as cross-border shoppers.

Table 1 Intention to change behaviour before the cigarette excise tax increases in Germany (n = 1860 owing to 8 missing values)

Access to foreign cigarettes (cross-border shopping)	Intention to reduce smoking	Intention to quit smoking	Intention to switch to cheaper brand	No intention for behaviour change	Σ
No	512 (31.43%)	187 (11.48%)	260 (15.96%)	670 (41.13%)	1629 (87.58%)
Yes	54 (23.38%)	13 (5.63%)	38 (16.45%)	126 (54.55%)	231 (12.42%)
Σ	566 (30.43%)	200 (10.75%)	298 (16.02%)	796 (42.80%)	1860 (100%)
χ^2 (df = 1)	5.98, p<0.05	7.11, p<0.01	0.05, NS	15.35, p<0.001	

In all, 231 (12.37%) smokers reported cross-border shopping of cigarettes. They did not differ significantly from smokers with no cross-border shopping by sex, age, education, employment status, family status, household size, income or the average number of cigarettes smoked daily (ie, nicotine dependence).[5–7] They were more likely to live in a German Bundesland (State) near countries with cheaper cigarettes—that is, Luxemburg, Poland and the Czech Republic (χ^2 (15) = 145.67; p<0.001). Significantly fewer cross-border shoppers reflected on their smoking behaviour because of the upcoming tax increase: 79 (34.20%) with access to foreign cigarettes versus 771 (47.10%) with no access (χ^2 (1) = 13.58; p<0.001). Smokers with access to cross-border shopping differed significantly in their intention to change behaviour before the cigarette excise tax increases (χ^2 (3) = 19.29; p<0.001). Significantly fewer smokers with access to foreign cigarettes intended to reduce or quit smoking and significantly more did not intend to change their smoking behaviour (table 1). There was almost no difference for the intention to switch to a cheaper brand.

As intentions are an important predictor for behaviour change, we may assume that access to cheaper cigarettes across the border also decreases the effect of tobacco tax increases on cessation and reduced consumption. Effective tobacco control measures to reduce the availability of different ways of evading price increases, such as cross-border shopping, are urgently needed to realise the full potential effect of tobacco tax increases.

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Press-released papers are more downloaded and cited

Website hits and particularly pdf downloads provide direct evidence of readers' interest in papers published in journals. *Tobacco Control*'s website has allowed examination of web hits and downloads each month and cumulatively since March 1998 (issue 7-1).

In March 2006, we examined website data and citations shown on the Institute for Scientific Information's Web of Science for all 553 original articles, reviews, editorials and special communications published in *Tobacco Control* and its peer-reviewed supplements from issue 7-1 till issue 13-2, comparing press-released and non-released articles. Articles published subsequent to 13-2 (June 2004) were not examined because publication lag times would have meant there would have been few citations to papers published after that time.

Press releases were issued to over 1000 media outlets around the world by the *BMJ*'s press office for 47 original articles published during the study period (table 1).

Press-released papers received 2.3 times more web hits than non-press-released papers (p<0.001), 2.5 times as many pdf downloads (p<0.001), and were 2.1 times more likely to be cited (p<0.001). Eleven papers (23.4% of those press released) which received more than 20 citations (range 21–90) in the sample period accounted for 58.6% of all citations for press-released papers.

Papers are selected for press release because of their anticipated newsworthiness. Newsworthiness is a subjective quality that reflects staff and editor's judgements about the likely interest that journalists will have in a paper's findings. It is not a judgement that is necessarily governed by the ''importance'' of a paper to the research community. When this judgement is accurate and a press release stimulates widespread news coverage, literally hundreds of millions of people globally may be exposed to the story, some of whom will have personal or professional interests in wanting to then locate and read the research article. A recent paper by SC on the effect of Kylie Minogue's breast cancer diagnosis on mammography screening[1] received coverage in over 950 news outlets, including the Chinese *People's Daily* and *Pravda*.

This study design does not allow anything more than speculation about whether it is a paper's contents or the fact it has been press released which is responsible for the more than doubling of web visits, downloads and subsequent citations. However, Philips *et al* showed that research articles published in the *New England Journal of Medicine* which were reported in the *New York Times* received 72.8% higher citations in their first year after publication than articles not reported in the newspaper. Their study included a 3-month period during which the *New York Times* was on strike but still produced an undistributed ''edition of record''. Articles covered by the newspaper in that 3-month period were no more likely to be cited than articles not reported by the newspaper.[2]

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Table 1 Press releases issued by the *BMJ*'s press office to over 1000 media outlets around the world

	Mean website hits	Mean pdf downloads	Mean citations
Press released (n = 47)	7430	969	13.98
Non-press released (n = 506)	3227	393	6.676
Total (n = 553)	3584	442	7.297