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Original investigation

“It Looks Like an Adult Sweetie Shop”: Point-of-Sale Tobacco Display Exposure and Brand Awareness in Scottish Secondary School Students

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Abstract

Introduction: As further restrictions have been placed on tobacco advertising and promotions, point-of-sale (PoS) displays of cigarettes in shops have become an increasingly important source of young people's exposure to tobacco products. This study explored the relationship between PoS displays of cigarettes and brand awareness among secondary school students in Scotland.

Methods: Cross-sectional school surveys ($n = 1406$) and focus groups ($n = 86$) were conducted with S2 (13–14 years) and S4 (15–16 years) students in four schools of differing socioeconomic status in 2013, prior to the PoS display ban in large shops. Adjusted negative binomial regression analysis examined associations between brand awareness and exposure variables (visiting tobacco retailers, noticing displays of tobacco products).

Results: Students visiting small shops more frequently (relative rate ratio [RRR] 1.19, 95% confidence interval [CI] 1.01–1.41) and those who noticed cigarette displays in small shops (RRR 1.24, 95% CI 1.03–1.51) and large supermarkets (RRR 1.15, 95% CI 1.01–1.30) had higher brand awareness. The focus groups supported these findings. Participants described PoS tobacco displays as being eye-catching, colorful and potentially attractive to young people.

Conclusions: This mixed-methods study showed that higher cigarette brand awareness was significantly associated with regularly visiting small shops and noticing PoS displays in small and large shops, even when students' smoking status, smoking in their social networks, leisure activities, and demographics were included as confounding variables. This highlights the importance of PoS displays of tobacco products in increasing brand awareness, which is known to increase youth smoking susceptibility, and thus the importance of implementing PoS display bans in all shops.

Implications: As increasing restrictions have been placed on tobacco promotion in many countries, PoS displays of cigarettes in shops have become an important source of young people's exposure to tobacco products and marketing. This mixed-methods study showed that prior to the PoS display ban in Scotland, and controlling for other factors, 13- and 15-year olds who regularly visited small shops and those who noticed PoS displays in small and large shops, had a higher awareness of cigarette brands. This highlights the importance of PoS displays in increasing youth brand awareness, which increases smoking susceptibility, and thus the need for comprehensive bans on PoS displays which cover all shops.

Introduction

Reducing children's exposure to tobacco advertising and promotion is a key element of effective national smoking prevention programmes.¹⁻³ As more countries ban or severely restrict tobacco advertisements and promotion in the media, tobacco companies have focused their attention and marketing budgets on retail point-of-sale (PoS) displays, and cigarette branding and packaging.⁴⁻⁷ Displays of cigarette packs, often described as "power walls," have special features highlighting particular brands, for example, with packs in illuminated central display sections.⁷ There has also been a considerable growth in brand variants, reflected in a significant increase in innovative packaging which includes pack size, shape, format, and colors.⁸⁻¹⁰ These developments in PoS displays and cigarette packaging are of concern as PoS displays are highly visible in shops frequented by children and adolescents. In the United States nearly half of teenagers visit a convenience store at least once a week.¹¹

Previous research found that exposure to cigarette PoS displays is associated with both smoking susceptibility and smoking among young people.¹²⁻¹⁴ This association may reflect the prominence of PoS displays and their use of attractive lighting and color which promotes the impression that smoking is normal and socially acceptable.⁷ Exposure to PoS displays may also increase young people's awareness of brands and new packaging, both of which have been shown to influence attitudes towards smoking, the perceived attractiveness of smoking, and susceptibility to smoke among never smokers.¹⁵⁻¹⁸ Responding to concerns about the impact of PoS tobacco displays on youth smoking, the Scottish Government introduced legislation banning PoS displays in shops, starting with large stores (exceeding a floor area of 280 sq meters, mostly large supermarkets) in April 2013, and all other stores (eg, newsagents, small supermarkets) in April 2015.¹⁹ PoS displays in large stores were banned in England a year earlier in April 2012, the implementation of the Scottish legislation being delayed following legal action by tobacco companies which attempted to stop the ban.

A previous study, which used surveys to investigate adolescents' exposure to PoS before the English ban was implemented, found that exposure to and awareness of PoS displays and brands were associated with smoking susceptibility, predominantly due to exposure in small shops.¹⁴ The authors concluded that implementing the PoS ban initially only in large shops probably had a limited impact on adolescent smoking behavior, and that countries should only introduce comprehensive PoS bans covering all tobacco retailers.

In the study reported here, we used surveys and focus groups to explore young people's exposure to PoS, the relationship between exposure and brand awareness, and how young people engaged with PoS displays, prior to the ban being implemented in large shops in Scotland. Data were collected in 2013 as part of the DISPLAY (Determining the Impact of Smoking Point-of-Sale Legislation Among Youth) study. This 5-year longitudinal study is evaluating the impact of the Scottish ban on PoS displays on young people's smoking

behavior, brand awareness, and perceived acceptability of smoking in four communities.²⁰ For the purposes of the study, a community was defined as the catchment area of the secondary school. The schools were selected to include urban and semi-urban/rural communities with high and low socioeconomic profiles, as these may have different numbers of outlets selling tobacco.²¹ Retail PoS tobacco displays are not the only sources of youth exposure to cigarette packs and brands. We, therefore, also looked at parental and friends' smoking, as well as the extent to which participants spent time with friends in the evening and hanging out in their communities, as these leisure activities are also associated with youth smoking²² and are likely to increase their exposure to cigarette packs and brands. Focus groups explored participants' awareness and perceptions of PoS displays in more depth, including features that they found attractive or appealing.

Methods

School Survey

Sample and Procedure

The four schools are located in Scotland's central belt. The community deprivation level for each school was estimated using uptake of free school meals and the Scottish Index of Multiple Deprivation (SIMD) based on the school's post-code.²⁰ Consenting students in S2 (mean age 13.6 years) and S4 (mean age 15.6 years) completed the questionnaire in February/March 2013 under exam conditions, supervised by class teachers. The questionnaire took 40-50 minutes to complete and included questions on personal smoking behaviors, attitudes towards smoking, family and peers' behaviors and attitudes, access to tobacco products, brand awareness, and exposure to tobacco advertising. Parental opt-out consent was utilized prior to the survey and students could withdraw from the survey on the day. Ethics approval was granted by the University of St Andrew's School of Medicine Ethics Committee and the Child Panel & School Liaison Representative.

Measures

Cigarette brand awareness, the primary outcome measure, was constructed by totaling the number of cigarette brands recognized from a list of 16 brands and brand recall. Respondents were able to tick "other brand" and write in additional responses not on the list as free text. A similar method has been used in a previous study.¹⁴ The list included a fake item. Respondents who recognized the fake item were excluded from analysis.

Two measures of exposure to cigarette displays were included: frequency of shop visits, and having seen tobacco products displayed in the last 30 days in: (1) large supermarkets and (2) smaller shops. Frequency of shop visits was measured using a seven-point scale (every day; most days; about two or three times a week; about once a week; less than once a week; never and don't know). In the analysis, frequency of shop visits was collapsed into "about 2 or 3

times a week or more often” and “about once a week or less often (including never).” “Don’t know” responses were recoded as missing values. For seeing cigarette and tobacco packs in supermarkets and small shops in the past 30 days, the response categories were: “yes,” “no,” and “don’t know.” In our analysis “don’t know” responses were excluded.

Smoking status was defined by two variables: ever smoking “have you ever smoked cigarettes, even if it is just one or two puffs?” and current smoking “I currently smoke cigarettes.” Current smoking status was not examined in relation to exposure outcomes due to the low smoking prevalence (5.1%, $n = 71$).

Data were collected on parental, siblings’ (eldest brother and sister) and friends’ (girlfriend/boyfriend, best friend) smoking, with response options: “smokes daily,” “smokes occasionally,” “does not smoke,” “don’t know” and “don’t see/have this person.” “Smokes daily” and “smokes occasionally” were categorized as smokers, other responses as nonsmokers. Three categories were constructed for parental and sibling smoking: both smokers, one smoker, and no smokers.

Leisure activities were measured using two variables: number of evenings a week spent out with friends (0 to 7), and hanging around the street or park when not at school. Number of evenings out with friends was collapsed into “2 or less” and “3 or more.” The response options for hanging around the street/park were: “everyday,” “most days,” “weekly,” “less often,” and “never.” Responses were combined into three categories—“everyday/most days”; “weekly”; and “less often/never.”

Socioeconomic status was assessed using the Family Affluence Scale (FAS), developed by the Health Behaviour in School-Age Children survey to measure material affluence and family purchasing power.²³ The FAS has been validated as a measure of absolute wealth in adolescent studies.²⁴ It is based on four questions about the material condition of their households: car ownership, bedroom occupancy, holidays, and home computer ownership. FAS items were combined to create a scale categorized into: low, medium, high. Students also provided demographic information on age, gender, and ethnicity.

Data Analysis

A generalized linear model (GLM) analysis was conducted to identify variables associated with cigarette brand awareness. The exposure variables were: frequency of visiting small shops and large supermarkets, and noticing cigarettes displayed for sale in small shops and large supermarkets. Sociodemographic indicators (gender, age, FAS), smoking behavior (ever smoking), family (parental and sibling) and friends’ smoking and leisure activities (number of evenings spent out and hanging around the street/park) were considered as confounding variables. The interaction between the two exposure variables was examined to estimate joint effects; however, interactions were not significant and consequently excluded from further analyses.

A Poisson model was initially fitted, but model statistics indicated over-dispersion and an inadequate fit. Therefore, negative binomial regression was used. The dispersion parameter alpha was estimated as significantly greater than zero, which confirmed that the negative binomial regression model was more appropriate ($P \leq .001$).

Two models were developed to assess the relationship between exposure (frequency of shop visits, noticing cigarettes displays) and outcome (brand awareness) adjusted to account for clustering by school. The association between exposure variables and the outcome variable was examined in model 1. In model 2, the confounders were

included with exposure variables. Prior to entering the confounder variables in the final model, the relationships of confounders with brand awareness were explored by including them in an adjusted negative binomial regression model by group, grouped on their criteria, for example, smoking behavior, family and friends’ smoking, and leisure activities. Variables significantly associated with brand awareness were included in the final model. However, all sociodemographic factors were included in the final model as confounders. Analyses were conducted in Stata, version 13.

Qualitative Methodology

Sample and Procedure

Sixteen single-sex focus groups were conducted in March 2013, four groups per school, two with S2 and two with S4 students. The groups had 3 to 9 participants ($n = 86$) and lasted 30–50 minutes. Participants were recruited with the help of teachers to include students who were smokers or had regular contact with smoking, such as having family members or friends who smoked. The aim was to include students most at risk of becoming adult smokers. These recruitment methods have been used in a previous qualitative study examining young people’s sources of cigarettes.²⁵ Opt-out consent was used with potential participants, using the same approach as in the survey phase. Participants were assured of anonymity and ground-rules were established around disclosure.

The focus groups were conducted by the same facilitator 1–2 weeks after the school survey (so that the discussions did not affect questionnaire responses) and digitally recorded with participants’ permission. The topic guide included: general discussion about the community; local smoking behaviors and cultures; access to tobacco products including direct, indirect/proxy and black-market; awareness of and views on tobacco promotion including PoS, packaging and branding.

Data Analysis

Focus group discussions were fully transcribed and the data entered into the qualitative computer package NVivo, version 10. The data were coded and inductive thematic analysis undertaken according to Braun and Clarke’s iterative approach to thematic analysis.²⁶ This involved the identification of key themes, focusing on uncovering the social worlds of the students, and drawing out examples of differing views and experiences.

Results

Survey Results

Out of 1697 students (S2 = 856, S4 = 841), 1482 (S2 = 775, S4 = 707) completed the questionnaire, a response rate of 87.3%. To avoid potential bias, the brand awareness of students who rated the fake brand as a real brand was compared with that of students who did not recognize the fake brand. The mean number of brands recognized was significantly higher among those recognizing the fake brand compared to others (11.1 vs. 3.6, $P < .001$). Therefore, these students ($n = 76$) were excluded from the analysis. A total of 1406 respondents were included in the analysis. Table 1 presents the characteristics of the survey participants. There were approximately equal percentages of girls (51.5%) and boys (48.5%). The percentage of S2 students was slightly higher than S4 students. The sample had low ethnic diversity (94.3% white) as expected in Scotland (96% white).²⁷ Most students (86.1%) were aware of more than one cigarette brand, but only 5.1% were current smokers.

Table 1. Students' Characteristics (*n* = 1406)

| Characteristics | <i>n</i> | % |
|---|----------|------|
| Gender | | |
| Boys | 679 | 48.5 |
| Girls | 721 | 51.5 |
| Age group | | |
| 15 years | 671 | 47.7 |
| 13 years | 735 | 52.3 |
| Family Affluence Scale (FAS) tertiles | | |
| Low | 469 | 33.4 |
| Medium | 467 | 33.2 |
| High | 470 | 33.4 |
| Ethnicity | | |
| White | 1315 | 94.3 |
| Other | 79 | 5.7 |
| Current smokers | | |
| Yes | 71 | 5.1 |
| No | 1319 | 94.9 |
| Brand awareness ^a | | |
| No brands | 195 | 13.9 |
| 1–2 brands | 372 | 26.5 |
| 3–4 brands | 367 | 26.1 |
| 5 or more brands | 472 | 33.6 |
| Schools | | |
| Urban and high deprived area | 374 | 26.6 |
| Urban and medium/low deprived area | 315 | 22.4 |
| Semi-urban and high deprived area | 348 | 24.8 |
| Semi-urban and medium/low deprived area | 369 | 26.2 |

^aBrand awareness = number of cigarette brands students were aware of, excluding students who reported fake brand.

The independent variables of interest are listed in Table 2. Nearly three-quarters of students (70.6%) visited small shops at least 2 or 3 times a week, but less than half (43.8%) visited large supermarkets this frequently. Noticing cigarettes or tobacco displayed for sale in both small shops and large supermarkets was common among the students (~90%). Under a quarter of respondents (22.5%) reported that they had tried smoking. Over one-third (37.4%) had at least one parent or carer who smoked, 17.0% indicated they had at least one older sibling who smoked, and 10.0% reported that at least one of their friends smoked. More than one-third of students spent three or more evenings a week out with friends (34.9%) or hung around the street/park at least weekly (34.7%).

The relationship between potential confounders and brand awareness was examined using a negative binomial regression model (Supplementary Appendix 1) for each individual grouping. Those variables which showed a significant association were included in the final model 2. Ever smoking significantly predicted brand awareness (relative rate ratio [RRR] 1.91, 95% confidence interval [CI] 1.67–2.19). RRRs in this context are the ratio of conditional expected counts. Therefore, young people who have smoked on average know 91% more cigarette brands than those who have never smoked. For family and friends' smoking, the following variables showed a significant relationship with brand awareness: parental smoking (both parents, RRR 1.36, 95% CI 1.11–1.68; one parent, RRR 1.26, 95% CI 1.11–1.43), sibling smoking (both eldest siblings, RRR 1.32, 95% CI 1.08–1.62; one oldest sibling, RRR 1.23, 95% CI 1.18–1.29), best friend (RRR 1.58, 95% CI 1.40–1.78). Both leisure activities were significantly associated with brand awareness: hanging around the street/park (everyday/most days, RRR 1.30, 95% CI 1.18–1.43;

weekly, RRR 1.27, 95% CI 1.03–1.58); and number of evenings spent out with friends (RRR 1.16, 95% CI 1.12–1.21).

Table 3 shows the probability of being aware of a greater number of cigarettes brands (RRR) for each exposure and significant confounders included in the model. Model 1 shows that when the variables associated with exposure to cigarette displays are regressed on brand awareness, "visiting and noticing cigarettes in small shops" demonstrate a significant relationship. In model 2 when the confounder variables are entered, students who visited small shops at least twice a week were significantly aware of more cigarette brands than students who visited shops less frequently (RRR 1.19, 95% CI 1.01–1.41). Noticing tobacco displays in small shops (RRR 1.24, 95% CI 1.03–1.51) and in large supermarkets (RRR 1.15, 95% CI 1.01–1.30) were also significant predictors of brand awareness. Frequency of visits to large supermarkets did not contribute significantly to the models.

"Ever smoke" was the most significant predictor of brand awareness in model 2. Students who had ever smoked cigarettes were more likely to be aware of cigarette brands than those who had never smoked (RRR 1.48, 95% CI 1.37–1.59). Students whose siblings smoked were also more likely to be aware of additional cigarette brands compared with those whose siblings did not smoke (both, RRR 1.38, 95% CI 1.13–1.70; one, RRR 1.18, 95% CI 1.09–1.27). Males, older students and those who spent three or more evenings a week out with friends were more likely to have higher levels of brand awareness. No significant associations between brand awareness and FAS, parental smoking, best friend smoking and hanging around the street/park were observed when the other included variables were in the model.

Qualitative Results

Most students in the focus groups, irrespective of whether they reported that they were smokers or nonsmokers, were aware of several brands of cigarettes and rolling tobacco, though smokers tended to describe more brands and were more aware of prices. The cigarette brands most often mentioned were Mayfair, Lambert and Butler, JPS, Richmond, Windsor Blue, and Embassy Regal. Rolling tobacco brands included Amber Leaf, Pall Mall, and Golden Virginia. Smokers and nonsmokers were also familiar with the tobacco displays in the shops in their communities. They spoke in detail about displays behind the counters of small shops and the separate displays in larger supermarkets. Some differences were noted between the different types of outlet. On the whole, participants expressed the view that supermarket displays tended to be more extensive, brighter and noticeable, located in distinct areas or kiosks, and also had more signage related to proof of age requirements (Box quotes 1 and 2). However, it was also argued that some smaller shops were not far behind in terms of their displays, which could also be extensive, colorful and well-lit (Box quote 3). While other small shops were viewed as not having such expansive displays, the cigarettes being sold were described as being very noticeable, partly due to the colorful packs (Box quote 4). Many participants perceived tobacco displays in small and larger shops to be very attractive. They were described as being bright and colorful due to the lighting and the design of the packs themselves, attention-grabbing and very difficult to avoid. Students described the displays as being "in your face" and looking like "an adult sweetie shop" (Box quote 4).

Some types of gantries in which cigarettes were contained were also thought to be appealing, not only in terms of their lighting and array of colors, but also their shape and the way that packs were

Table 2. Potential Variables Associated With Brand Awareness (*n* = 1406)

| Variables | <i>n</i> | % |
|---|----------|------|
| Exposure to cigarette displays | | |
| Visit to small shops | | |
| About 2 or 3 times a week or more often | 972 | 70.6 |
| About once a week or less often | 404 | 29.4 |
| Visit to large supermarkets | | |
| About 2 or 3 times a week or more often | 588 | 43.8 |
| About once a week or less often | 754 | 56.2 |
| Noticing cigarettes or tobacco displayed for sale in small shops | | |
| Yes | 1116 | 89.4 |
| No | 132 | 10.6 |
| Noticing cigarettes or tobacco displayed for sale in large supermarkets | | |
| Yes | 1114 | 87.6 |
| No | 158 | 12.4 |
| Smoking status | | |
| Ever smoked | | |
| Yes | 314 | 22.5 |
| No | 1082 | 77.5 |
| Family and friends smoking | | |
| Parental smoking | | |
| Both parents smoke | 195 | 13.9 |
| One parent smokes | 329 | 23.5 |
| No parent smokes | 876 | 62.6 |
| Sibling smoking | | |
| Both oldest siblings (brother and sister) smoke | 37 | 2.7 |
| One oldest sibling smokes | 198 | 14.3 |
| No sibling smokes | 1145 | 83.0 |
| Girlfriend/boyfriend smoking | | |
| Friend smokes | 49 | 3.7 |
| No friend smokes | 1283 | 96.3 |
| Best friend smoking | | |
| Friend smokes | 138 | 10.0 |
| No friend smokes | 1240 | 90.0 |
| Leisure activities | | |
| Number of evening spend out with friends | | |
| 3 or more evenings | 477 | 34.9 |
| 2 evenings or less | 890 | 65.1 |
| Hanging around the street and park | | |
| Everyday/most days | 240 | 17.5 |
| Weekly | 236 | 17.2 |
| Less often/ never | 895 | 65.3 |

displayed within them, with the result that particular brands and packs were made to stand out from the others (Box quote 3). The packs themselves were viewed positively by several participants, being described as “shiny,” as were features such as sliding packs, even if the product within the pack did not always appeal (Box quote 3). The general consensus was that these displays did influence young people to buy cigarettes as they were perceived to be attractive and designed to encourage individuals to approach and buy tobacco from the display, though not necessarily themselves (Box quote 5). Indeed, some participants highlighted that displays acted as advertisements and promotion for cigarettes even though tobacco advertising was banned (Box quotes 1 and 4).

Other students were more doubtful about the likely impact of the displays, stating that the displays were neither attractive or unattractive, and often quite nondescript (Box quotes 6 and 7). They argued that the displays had no influence on young people’s tobacco purchasing behavior as they were just a “normal” part of shops and that only those who smoked would be interested in them. However, participants who were sceptical about the impact of displays showed

an awareness of the brands and packaging displayed, such as when contrasting the attractiveness of the packet with the contents, as in the case of Chesterfield (Box quote 6) or the negative emotional impact of some of the pictorial health warnings on the packs (Box quote 8). On the whole, these images on posters or packs were said to be tasteless and unappealing.

Discussion

This study found that, prior to the ban on PoS displays in large shops in Scotland, awareness of cigarette brands among 13- and 15-year olds was significantly associated with regular visits to small shops even when controlling for other potentially significant influences (ie, current smoking behavior, exposure to smoking in their close social networks, leisure activities, and demographic factors). Brand awareness was also significantly associated with noticing cigarettes displayed in small shops and large supermarkets. As expected, participants’ own smoking status was the strongest factor associated with brand awareness. Sibling smoking also showed

Table 3. Adjusted Negative Binomial Regression Analysis of Variables Associated With Relative Rate Ratio (RRR) for Brand Awareness With Adjustment for Clustering by School

| | Brand awareness | | | | | |
|---|----------------------------|------|-----------|---|------|-----------|
| | Model 1 (<i>n</i> = 1156) | | | Model 2 (<i>n</i> = 1092) ^a | | |
| | Mean | RRR | 95% CI | Mean | RRR | 95% CI |
| Visit to small shops | | | | | | |
| About 2 or 3 times a week or more often | 4.18 | 1.39 | 1.19–1.64 | 4.00 | 1.19 | 1.01–1.41 |
| About once a week or less often | 3.00 | 1 | | 3.35 | 1 | |
| Visit to large supermarkets | | | | | | |
| About 2 or 3 times a week or more often | 4.02 | 1.08 | 0.99–1.16 | 4.02 | 1.09 | 0.98–1.21 |
| About once a week or less often | 3.74 | 1 | | 3.69 | 1 | |
| Notice cigarettes displayed in small shops | | | | | | |
| Yes | 3.94 | 1.27 | 1.02–1.60 | 3.90 | 1.24 | 1.03–1.51 |
| No | 3.09 | 1 | | 3.13 | 1 | |
| Notice cigarettes displayed in large supermarkets | | | | | | |
| Yes | 3.93 | 1.20 | 0.98–1.47 | 3.89 | 1.15 | 1.01–1.30 |
| No | 3.27 | 1 | | 3.39 | 1 | |
| Gender | | | | | | |
| Boys | | | | 4.06 | 1.11 | 1.01–1.22 |
| Girls | | | | 3.64 | 1 | |
| Age group | | | | | | |
| 15 years | | | | 4.08 | 1.15 | 1.06–1.24 |
| 13 years | | | | 3.56 | 1 | |
| Family Affluence Scale (FAS) | | | | | | |
| Low | | | | 3.79 | 0.97 | 0.87–1.07 |
| Medium | | | | 3.83 | 0.96 | 0.91–1.05 |
| High | | | | 3.91 | 1 | |
| Smoking status | | | | | | |
| Ever smoke | | | | 5.03 | 1.48 | 1.37–1.59 |
| Never smoke | | | | 3.41 | 1 | |
| Parental smoking | | | | | | |
| Both parents smoke | | | | 4.42 | 1.24 | 0.98–1.57 |
| One parent smokes | | | | 4.15 | 1.16 | 1.00–1.36 |
| No parent smokes | | | | 3.56 | 1 | |
| Sibling smoking | | | | | | |
| Both oldest siblings (brother and sister) smoke | | | | 5.09 | 1.38 | 1.13–1.70 |
| One oldest sibling smokes | | | | 4.35 | 1.18 | 1.09–1.27 |
| No sibling smokes | | | | 3.68 | 1 | |
| Best friend smoking | | | | | | |
| Friend smokes | | | | 4.35 | 1.16 | 0.99–1.35 |
| No friend smokes | | | | 3.75 | 1 | |
| Number of evening spend out with friends | | | | | | |
| 3 or more evenings | | | | 4.10 | 1.11 | 1.05–1.17 |
| 2 evenings or less | | | | 3.69 | 1 | |
| Hanging around the street/park | | | | | | |
| Everyday/most days | | | | 3.87 | 1.05 | 0.97–1.14 |
| Weekly | | | | 4.28 | 1.16 | 1.00–1.35 |
| Less often/never | | | | 3.69 | 1 | |

CI = confidence interval.

^aAdjusted for age, gender, FAS, smoking status, parental smoking, sibling smoking, best friend smoking, number of evening spend out with friends and hanging around the street/park.

a significant relationship with brand awareness, with those whose siblings smoked being aware of more brands.

Most survey and focus group participants' reported that they noticed tobacco displays in supermarkets and small shops and this was significantly associated with brand awareness. The frequency of visiting large supermarkets was not associated with greater brand awareness. The greater impact of visiting small shops on brand awareness may partly be explained by the higher frequency of students visiting small shops compared to large supermarkets, with 70.6% versus

43.8% making two or more visits a week respectively. An audit of all tobacco retailers in these four communities²⁸ found that, as has been shown in a previous UK study,⁷ tobacco PoS displays in small retail outlets were usually located behind the till where children pay for other purchases, and were therefore particularly noticeable. In larger shops they tended to be in separate sections or kiosks primarily used by adults to purchase tobacco products. Thus while there was a similarly high level of awareness of PoS displays in small and large shops, students were more likely to be directly exposed to displays in

Box 1. Awareness and Attractiveness of Tobacco Displays

P: Very bright. Like you can notice them like as soon as you walk in. Or like you could be on the other side of the...

P: It's the first thing that attracts your attention.

P: Aye. You can be on the other side of' the shop...

P: And you're like still able to view all, you're still able to make out like the tobacco thing and that.

I: Are you thinking of any particular shops there?

P: Like Sainsburys [supermarket].

(School C3; S2 Males)

P: In Tesco's [supermarket] there was like two big special squares with kinds in it, one of them was Mayfair, I remember that. And another one...I'm sure there was Sterling, it was Sterling, Mayfair and in two big things it was just like all the rest in rows and then there was two big squares out of it and they like lined them all up nicely. So I think they were trying to advertise them better.

(School C4; S2 Males)

P: They look quite smart. They've got lights in all of them now, so it makes them stand out more.

P: They're not just like flattened out. They've got them like, all like curved and like Lambert & Butler on it.

P: Because the Lambert & Butler boxes are shiny, so it stands out. And then they done the slide box and that, and then everyone was like "Buy them", because they wanted the box. It slides, and you just...

I: So have you bought them yourselves?

P: Aye! Just to slide it up.

(School C4; S4 Males)

P: They're in really shiny packets I think, when I'm just looking in the shops when you go to the counter it's just like in your face!

P: So really like bright and shiny.

P: If you go to like sweetie shops and that its like how they're displaying it, it's like...do you know how when you got to sweetie shops they have like a big section of bonbons and stuff, it's like that. I'm not saying colour coordinated, like if it's all the same make it will be in the same corner and it sort of looks like a sweetie shop or something.

P: It looks like an adult sweetie shop!

P: They're not allowed to have posters on the street. They're not allowed to have it on TV.

P: They don't really promote it, but when you go there it looks quite promoting.

(School C3; S2 Females)

I: Do you think that has any influence or not on young people?

P: Yeah, because primary colours look a lot brighter than secondary colours. So it like jumps out at them. Like "buy me".

(School C1; S2 Males)

P: Like Chesterfield has got a nice packet but they're minging [disgusting]!

P: They're just plain colours.

P: Well they don't really look like anything, you just walk in the shop, some people pay attention to them if they smoke, some people just don't.

(School C2; S2 Males)

P: They are just normal.

P: They're not really attractive, you just look at them... Nah, I don't think it would influence you to smoke.

(School C3; S4 Males)

P: On the wrappers it had pictures of like the lungs that had been destroyed and that was disgusting. They should have it like in a case or something.

(School C3; S2 Females)

small shops, which increased their awareness of cigarette brands. This study has several limitations including: its cross-sectional design, thus no causal associations could be explored; and the study sample not being nationally representative but demographic variables in the final model controlled for this. However, the findings are in line with those of a study carried out in England prior to the PoS ban there which found that exposure to PoS displays increased smoking susceptibility and that this was predominantly due to displays in small shops.¹⁴

By including focus groups, our study is also able to provide insights into how PoS displays may influence social norms around smoking among young people, through increasing their exposure to cigarette brands that they might not be exposed to through their social environment (eg, family and friends). Mead and colleagues²⁹ have argued that smoking social norms are shaped not only by normative influences in the social environment, but also those in the physical and symbolic environments. In the students' accounts in the focus groups we found evidence of both effects. Whether or not students thought that PoS displays were attractive and/or would influence young people's smoking and cigarette purchasing behavior, they regarded them as being a normal part of their local retail (physical) environment. The ubiquity of PoS displays, and thus the ready availability of cigarettes, carries the implication that many people use these products and that smoking is an acceptable behavior in their community. Our findings also indicate that PoS displays may shape the symbolic environment around cigarettes and smoking, through increasing young people's awareness not only of different brands but their potentially attractive packaging and brand image. Being likened to "sweeties" for adults, with their bright, shiny packs and sometimes novel packaging (eg, packs that slide open from the side), they provided a point of interest in shops for young smokers and nonsmokers, who showed sophisticated understandings of cigarette packaging and displays as forms of tobacco promotion with the ultimate message "buy me." Previous studies have revealed how such innovative packaging can impact on smoking uptake with, for example, adolescents who think most highly of novelty cigarette packaging and color being more likely to intend taking up smoking.¹⁶ This highlights the importance of reducing young people's exposure to these through banning PoS displays and introducing standardized packaging.

Conclusions

This study found, using surveys and focus groups with Scottish 13- and 15-year olds, that cigarette brand awareness in adolescents was not only associated their smoking status but also their exposure to smoking and brands in their close social networks, particularly sibling smoking, and the wider retail environment in their communities. It confirmed the findings of previous studies that exposure to PoS tobacco displays are likely to have an important influence on young people's cigarette brand awareness, which is known to increase susceptibility to smoking uptake.¹²⁻¹⁶ It also confirmed the findings of a previous study in England that exposure in small shops, rather than large supermarkets, has the most influence on brand awareness and this is likely to negatively influence smoking social norms in young people. These findings have two key implications. First, any significant impacts of the PoS bans in the United Kingdom on young people's smoking attitudes, norms and behaviors are likely only to be found after the ban was implemented in small shops. Second, while comprehensive bans on PoS displays are likely to positively contribute to denormalizing smoking among young people,³⁰ partial bans have only limited effects on reducing children's exposure to tobacco marketing, particularly if they do not include shops which children

and young people visit most frequently. This study is of therefore of international significance, underlining that jurisdictions without PoS regulation should implement comprehensive bans in all retailers.

Supplementary Material

Supplementary Appendix 1 can be found online at <http://www.ntr.oxfordjournals.org>

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Declaration of Interests

None declared.

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