Cigarette advertising and onset of smoking in children: questionnaire survey

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Abstract

Objectives—To investigate uptake of smoking in a cohort of 11 to 12 year olds related to awareness of advertised cigarette brands named.

Design—Self completed questionnaires administered to whole classes of schoolchildren in June 1993 and June 1994.

Setting—Primary, middle, and secondary schools in the north and south of England.

Subjects—1450 pupils aged 11 and 12 years at the time of the first survey.

Main outcome measures—Onset of smoking and brands smoked by the second survey related to cigarette brands named in the first one. Less advertised brands were used as the base for calculating odds ratios.

Results—Girls who named the most advertised brands—namely, Benson and Hedges alone (odds ratio = 2.50, 95% confidence interval = 1.18 to 5.30) or Benson and Hedges and Silk Cut (2.15, 1.04 to 4.42) in the first survey were at greatest risk of taking up smoking by the second one. The difference was similar but not significant for boys. Boys and girls who named the least advertised brands in the first survey were at no greater risk of taking up smoking by the second survey than those who named no brands (boys odds ratio = 0.49 (0.24 to 1.01); girls 0.79 (0.38 to 1.62)). New smokers were more likely to smoke any available brand (29.5%) or a less advertised brand such as Embassy (24.6%) than the most advertised ones, Benson and Hedges (19.7%) and Silk Cut (14.8%). Established smokers were more selective, only 15% smoking any available brand and 38.3% smoking Benson and Hedges.

Conclusions—Cigarette advertising appears to increase children's awareness of smoking at a generic level and encourages them to take up the behaviour, beginning with any cigarettes which are available and affordable.

Introduction

It is widely accepted that cigarette advertising plays a part in children's decision to smoke.^{1,2} The tobacco industry claims that it does not want children to smoke and that its advertising is intended to encourage brand switching in adults who are already smokers.³ Children are undoubtedly aware of cigarette advertising, and some of it appeals to them more than it does to adults.⁴ Studies which have shown increased uptake of smoking in children who expressed awareness of cigarette brands or advertising have been viewed with reservation on the grounds that the wish to smoke might precede the awareness, rather than the reverse.⁵ As part of a much larger study, we investigated whether or not awareness of the most advertised brands of cigarette was more likely than awareness of less advertised brands to precede onset of smoking.

Subjects and methods

This paper describes some of the findings of a cohort study of a sample of children aged 9 and 10 years in 1991 and followed to age 13 and 14 in 1995. The find-

ings presented here are from phase 3 (ages 11 and 12 years in June 1993) and phase 4 (ages 12 and 13 years in June 1994). This age range coincides with the highest onset of smoking. Some of the children moved from primary to secondary school between the two phases, so 31 schools were involved in phase 3 and 21 in phase 4.

The five annual surveys were carried out by means of self completed questionnaires administered to whole classes in school under examination conditions supervised by the class teacher. The questionnaires were named for the purpose of matching, but were sealed into plain envelopes by the respondents before handing in, and the names were removed by the researcher after an identity number had been allocated. The questionnaire used for this study was administered to all the pupils present in the participating school classes on the two occasions, a total of 1490 pupils (814 boys and 676 girls). Response was 100%. Forty questionnaires (2.7%) were omitted from the analysis because they were spoilt, incomplete, or gave inconsistent answers to the check questions relating to smoking behaviour, leaving 1450 (97.3%).

The questions included smoking behaviour of the respondents, their families, and friends; beliefs about smoking; self perception; brand awareness; favourite cigarette advertisements; and brand smoked.

Results

One hundred and thirty six boys (23%) and 134 girls (26%) who had never smoked at phase 3 became smokers by phase 4. By phase 4, 4% of the boys and 8% of the girls were regular smokers. Smokers were more likely than never smokers to name at least one cigarette brand. The percentage increased from 53% at phase 1 to 83% at phase 5 in boys who had never smoked and from 73% to 95% in boys who had at least tried smoking; for girls the increases were from 48% to 81% and from 78% to 97% in never smokers and smokers respectively.

The cigarette brands on which the tobacco industry spent the greatest amount of money in media advertising during the year covered by this survey, July 1993 to June 1994, were Benson and Hedges and Silk Cut.⁶ Embassy was not heavily advertised during the period but featured in the form of the "Reg" advertisements immediately before.⁴

Benson and Hedges and Silk Cut were the most frequently named brands, either individually or in combination with each other, that respondents were aware of. Benson and Hedges was most frequently mentioned by boy smokers. Perhaps surprisingly, Silk Cut on its own was generally more frequently mentioned by girls who had never smoked than by any other group. Boys and girls who named brands other than Benson and Hedges and Silk Cut in phase 3 were at no greater risk of taking up smoking by phase 4 than those who named no brands ((base: naming other brands) boys odds ratio = 0.49 (95% confidence interval 0.24 to 1.01); girls 0.79 (0.38 to 1.62); table 1).

Girls who named Benson and Hedges were at significantly greater risk of taking up smoking than those who named other brands (2.50 (1.18 to 5.30)) as were those who named both Benson and Hedges and Silk Cut (2.15 (1.04 to 4.42)). No such significant difference was found for boys.

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Table 1—Changes in smoking behaviour in never smokers between June 1993 and June 1994 related to cigarette brands named. Results are percentages (and numbers)

Smoking behaviour June 1994	Cigarette brands named by never smokers (June 1993)									
	Boys					Girls				
	Benson and Hedges only	Silk Cut only	Benson and Hedges and Silk Cut	Other brands only	None	Benson and Hedges only	Silk Cut only	Benson and Hedges and Silk Cut	Other brands only	None
Never smoked	70 (78)	72 (88)	72 (79)	80 (81)	89 (131)	60 (44)	75 (89)	64 (60)	79 (53)	83 (130)
Smoked	30 (34)	28 (35)	28 (31)	20 (20)	11 (16)	40 (29)	25 (30)	36 (34)	21 (14)	17 (27)
Base for %	112	123	110	101	147	73	119	94	67	157

Table 2—Cigarette brands smoked by new, established, and all smokers aged 12-13 years. Results are percentages (and numbers)

Cigarette brands usually smoked	New smokers			Established smokers			All smokers		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Any brand	29.6 (8)	29.4 (10)	29.5 (18)	9.1 (2)	18.4 (7)	15.0 (9)	29.2 (19)	24.5 (23)	26.4 (42)
Embassy	29.6 (8)	20.6 (7)	24.6 (15)	31.8 (7)	23.7 (9)	26.7 (16)	26.2 (17)	20.2 (19)	22.6 (36)
Benson and Hedges	29.6 (8)	11.8 (4)	19.7 (12)	36.4 (8)	39.5 (15)	38.3 (23)	29.2 (19)	25.5 (24)	27.0 (43)
Silk Cut	7.4 (2)	20.6 (7)	14.8 (9)	9.1 (2)	13.2 (5)	11.7 (7)	6.2 (4)	19.1 (18)	13.8 (22)
Other brands	3.7 (1)	8.8 (3)	6.6 (4)	4.5 (1)	2.6 (1)	3.0 (2)	6.2 (4)	6.4 (6)	6.3 (10)
Marlborough	0 (0)	8.8 (3)	4.9 (3)	9.1 (2)	2.6 (1)	5.0 (3)	3.1 (2)	4.3 (4)	3.8 (6)
Base for %	27	34	61	22	38	60	65	94	159

However, overall more of the children who had begun to smoke between phases 3 and 4 smoked any brand which was available, or Embassy, rather than the two most advertised brands Benson and Hedges or Silk Cut. Embassy was the most popular specific brand smoked and also the most frequently named of the "other" brands. For example, out of the 17 girls who had never smoked at phase 3 and named Benson and Hedges, only two smoked that brand when they took up smoking at phase 4. Out of the 15 who named Silk Cut, five smoked it. These findings are based on those girls who responded to both questions.

As table 2 shows, there were also gender differences in the choice of cigarette smoked and changes in brand choice as smoking became established—that is, among those who had tried in phase 3 and had become regular smokers by phase 4. New smokers tended to smoke whatever brand was easily accessible or available. Established smokers tended towards the more heavily advertised Benson and Hedges, although Embassy was popular throughout.

Children's reasons for choosing particular brands also reflected this process. Of the 152 pupils who responded to this question, most smokers (45% of the boys and 48% of the girls) said they did not know why they chose their cigarette brands, but the source of their first cigarettes—namely, parents, friends, siblings—and general availability and popularity determined 13% of their choices. Otherwise taste and liking (26% of boys and 17% of girls) and strength (not as strong 7% of boys and 16% of girls; strong 5% of boys and 4% of girls) were the most frequently stated reasons. Earlier studies have shown that children smoke the most advertised brands.⁷⁻¹² All these studies were carried out 5-10 years ago, and the price of cigarettes has since risen sharply. Although only 2% mentioned cheapness of the brand as a reason for choosing a brand, price is probably now a major issue for children. It is as unfashionable to smoke cheap cigarettes as it is to wear certain cheap clothes. Children might not admit to smoking cheap cigarettes.

Comment

Awareness of certain brands of cigarette was linked to an increased risk of onset of smoking in 11 to 13 year olds, especially girls. Awareness of the most advertised brands was a strong predictor of smoking, while awareness of other brands, probably known from other sources, was a less likely predictor. Children appear to take in the messages of cigarette advertising and interpret them as generic to smoking rather than brand specific.

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- Smee C. *Effect of tobacco advertising on tobacco consumption: a discussion document reviewing the evidence*. London: Department of Health, 1992.
- US Surgeon General. *Preventing tobacco use among young people*. Rockville, MD: Office of Smoking and Health, 1994.
- Tobacco Advisory Council. *The case for tobacco advertising*. London: Tobacco Advisory Council, 1985.
- Hastings GB, Ryan H, Teer P, MacKintosh AM. Cigarette advertising and children's smoking: why Reg was withdrawn. *BMJ* 1994;309:933-7.
- Charlton A, Blair V. Predicting the onset of smoking in boys and girls. *Soc Sci Med* 1989;29:813-8.
- Summary of brands and advertisers, 1993/94. *Nielson Register-MEAL*, 1993/94. London: Nielson Register-MEAL 1994.
- Aitken PP, Eadie DR. Reinforcing effects of cigarette advertising on under-age smoking. *Br J Addict* 1990;85:399-412.
- Goddard E. *Why Children Start Smoking*. London: HMSO, 1990.
- Chapman S, Fitzgerald B. Brand preferences and advertising recall in adolescent smokers: some implications for health promotion. *Am J Public Health* 1982;72:491-4.
- Goldstein AO, Fischer PM, Richards JW, Cretan D. Relationships between high school children smoking and recognition of cigarette advertisements. *J Pediatr* 1987;110:488-91.
- McNeill AD, Jarvis MJ, West RH. Brand preferences among children who smoke. *Lancet* 1985;iii:271-2.
- Aitken PP, Leather DS, Scott AL, Squair SI. Cigarette brand preferences of teenagers and adults. *Health Promotion* 1987;2:219-26.

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