Reaching youth at the point of sale: cigarette marketing is more prevalent in stores where adolescents shop frequently

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Objective: Although numerous studies describe the quantity and nature of tobacco marketing in stores, fewer studies examine the industry’s attempts to reach youth at the point of sale. This study examines whether cigarette marketing is more prevalent in stores where adolescents shop frequently.

Design, setting, and participants: Trained coders counted cigarette ads, products, and other marketing materials in a census of stores that sell tobacco in Tracy, California (n = 50). A combination of data from focus groups and in-class surveys of middle school students (n = 2125) determined which of the stores adolescents visited most frequently.

Main outcome measures: Amount of marketing materials and shelf space measured separately for the three cigarette brands most popular with adolescent smokers and for other brands combined.

Results: Compared to other stores in the same community, stores where adolescents shopped frequently contained almost three times more marketing materials for Marlboro, Camel, and Newport, and significantly more shelf space devoted to these brands.

Conclusions: Regardless of whether tobacco companies intentionally target youth at the point of sale, these findings underscore the importance of strategies to reduce the quantity and impact of cigarette marketing materials in this venue.
Independent-sample t tests compared the quantity of marketing materials and shelf space for cigarettes and the visual impact of cigarette advertising in stores popular with teens and other stores in the same community. The quantity of marketing materials and shelf space for “youth brands” (Marlboro, Camel, Newport) and other brands were also compared between the two groups of stores. To adjust for varying store size, such counts are typically divided by the number of cash registers. We report unadjusted means because the average size of stores popular among teens and other stores was not significantly different (p = 0.63), the unadjusted numbers are easier to interpret, and the conclusions from tests of adjusted and unadjusted means were essentially the same. Given the skewed distribution of some measures, we also conducted Mann-Whitney U tests, but results did not differ from the parametric tests reported.

RESULTS
The 48 stores contained an average (SD) of 22.6 (21.5) branded cigarette marketing materials and 123.8 (98.9) product facings per store. In the stores popular among adolescents, these numbers increased to 31.0 (24.5) and 153.1 (102.3) per store, respectively (table 1). Combining all brand impressions from marketing materials and products, adolescents were exposed to an average of 184.1 (109.2) cigarette brand impressions per store visit.

There were 3.4 times as many ads for cigarettes on windows of stores popular among adolescents than on other stores in the same community (table 1). Coders’ impressions of the quantity of cigarette marketing materials confirmed a disparity between the two groups of stores, as well. Cigarette advertising had significantly greater visual impact in the popular than in the other stores (table 1).

The three brands most popular with adolescents (Marlboro, Camel, and Newport) accounted for 45% of all cigarette marketing materials and 45% of all shelf space for cigarettes in the 48 stores. Stores popular among adolescents contained almost three times more marketing materials and twice as much shelf space for Marlboro, Camel, and Newport than other stores in the same community (table 2). One possible explanation for this difference is that stores popular among adolescents were more likely to be the types of stores (convenience, liquor, and small grocery stores) which typically contain the most tobacco marketing. However, a χ² test yielded no significant difference in the distribution of store types between the popular and other stores.

Another plausible explanation is that stores popular among adolescents were also popular among adults and therefore contain more advertising for the top selling brands (Marlboro, Camel, and Newport) and more advertising overall. However, we found no differences between popular and other stores in the quantity of marketing materials and...
shelf space for cigarette brands other than Marlboro, Camel, and Newport (table 1). Nor did we find a significant difference between the quantity of marketing materials for three top selling beer brands (Budweiser, Miller, and Heineken) in stores popular among adolescents (mean (SD) 23.5 (23.0)) and the other stores (23.5 (24.2)).

Finally, we tested whether the tobacco industry’s signs about identification required for tobacco purchase were more numerous in the stores popular among teens than in other stores. California law requires a sign at every cash register warning against illegal tobacco sales to minors, but no law governs the number or placement of such warnings provided to retailers by the tobacco industry. Ironically, stores popular among teens displayed more of the industry’s signs and shelving to promote Marlboro, Camel, and Newport, but did not display more of the industry’s signs to discourage minors from purchasing these products illegally (mean (SD) 3.9 (2.4)) than did other stores (3.7 (3.2)).

**DISCUSSION**

According to this study, cigarettes are marketed more heavily in stores where adolescents shop—particularly the cigarette brands most popular with adolescent smokers. Compared to other stores in the same community, stores popular among adolescents displayed more than three times as many cigarette marketing materials outside, and contained almost three times more marketing materials and twice as much shelf space for Marlboro, Camel, and Newport. These three brands account for more than 80% of the cigarettes bought by US adolescents. The four brands advertised most heavily in US stores (Marlboro, Camel, Winston, and Newport) are three of the four brands with the largest sales revenue (Marlboro, Newport, Doral, Camel). The relation between market share and the prevalence of marketing materials and product facings in stores warrants further research, particularly since advertising is related more strongly to cigarette brand choice among adolescents than adults.

This study is the first we are aware of to measure shelf space for cigarettes as an indicator of retail tobacco marketing. The fact that Marlboro, Camel, and Newport accounted for 45% of all marketing materials and 45% of all shelf space for cigarettes in the 48 stores may be purely coincidental. It may also suggest that tobacco companies consider self space devoted to their brands as important as other forms of in-store marketing.

**Study limitations**

The school based survey did not assess the frequency with which adolescents visited all retail tobacco outlets in the school catchment area. Thus, we cannot confirm that unpopular stores were visited less frequently than the stores nominated by the focus groups. However, incorrect classification would likely decrease the observed differences between the two groups of stores. Future research should use other means to determine which stores are most popular with adolescents, such as merchant interviews or consumer marketing data.

The current study classified marketing materials and product facings into only four brand categories—Marlboro, Camel, Newport, or other. Although “other brands” is a potentially crude comparison for “youth brands”, it is unlikely that one or two brand names accounted for most of the marketing materials recorded in the “other” category. In a survey of 1565 US stores, Marlboro, Camel, and Newport accounted for 46% of all cigarette marketing materials, seven of the remaining top 10 brands accounted for 42%, and innumerable other brands accounted for the remaining 12%. The absence of reliable information about the total number of cigarette brands advertised in stores makes it difficult to appreciate the extent to which brands favoured by teen smokers dominate the retail environment. Indeed, it would be helpful if the Federal Trade Commission or other organisations maintained a list of cigarette brands sold.

Although this study examined a small sample of stores in a single California community, observations about the quantity of cigarette marketing materials are quite similar to those from larger, more representative samples. For example, the average number of cigarette marketing materials was slightly lower than the average for a California sample of 569 stores (22.7 vs 25, respectively), and the proportion of marketing materials for Marlboro, Camel, and Newport in this sample was comparable to the California sample and to a US sample of 1565 stores (45%, 42%, and 46%, respectively). Using a standardised protocol to quantify marketing materials and shelf space for cigarettes, future research should compare the quantity of marketing materials in countries with varying regulations at the point of sale, and determine whether adolescents are disproportionately exposed to cigarette marketing materials, particularly to brands favoured by young smokers.

**Implications for tobacco control**

Several examples serve to illustrate how successfully US tobacco companies have avoided restrictions on advertising at the point of sale. The MSA, which bans cigarette ads on billboards and limits such ads in magazines and at sponsored events, contains only two provisions that affect ads in stores. One provision limits the size of exterior ads to 14 square feet and another prohibits using cartoons to advertise cigarettes in stores or elsewhere. More stringent regulations proposed by the US Food and Drug Administration—mandating
black-and-white, text only advertisements and banning self service displays—did not survive judicial review.13 The US Supreme Court also struck down a Massachusetts law that prohibited placing cigarette ads within 5 feet of the store floor—at children’s eye level.14 The Framework Convention on Tobacco Control (FCTC) does not specify point of sale in its recommendation to ban tobacco advertising, promotion, and sponsorship.15 However, the FCTC endorses larger, more vivid warning labels on cigarette packaging, which are clearly visible in stores and may serve as important cues to the FCTC endorses larger, more vivid warning labels on cigarette packaging, which are clearly visible in stores and may serve as important cues to...
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