



National Tobacco Control Policies: do they have a differential social impact?

- Cigarette smoking is a major health and social issue across the world; five million people die of smoking related diseases every year.
- Effective tobacco control policies can help prevent young people from taking up the habit, support smokers wishing to quit, and protect people from the damaging effects of second-hand smoke.
- In recent years, a series of new tobacco control policies have been introduced in the UK. These include: a comprehensive ban on tobacco advertising and promotion (February 2003); enlarged on-pack text warnings (January 2003); and a ban on misleading product descriptors such as 'light' and 'mild' (September 2003).
- This study uses data from the International Tobacco Control Policy Evaluation Study, an ongoing cross-country study (Australia, Canada, UK and USA), to assess whether there are any socioeconomic differentials in the impact of these three policies on smokers.
- Ad bans, enhanced warning labels and the elimination of misleading product descriptors appear to have a uniform impact across socio-economic groups.
- The study found that enhanced warning labels led to increased awareness and processing of warning messages and that the advertising and promotions ban drove substantial reductions in tobacco marketing awareness.
- Given the disproportionately high smoking rates in disadvantaged populations, these tobacco control policies are likely to be having a bigger proportional impact in these communities.

Background

Smoking is a major health and social issue across the world. One in two lifelong smokers dies due to their habit¹; on average smokers lose 14 years of life compared with non-smokers and have more fatal health complications² - including 30% of cancer deaths³. Second-hand smoke is also being recognised as a public health problem, causing around 11,000 deaths annually in the UK⁴. Each year, around the world, five million people die of smoking related diseases; by 2020 this figure is expected to rise to ten million⁵.

Smoking is a major public policy issue. Effective policies can help prevent young people from taking up the habit, support smokers wishing to quit, and protect people from the damaging effects of second-hand smoke. Such policies are also likely to be popular, even with smokers, most of whom wish that they had never smoked and would like to give up⁶.

The WHO-led Framework Convention on Tobacco Control (FCTC) has led the policy debate internationally. As the FCTC is implemented, researchers are developing the evidence base on its effectiveness. One major international study set up to focus on this task is the International Tobacco Control Policy Evaluation Project (ITC project). ITC has used telephone interviewing to track a randomly selected cohort of 2,000 smokers in each of the UK, Canada, United States and Australia at regular intervals since 2003, exploiting the natural experiment that results from countries implementing tobacco control policies at different times. During this period, the UK has introduced enlarged warning labels, prohibited tobacco advertising and promotion, and eliminated misleading product descriptors.

Warning labels are a very cost effective way of increasing smokers' awareness and knowledge about the harmful nature of tobacco. Smokers are exposed to the warnings at both the point of purchase and the point of use, giving rise to a regular reinforcement of the negative aspects of smoking. Given that communicating the harmful nature of tobacco remains a key tobacco control policy for many governments, warning labels provide a possible effective strategy. Research findings suggest that smokers do regard

warning labels as a means of obtaining health information and that they have increased smokers' awareness of the risks of smoking⁷. The FCTC recommends that warning labels should be 50% or more of the principal display areas but shall be no less than 30% and they may be in the form of or include pictures or pictograms. The new EU policy was introduced in the UK in January 2003 and required 30% of the front of the pack to contain one of two messages with 40% of the back containing one of 14 rotating warnings.

Although cigarette advertising disappeared from UK screens in the 1960s, and cigar and pipe tobacco advertising in the early 1990s, other forms of tobacco promotion were allowed to continue. These included billboard, magazine and newspaper advertising as well as direct mail, price promotions, coupon schemes and sports and arts sponsorship. So, between 2002 and 2006, the UK introduced a comprehensive ban on all forms of tobacco advertising. The evidence base suggests that advertising increases tobacco consumption and that only comprehensive tobacco advertising bans are effective as tobacco companies simply switched to other forms of promotion if limited bans were introduced.^{8,9} The FCTC supports comprehensive bans.

The use of misleading product descriptors such as "light" and "mild" have been banned in the UK. The UK ban was part of the wider EU warning labels legislation and was implemented in September 2003 while Australia implemented a ban during late 2005 and early 2006 and Canada is also due to implement a ban soon. The FCTC also calls for the removal of these misleading terms. In the UK, tobacco companies have responded to the ban by inventing new terms (e.g. Marlboro Lights became Marlboro Gold) and using packet colour coding to distinguish what were previously called light or mild brands.

ITC Project

The overarching aim of the ITC collaboration is to evaluate the psychosocial and behavioural effects of nation-level tobacco control policies throughout the world. The study started in 2002 and funding allows the cohort to be

followed-up annually until 2009, giving eight waves of data.

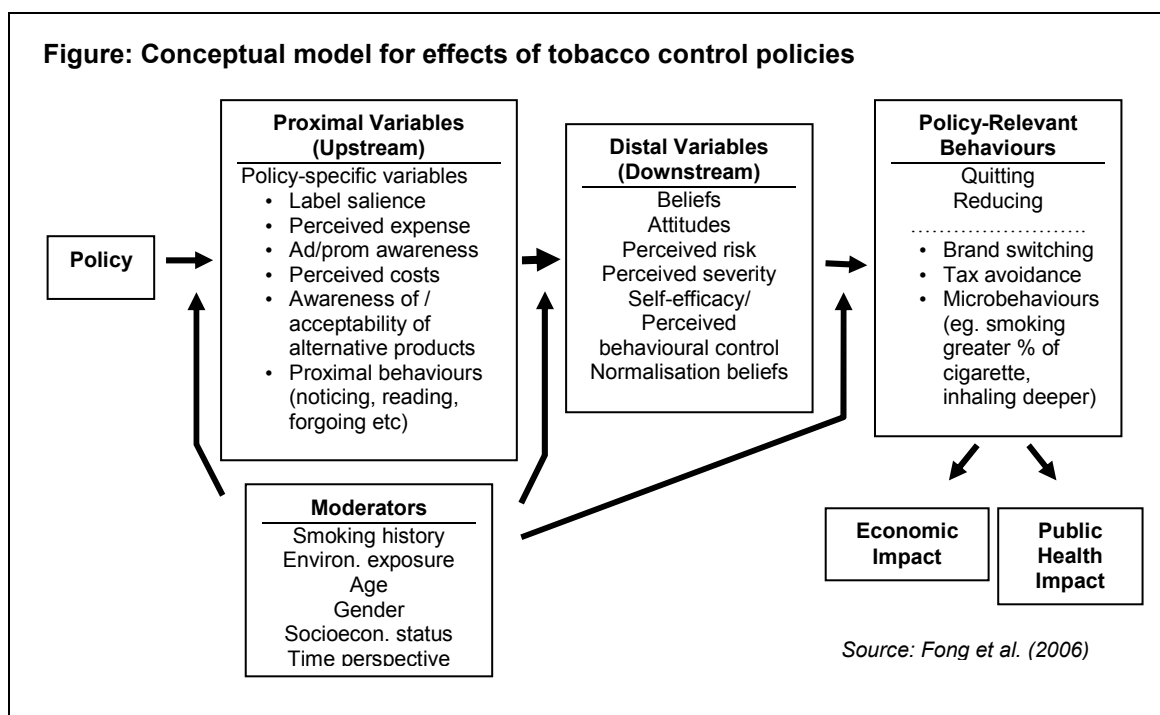
The ITC study is based on a conceptual model (see Figure). This model builds on the principle that each policy will have an influence on behaviour through a sequence of psychological events. The policy is expected to have an initial effect on proximal variables which are the closest measures of the effects of the policy. These proximal variables affect more distal variables such as attitudes which in turn mediate smoking behaviour. Variables such as socioeconomic status (SES) are hypothesized to be moderators and may influence the relationships found at any stage along the causal sequence.

Methods

This PHRC study uses ITC data to assess

response across SES to changes in policy in the three areas. Four waves of ITC data were included in the analysis to provide a longitudinal assessment of response to the policies, along with trends in smoking knowledge, attitudes and behaviour. SES measures focused on household income (high, moderate, low) and education level (high, moderate, low). Both were included because research has shown that they are not interchangeable.^{10,11} Several methods were used to analyse the data. Longitudinal data were principally analysed using generalized linear modelling (GLM) which is a common method employed to explore longitudinal effects by ITC researchers¹⁴.

Full details of this study can be found on the PHRC website (www.york.ac.uk/phrc/).



Key findings

The analyses show that the enhanced warning labels have led to increased awareness and processing of warning messages by smokers and that the advertising and promotions ban has driven substantial reductions in tobacco marketing awareness by smokers. On the other hand, the elimination of light/mild descriptors has been less successful. It has had little perceptible influence on smokers' beliefs about the harmfulness of light/mild cigarettes, and the findings show that smokers continue to use other cues - such

as the colouring of packets - as surrogates for light/mild labelling to determine the type of cigarettes they are purchasing.

However, the key aim of this study was to examine whether or not the policies had a differential effect across socioeconomic status, in other words whether the policies had a greater positive impact on some socio-economic groups than others. It is clear from the analyses that, whilst minor variations were apparent, and some of these even reached statistical significance,

no consistent or important differences emerged. For example, whilst the introduction of the ad ban led to greatest falls in the general salience of the tobacco advertising among highest social groups, this pattern was reversed for more specific measures of sponsorship and price promotion awareness (see figures 6.7 - 6.12 in the main report). Analyses based on income group and educational level produced consistent results. The policies, therefore, are, to all intents and purposes, having an equivalent impact across the social scale.

Conclusions

The three policies examined – the ad ban, enhanced warning labels and the

elimination of misleading product descriptors – are having a uniform impact across socio-economic groups. As a result, given the disproportionately high smoking rates in disadvantaged populations, the policies are likely to be having a bigger proportional impact on awareness of health warnings and tobacco marketing in these communities. To the extent that changes in awareness and perceptions support changes in behaviour (Figure 1), these population-wide policies will contribute to a narrowing of the smoking prevalence gap. We therefore conclude that the policies are an important part of a broader strategy to reduce inequalities in cigarette smoking.

References

1. Thun, MJ, Day-Lally CA, Calle EE et al (1995). Excess mortality among cigarette smokers: changes in a 20-year interval. *American Journal of Public Health*, 85: 1223-1230.
2. http://www.cdc.gov/tobacco/research_data/economics/mm5425_highlights.htm
3. <http://info.cancerresearchuk.org:8000/cancerstats/types/lung/smoking/>
4. Jamrozik, K (2005). Estimate of deaths among adults in the United Kingdom attributable to passive smoking. *BMJ*, Apr 9, 330: 812.
5. The World Health Report 2003. World Health Organization.
6. <http://www.dh.gov.uk/assetRoot/04/11/47/31/04114731.pdf>
7. Hammond D, Fong GT, McNeill A, et al. (2006). Effectiveness of cigarette warning labels in informing smokers about the risks of smoking: findings from the International Tobacco Control (ITC) Four Country Survey. *Tobacco Control*, 15(Suppl 3): iii19-iii25.
8. Lovato C, Linn G, Stead LF, Best A. Impact of tobacco advertising and promotion on increasing adolescent smoking behaviours. *Cochrane Database of Systematic Reviews* 2003, Issue 3. Art. No.: CD003439. DOI: 10.1002/14651858.CD003439.
9. Saffer H, Chaloupka F (2000). The effect of tobacco advertising bans on tobacco consumption. *Journal of Health Economics*, 19: 1117-1137.
10. Winkleby MA, Jatulis DE, Frank E, Fortmann SP (1992). Socioeconomic status and health: How education, income, and occupation contribute to risk factors for cardiovascular disease. *American Journal of Public Health*, 82: 816-820.
11. Huisman M, Kunst AE, Mackenbach JP (2005). Inequalities in the prevalence of smoking in the European Union: comparing education and income. *Preventive Medicine*, 40: 756-764.
12. House JS, Kessler RC, Herzog AR, Mero R, Kinney A, Breslow M (1990). Age, socioeconomic status, and health. *Milbank Quarterly*, 68: 383-411.
13. House JS, Lepowski JM, Kinney AM, Mero RP, Kessler RC, Herzog AR (1994). The social stratification of aging and health. *Journal of Health & Social Behavior*, 35: 213-234.
14. Thompson ME, Fong GT, Hammond D, et al. (2006). Methods of the International Tobacco Control (ITC) Four Country Survey. *Tobacco Control*, 15 (Suppl 3): iii12-iii18

Details of the research team

Gerard Hastings,¹ Louise M Hassan,¹ Anne Marie MacKintosh,¹ Christine Godfrey,² Steve Platt.³

¹Institute for Social Marketing, University of Stirling; ²Department of Health Sciences, University of York; ³Research Unit in Health Behaviour and Change, University of Edinburgh

Address for Correspondence

Professor Gerard Hastings, Institute for Social Marketing University of Stirling, Stirling, FK9 4LA. Email address: gerard.hastings@stir.ac.uk

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