Health-related behaviours

Tobacco marketing awareness on youth smoking susceptibility and perceived prevalence before and after an advertising ban

Crawford Moodie*, Anne Marie MacKintosh, Abraham Brown, Gerard B. Hastings

Background: The Tobacco Advertising and Promotion Act (TAPA) was implemented in the United Kingdom in 2003. This study is the first to assess its impact on young people, examining smoking susceptibility (intention to smoke among never smokers) and perceived prevalence across three British cross-sectional samples (aged 11–16) before and after the introduction of the ban. Methods: Three in-home surveys (n = 1078, 1121 and 1121) were conducted before (1999 and 2002) and after (2004) the implementation of the TAPA. Results: Significant declines in awareness of tobacco marketing and perceived prevalence occurred across the three waves. Higher levels of awareness and perceived prevalence were associated with increased susceptibility, but direct measures of susceptibility remained stable. Conclusions: The TAPA is protecting young people in United Kingdom from tobacco marketing and reducing perceived prevalence, both of which are linked to susceptibility. The stability of susceptibility across the three waves is probably best explained by both the partial implementation of TAPA at the final survey point and the time such effects take to emerge. The evidence from this and previous studies is, however, that, ultimately, they will appear.

Keywords: susceptibility, tobacco advertising, youth

Introduction

Smoking represents a serious global health issue given that it has been unequivocally established that exposure to tobacco smoke causes significant mortality and morbidity.1 Britain, like many countries, was initially slow to react to the health threat posed by tobacco consumption, a delay that could have resulted in millions of pre-mature deaths.2,3 A significant shift in governmental policy was evidenced with the White Paper Smoking Kills in 1998,4,5 with the UK government promising to implement a series of measures with the aim of reducing smoking prevalence among both young people and adults.6 The optimal strategy for reducing tobacco consumption involves integrating a comprehensive tobacco control policy,7 which is exactly the multifaceted approach that the UK government has adopted as part of its public health strategy. The government has clearly delivered the promises made back in 1998 by ratifying, subsequently enacting and even extending upon the Framework Convention for Tobacco Control (FCTC) protocol, with a recent survey using the Tobacco Control Scale finding United Kingdom to be the second most progressive European country in terms of tobacco control.8 This grading was improved to first place at the 2007 European Conference on Tobacco or Health, following the UK’s recent implementation of smoke-free public places legislation. However, notwithstanding these encouraging policy developments,9 attempting to counterbalance the tobacco industry’s powerful10,11 and well resourced12 marketing efforts remains a formidable task.

The UK Tobacco Advertising and Promotion Act (TAPA) of 2002 has been introduced incrementally with the first three phases, the main advertising ban, a ban on promotions and a ban on sponsorship of domestic sporting events, implemented between February and July 2003. Subsequently, restrictions were placed on point of sale (POS) advertising in December 2004 and a ban on brand-sharing and international sponsorship came into effect in July 2005. The TAPA is on a par with the Tobacco Advertising Prohibition Act of Australia and the Tobacco Products Control Amendment Act of South Africa, and is more comprehensive than the Master Settlement Agreement (MSA) in the United States and Tobacco Hazard Control Act in Taiwan, both of which allow advertising in magazines and place few restrictions on POS advertising. This study is the first to examine the impact of the TAPA on young people, and allows for identification of further changes that may be necessitated to improve upon existing policy.

Although, the tobacco industry vehemently denies targeting young people,13 internal tobacco industry documents from the United Kingdom, United States and Taiwan reveal that it does, and indeed that tobacco companies depend on the youth smoking market for their long-term survival.14–16 Research has consistently revealed that tobacco advertising and promotion increases the likelihood that adolescents will start to smoke, whether employing cross-sectional research,17–24 prospective research,25–28 time series studies30 or systematic reviews.31 The cumulative evidence indicates that there is a dose-response relationship, where greater exposure to advertising and promotion results in higher risk, even when controlling for known causative factors such as low socioeconomic status, parental and peer smoking.32

Smoking is often alluded to as a paediatric disease,33 not because the negative health consequences of smoking are restricted to youth, but because onset typically occurs in adolescence.22 Given the addictive nature of nicotine subsequent quitting often proves very difficult, for adults and
adolescents alike.\textsuperscript{34,35} The vulnerability of children both to tobacco advertising and to smoking makes prevention a cornerstone of tobacco control.

A particularly useful measure for calibrating the extent to which young people who have never smoked intend to smoke in the future is the concept of ‘susceptibility’.\textsuperscript{17,21,26,36} It builds on intention to smoke, which is known to be a strong predictor of future smoking.\textsuperscript{37–39} Previous cross-sectional research has used a measure of susceptibility to assess the impact of a long-standing ad ban in Norway, showing a clear link between exposure to tobacco marketing and stated intentions to smoke when older.\textsuperscript{40} However, this study, which provides the foundation for the present research, assessed future smoking intentions among both smokers and never smokers (as opposed to only never smokers), which limit the findings somewhat given that recent longitudinal research has found intention to smoke to only have predictive value with never smokers.\textsuperscript{11}

A further limitation, as the authors acknowledge, was that this study did not examine the interaction between susceptibility and perceived prevalence. It is well-established that social influences such as peer, parental and sibling smoking increase the likelihood of smoking initiation and are strongly predictive of smoking behaviour in young people.\textsuperscript{21,42–48} For adolescents, peers, in particular, have a profound influence on tobacco consumption\textsuperscript{23,49} and also a range of potentially addictive behaviours such as drug use,\textsuperscript{50–53} alcohol use,\textsuperscript{54,55} and gambling behaviour.\textsuperscript{56,57} Peers represent such a strong influence that young people who simply overestimate the prevalence of smoking among their peers, as with other health-risk behaviours such as alcohol and drug use, are more likely to engage in these behaviours as a result of these erroneous beliefs.\textsuperscript{58–62} Although, less well-researched, the same appears to apply to susceptible never smokers; the Global Youth Tobacco Survey (GYTS) shows them to have elevated rates of perceived smoking prevalence.\textsuperscript{23} This study also found that susceptible never smokers were more involved with tobacco marketing, although this was assessed using only a single item and therefore needs further research.

Our study builds on Braverman and Aaro’s study and extends it in two ways. First, it includes a measure of perceived prevalence as well as future intentions to provide a more descriptive measure of susceptibility. Second, the study design comprised surveys before and after the United Kingdom ad ban came into place. Although these are cross-sectional, this still gives an indication of the effects an ad ban can have on the crucial measure of susceptibility.

### Methods

#### Design

Data comes from the first three waves of a long-term study examining the impact of the TAPA on young people. The first wave was conducted in Autumn 1999 (more than 3 years before TAPA) and the second in Summer 2002 (~6, 9 and 11 months before the main advertising, promotion and domestic sponsorship regulations, respectively, i.e. the first three phases of TAPA). The third survey wave took place in Summer 2004, ~12 months after the third phase of TAPA (domestic sponsorship) and 6 months prior to the fourth phase (POS restrictions).

The fieldwork comprised face-to-face interviews conducted in-home, by professional interviewers, accompanied by a self-completion questionnaire to gather more sensitive data on smoking behaviour. Parental permission and participant consent were secured prior to each interview.

#### Sample

At each wave, a cross-sectional sample of 11–16-year-olds was drawn from households across the United Kingdom, using random location quota sampling. The initial sampling involved a random selection of 92 electoral wards (88 at wave 1), stratified by Government Office Region and ACORN (A Classification of Residential Neighbourhoods), a geodemographic classification system that describes demographic and lifestyle profiles of small geographic areas to ensure coverage of a range of geographic areas and socio-demographic backgrounds. All wards covering the islands, areas north of the Caledonian Canal, or with fewer than three urban/sub-urban Enumeration Districts, were excluded from the sampling frame for cost and practicality reasons. Within each of the selected 92 wards a quota sample, balanced across gender and age groups, was obtained. A total of 1078 adolescents participated in wave 1 (W1), 1121 in wave 2 (W2) and 1121 in wave 3 (W3), with our main analyses concentrating on the 1814 never smokers. Table 1 provides details of the characteristics of participants at each survey wave.

#### Measures

##### General information

Age, gender and smoking by mother, father, siblings (if any) and close friends was obtained. Social class was assessed via occupation of breadwinner, a standard approach employed by previous research.\textsuperscript{57}
Table 2 Measures of awareness of specific tobacco marketing channels

<table>
<thead>
<tr>
<th>Adverts</th>
<th>Promotions</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Adverts for cigarettes on large posters or billboards in the street</td>
<td>(4) Free trial cigarettes being given out or offers to send away for free</td>
</tr>
<tr>
<td>(2) Adverts for cigarettes in newspapers or magazines</td>
<td>(5) Free gifts from the shop keeper when people buy cigarettes</td>
</tr>
<tr>
<td>(3) Signs or posters about cigarettes in shops or on shopfront:</td>
<td>(6) Free gifts when people save coupons or tokens from inside cigarette packs</td>
</tr>
<tr>
<td>on shop windows on shop doors on cigarette display units inside shops</td>
<td>(7) Free gifts when people save parts of cigarette packs</td>
</tr>
<tr>
<td>on clocks inside shops on staff aprons or overalls on signing mats inside shops</td>
<td>(8) Free gifts showing cigarette brand logos being given out at events such as concerts, festivals or sports events</td>
</tr>
<tr>
<td>some other signs or poster about cigarettes (in shops or on shopfronts)</td>
<td>(9) Special price offers for cigarettes</td>
</tr>
<tr>
<td></td>
<td>(10) Promotional mail, from cigarette companies, being delivered to people's homes</td>
</tr>
<tr>
<td></td>
<td>(11) Clothing or other items with cigarette brand names or logos on them</td>
</tr>
<tr>
<td></td>
<td>(12) Competitions or prize draws linked to cigarettes</td>
</tr>
<tr>
<td></td>
<td>(13) Famous people, in films or on TV, with a particular make or brand of cigarettes</td>
</tr>
<tr>
<td></td>
<td>(14) New pack design or size</td>
</tr>
<tr>
<td></td>
<td>(15) Internet sites promoting cigarettes or smoking (do not include anti-smoking sites)</td>
</tr>
<tr>
<td></td>
<td>(16) E-mail messages or mobile phone text messages promoting cigarettes or smoking (do not include anti-smoking messages)</td>
</tr>
<tr>
<td></td>
<td>(17) Leaflets, notes or information inserted in cigarette packs</td>
</tr>
<tr>
<td></td>
<td>(18) Can you think of any sports or games that are sponsored by or connected with any makes or brands of cigarettes?</td>
</tr>
<tr>
<td></td>
<td>(19) Can you think of any other events or shows that are sponsored by or connected with any makes or brands of cigarettes?</td>
</tr>
</tbody>
</table>

Smoking susceptibility

Never smokers were those who indicated that they had never tried or experimented with smoking, not even a few puffs. Never smokers were further classified as susceptible or non-susceptible on the basis of their response to the item 'Which of these best describes whether or not you think you will be smoking cigarettes when you are 18 years old?' with the response categories: when I am 18, I definitely will not be smoking, I probably will not be smoking, I probably will be smoking and I definitely will be smoking. In keeping with previous research,21–23,26,63 non-susceptible never smokers were those who indicated that they would 'definitely not' smoke in the future, with susceptible never smokers those whose response was anything other than definitely not.

Awareness of tobacco marketing

Awareness of three broad types of tobacco marketing was assessed: (i) advertising (ii) promotions and (iii) sponsorship (sports/events/shows). For advertising and promotions, participants were given a series of 17 cards with examples of different forms of tobacco marketing (table 2) and asked to indicate whether or not they had come across cigarettes being marketed in each of these ways. For sponsorship, participants were asked if they could think of any sports or games that are sponsored by or connected with any makes or brands of cigarettes. Unfortunately, the nature of the questions asked in relationship to sports sponsorship did not allow domestic and international sponsorship to be differentiated. The number of channels through which participants had noticed marketing was calculated by counting the number of positive responses for each of the 18 channels listed in table 2.

Perception of perceived prevalence

Perceived prevalence of peer smoking was assessed using the item: 'How many 15-year-olds do you think smoke at least one cigarette a week?' measured on a 7-point scale: none, very few, a few, about half, most, almost all and all. Responses were also dichotomized into 'overestimated' and 'not overestimated' to allow comparison of those overestimating prevalence at each wave. The nearest 'correct' answer would be 'very few' or 'a few', given that 20% of 15-year-olds in this study were regular smokers. To allow comparison of those overestimating prevalence at each wave responses of 'about half' or more were coded as 'overestimated'.

Statistical analysis

Data were analysed using SPSS Version 13. Percentages were weighted for age, gender and social class to adjust for slight differences in sample profiles between survey waves. All multivariate analyses were conducted on unweighted data. Logistic regression was used to determine whether any changes occurred, post-ban, in (i) awareness of specific marketing channels, (ii) the proportion who overestimated smoking prevalence for 15-year-olds and (iii) the proportion of susceptible never smokers. The logistic regression also examined whether any relationship existed between susceptibility and (i) overall tobacco marketing awareness and (ii) perceptions of smoking prevalence among 15-year-olds. Multiple regression was used to determine changes across survey waves in (i) the number of channels through which never smokers could recall tobacco marketing and (ii) never smokers' perceptions of smoking prevalence among 15-year-olds.

Sixteen separate logistic regression models were run with awareness of each tobacco marketing channel as the dependent variable, controlling for age, gender, social class, parental smoking, sibling smoking, close friend smoking, parental presence during the interview and survey wave. Changes in awareness of marketing among never smokers were examined at W3 (post-ban) relative to W2 (recent pre-ban) and also between the two baseline waves (W1 relative to W2).

Results

After excluding cases missing information for smoking status (n = 46), it was found that 56% (n = 1876) were never smokers. Among these, 1876 never smokers, 1814 (97%) provided information on intentions to smoke, with 76% categorized as non-susceptible and 24% susceptible.

Awareness of tobacco marketing

There were statistically significant declines in awareness of any form of tobacco marketing across the three waves; from 94% at W1 to 84% at W2 and 76% by W3 (table 3). The average number of channels encountered decreased from 4.16 at W1 to 2.35 at W3. Multiple regression analysis showed a negative effect post-ban, relative to W2, on the number of channels encountered (P < 0.001, Adjusted R² = 0.140), when controlling for demographics, smoking related measures and parental presence (F₇,₁₈₉₀ = 45.039, P < 0.001, Adjusted R² = 0.140).

In terms of awareness of specific tobacco marketing channels, those with awareness levels below 10% are not presented in table 3 but are included in the analysis. Prior to ban the most salient channel was posters/billboards, closely followed by
estimating increased by 19%. 

pants 'overestimated' prevalence decreased post-ban (table 3). Overall, partici-
to any close friends smoking, either parent smoking, age, lower

Table 3 Awareness of tobacco marketing and proportion overestimating smoking prevalence

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Wave 1 Pre-ban 1999</th>
<th>Wave 2 Pre-ban 2002</th>
<th>Wave 3 Post-ban 2004</th>
<th>Pre-ban 1999 versus Pre-ban 2002</th>
<th>Post-ban versus Pre-ban 2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awareness</td>
<td></td>
<td></td>
<td></td>
<td>Adj OR 95% CI</td>
<td>Adj OR 95% CI</td>
</tr>
<tr>
<td>Any tobacco marketing</td>
<td>94 84 76</td>
<td>3.18 2.128 4.751</td>
<td>&lt;0.001</td>
<td>0.56 0.418 0.744</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Promotions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Store/shopfronts</td>
<td>69 56 50</td>
<td>1.77 1.398 2.231</td>
<td>&lt;0.001</td>
<td>0.79 0.633 0.990</td>
<td>0.04</td>
</tr>
<tr>
<td>Posters/billboards (R)</td>
<td>78 65 46</td>
<td>1.85 1.438 2.388</td>
<td>&lt;0.001</td>
<td>0.41 0.327 0.522</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Newspapers/magazines (R)</td>
<td>46 29 27</td>
<td>2.07 1.635 2.628</td>
<td>&lt;0.001</td>
<td>0.88 0.688 1.131</td>
<td>ns</td>
</tr>
<tr>
<td>Sponsorship</td>
<td>47 30 21</td>
<td>2.28 1.761 2.942</td>
<td>&lt;0.001</td>
<td>0.59 0.450 0.782</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Sports sponsorship (DR)</td>
<td>46 28 19</td>
<td>2.34 1.802 3.036</td>
<td>&lt;0.001</td>
<td>0.55 0.413 0.732</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Promotions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Free gifts (R)</td>
<td>41 24 14</td>
<td>2.44 1.891 3.144</td>
<td>&lt;0.001</td>
<td>0.49 0.364 0.663</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Special price (R)</td>
<td>36 29 18</td>
<td>1.44 1.125 1.833</td>
<td>0.004</td>
<td>0.55 0.417 0.715</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Branded clothing</td>
<td>24 14 15</td>
<td>1.59 1.167 2.155</td>
<td>0.003</td>
<td>1.07 0.778 1.471</td>
<td>ns</td>
</tr>
<tr>
<td>Famous people in Films/TV</td>
<td>17 12 12</td>
<td>1.74 1.266 2.386</td>
<td>0.001</td>
<td>0.99 0.706 1.400</td>
<td>ns</td>
</tr>
<tr>
<td>New pack design or size</td>
<td>14 8 9</td>
<td>1.86 1.285 2.679</td>
<td>0.001</td>
<td>1.06 0.714 1.587</td>
<td>ns</td>
</tr>
<tr>
<td>Proportion overestimating prevalence among 15-year-old</td>
<td>79 77 69</td>
<td>0.85 0.635 1.140</td>
<td>ns</td>
<td>0.69 0.522 0.907</td>
<td>0.008</td>
</tr>
</tbody>
</table>

Odds Ratio (OR)

(R) indicates new regulation was introduced between wave 2 and wave 3

(DR) indicates that regulation on sponsorship was introduced between wave 2 and wave 3 for domestic events only.

Data have been weighted for age, gender and social class. Base: never smokers. Weighted base numbers for each wave range as follows: Awareness measures—Wave 1 (558–559), Wave 2 (617–618), Wave 3 (638–639), Smoking Prevalence measures—Wave 1 (507), Wave 2 (565) and Wave 3 (564)

store/shopfront. Following the ban store/shopfront, which had yet to be regulated, was at least as salient as posters/billboards. Awareness decreased across all channels between W1 and W2. Between W2 and W3, awareness decreased in newly regulated channels—posters/billboards, free gifts and special price. Despite regulation, awareness of press advertising did not show a decrease beyond W2. Reductions were also seen for some of the channels that had yet to be regulated. For example, tobacco marketing in store, which decreased from W1 onwards, despite not being regulated until after W3. Awareness of branded clothing, famous people smoking and new pack design, which had not been subject to any new regulation, did not show any reduction beyond W2.

Perceived prevalence of smoking and relationship with tobacco marketing awareness

Multiple regression, comparing W3, post-ban with W2, pre-ban, found that perceived prevalence decreased following the ban ($F_{7, 1707} = 26.391, P<0.001$, Adjusted $R^2 = 0.094$, $\beta = -0.088$). Perceived prevalence was also positively related to any close friends smoking, either parent smoking, age, lower social class and number of channels through which participants had encountered tobacco marketing. Overall, participants ‘overestimated’ prevalence decreased post-ban (table 3). For each additional channel encountered, likelihood of overestimating increased by 19%.

Susceptibility and association with perceived prevalence and tobacco marketing

Logistic regression analysis examined the relationship between susceptibility as the dependent variable and overall tobacco marketing awareness, perceived prevalence of 15-year-olds and survey stage, after controlling for demographic, smoking related variables and parental presence (table 4). The analysis was run on 1709 (unweighted) never smokers who had provided data on all the necessary independent variables. Susceptibility did not decrease post-ban but it was positively related to the number of channels through which participants encountered tobacco marketing and to their perceptions of the prevalence of smoking. For each additional form of tobacco marketing that never smokers were aware of, their odds of being susceptible increased by 7%. Compared with never smokers who perceived that ‘very few or none’ 15-year-olds smoke, those who perceived ‘a few smoke’ were more than twice as likely to be susceptible (Adjusted OR = 2.14) and those who perceived ‘about half to all smoke’ were more than 2.5 times as likely to be susceptible (Adjusted OR = 2.59). Susceptibility was also positively related to having any siblings who smoke (Adjusted OR = 1.96) and being female (Adjusted OR = 1.53). It was negatively related to age (Adjusted OR = 0.90), indicating that likelihood of being susceptible lessened as never smokers aged.

Discussion

Awareness of tobacco marketing is a policy specific measure related to the TAPA, and would therefore be expected to decrease for newly regulated channels. The linear decrease in awareness across the three survey waves shows that the TAPA has fulfilled its primary purpose of protecting young people from tobacco marketing. It also complements the findings of research with British adults, which shows similar declines in pre-ban and post-ban awareness. The effects of the legislation are further demonstrated by the fact that marketing activities not subject to regulation (e.g. new pack designs, cigarette logos on clothing and famous people smoking on TV or films) saw no reduction in awareness following implementation, with the exception of store/shopfront. Even with the reduction of tobacco marketing awareness observed with respect to stores/shopfronts, it was less steep than with regulated channels such as posters/billboards.

It is important to explain the decline in awareness between the two pre-ban surveys, which may appear, at first, to undermine the value of the advertising ban. However, in anticipation of the impending ban, which was unexpectedly delayed, advertising levels increased dramatically in late 1999, coinciding with W1 fieldwork, but between W1 and W2 reduced even
susceptibility.23 Our research, looking at a much broader range of perceived prevalence.67 Cross-sectional research has high-
tobacco marketing exposure is associated with elevated levels
Previous experimental research has indicated that increased
marketing awareness and perceived prevalence are, in turn,
these achievements are important because both tobacco
regulated media.
channels, a reduction that has continued post-ban in the
pre-ban decreases in awareness that were observed across most

Parental smoking
Neither parent smokes 875 1.00 0.012
Either 696 1.22 0.95 1.57 0.120
Not sure/not stated/no
mum, no dad 156 1.80 1.21 2.67 0.003

Gender
Male 852 1.00 <0.001
Female 857 1.53 1.22 1.94 <0.001

Social Class
ABC1 718 1.00 <0.001
CZDE 991 0.80 0.63 1.01 0.063
Age 0.90 0.83 0.97 0.006

Parental presence (during interview)
Not present 526 1.00 0.003
Present all the time 814 0.75 0.57 0.99 0.042
Present some of the time 369 1.22 0.89 1.66 0.210
Number of types of tobacco marketing aware of
Perception of prevalence of smoking among 15-year-old
Very few or none smoke 137 1.00 0.002
A few smoke 307 2.14 1.19 3.85 0.011
About half to all smoke 1265 2.59 1.51 4.44 <0.001
Survey Wave
W2 - 2002 - Pre-ban 582 1.00 0.566
W1 - 1999 - Pre-ban 564 1.16 0.87 1.54 0.315
W3 - 2004 - Post-ban 563 1.12 0.84 1.49 0.430

Odds Ratio (OR)

more dramatically.66 This helps to explain the substantial pre-ban decreases in awareness that were observed across most channels, a reduction that has continued post-ban in the regulated media. Following the TAPA, there has also been a significant drop in the perceived prevalence of smoking. This study shows that these achievements are important because both tobacco marketing awareness and perceived prevalence are, in turn, linked to susceptibility and thus to the onset of smoking. Previous experimental research has indicated that increased tobacco marketing exposure is associated with elevated levels of perceived prevalence.67 Cross-sectional research has high-
lighted the relationship between these two variables and also their predictive value on both current tobacco use68 and susceptibility.23 Our research, looking at a much broader range of tobacco marketing, supports the conclusion that awareness influences smoking susceptibility via peer norms.69

Importantly, it also shows that each additional form of tobacco marketing that never smokers were aware of leads to a 7% increase in susceptibility. This finding adds to previous research in Norway where, despite a long-standing comprehen-
sive tobacco-advertising ban, even limited marketing exposure was found to play a potent role in future smoking intentions.40

We found that 24% of never smokers were classified as susceptible, which is within the 20–50% range of previous research.21,22,70 The fact that susceptibility did not decrease significantly from W1 to W3, even though awareness of tobacco marketing and perceived prevalence did, may be explained in two ways. First, at the time of the third wave the ban was still not fully implemented; whilst most promotion had gone, POS advertising and international sponsorship still had to be restricted. It is well-established that steeper declines in smoking result from more comprehensive bans, because marketing resources can be diverted to remaining legal media.71,72 The powerful influence of POS advertising is demonstrated by the National Institute on Drug Abuse’s Monitoring the Future survey showing that smoking initiation increased by 8% for each form of it that never smokers could recall,24 very similar to our results. Second, it is likely that any decline in smoking susceptibility, as with smoking, will occur gradually. For example, following ad bans in Norway, France, New Zealand and Finland rates of adult, and to a lesser extent youth, smoking dropped considerably over time,7 with the lowest reduction found in France, where the legislation was most recent. It may therefore be that the third survey occurred too recently after the legislation to detect any changes, which the reductions in both marketing awareness and perceived prevalence suggest, will eventually result.

It is important to acknowledge that perceived prevalence and susceptibility are conceptually distant from TAPA and likely to be affected by multiple means.64 Therefore, other tobacco control measures, beyond the scope of this study, may also have contributed to the decrease in perceived prevalence. For example, steeper increases in the taxation on tobacco products from the end of 1998, the implementation of NHS countrywide smoking cessation services between 1999 and 2000, and also health warnings on tobacco products in 2001.

The research has two important policy implications. First, it confirms that ad bans are a valuable tobacco control tool because they reduce perceived prevalence among young people, thereby helping to denormalize tobacco. In the longer term this will likely result in reduced susceptibility and uptake. Second, it underlines the need for controls on tobacco advertising and promotion to be comprehensive. Even after the UK ban had been substantially implemented, although tobacco marketing was significantly less prominent, three quarters of UK children were still aware of it. Complete implementation may reduce this a little further, especially once POS advertising is controlled, but it will remain pervasive. This is because tobacco marketing goes beyond overt communica-
tion efforts and takes in all forms of marketing, including product design, distribution and pricing. This problem is illustrated with POS activity. In the United Kingdom, in-shop advertising has now been limited to one A5 panel, but the display of product remains unrestricted, with large ganneties being used to show off a wide range of tobacco brands. Added to this, liveried packs communicate these same brand images, product variations add a value (in the case of economy brands) or quality (in the case of premium brands) proposition to them, and wide distribution suggests normalcy. Furthermore, we know that tobacco branding is continuing to drive UK teen smoking even after TAPA.73

This demonstrates the wisdom of the FCTC’s very broad definition of tobacco marketing as ‘any form of commercial communication, recommendation or action with the aim, effect or likely effect of promoting a tobacco product or tobacco use either directly or indirectly’. It provides an invaluable opportunity to tackle all the tobacco industry’s marketing activities, and our study confirms that the tobacco control community should seize it. Specifically, policy makers should act now to remove tobacco products from sight at POS, limit the number of outlets selling tobacco, mandate plain packaging and implement a minimum pricing policy to prevent price being used as a marketing tool.


**Study limitations**

Cross-sectional studies cannot make deductions about causality; for this a longitudinal design is needed. However two problems discouraged the research team from adopting this approach. First of all is sample attrition, where even modest drop rates can have a problematic effect on the data and limit the generalizability of the findings. Second, with an adolescent sample such as ours, increasing age means that respondents rapidly outgrow the study. This is a particular problem in this case, because the research aims to provide a long-term monitor of the impact of the TAPA (and other tobacco control policies) on young people, and is set to continue until at least 2012. It is the only study in the United Kingdom—and as far as we can ascertain anywhere in the world—that will provide this type of sustained feedback.

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**Conflict of interest:** None declared.

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**Key points**

- The UK Tobacco Advertising and Promotion ban has lead to a reduction in both perceived prevalence and tobacco marketing awareness among young people, but not susceptibility.
- Findings indicate that each form of tobacco marketing that young people are aware of leads to a 7% increase in susceptibility.
- This study adds further credence to the notion that partial tobacco advertising bans are ineffective, with awareness of unregulated tobacco marketing such as POS very high.

**References**


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