

The prevention of uptake of smoking by children and young people, with reference to the areas of mass media and the sale of tobacco products: findings from a multi-method primary research study.

Final Report

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November 2021: NICE guidelines PH10 (February 2008) and PH14 (July 2008) have been updated and replaced by NG209. The recommendations labelled [2008] or [2008, amended 2021] in the updated guideline were based on these evidence reviews. See www.nice.org.uk/guidance/NG209 for all the current recommendations and evidence reviews.

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Executive Summary

Introduction and aims

This study explored the views of children and young people on the prevention of smoking uptake with reference to the areas of mass media and age restricted sale of tobacco products. Young people's knowledge and attitudes towards the use of media including new media (e.g. websites), smoking and the legal age of purchasing cigarettes, including access to cigarettes and their comprehension and appreciation of health promoting messages, including anti-smoking campaigns, were examined.

Methods

The study incorporated both qualitative and quantitative research methods, including screening questionnaires and focus groups. An interactive electronic voting tool was also used in focus groups enabling participants to anonymously reply to questions.

Sample: 852 pupils aged between 11 and 17 years from six schools were screened for existing smoking behaviours. From answers given, a sample of young people attending schools and sixth forms (n=147), and two additional groups of young people who were at risk of, or had been excluded from, mainstream education (n=7) and young people in contact with smoking cessation services (n=12) were selected to take part. In total, 21 focus groups were conducted across the Merseyside areas of Sefton, Liverpool, Wirral and Knowsley. The sample population differed from the general UK population as overall, it reports higher than national average smoking prevalence (young people and adults) and contains some of the most deprived local authorities in England (HDA, 2004; ONS, 2004). However, the four regions within Merseyside provide a wide range of demographics and levels of deprivation varied across the four sample areas.

Procedure: A two stage sampling methodology was utilised in order to recruit and allocate young people to focus groups. Firstly, a purposive sampling framework was developed in order to ensure that focus groups were stratified by the variables of age, sex, smoking and socioeconomic status. A brief screening questionnaire was then developed to identify the smoking status, gender and age of young people in schools and colleges in order to allocate young people to groups. The 'school excludees' and 'smoking cessation' groups were recruited using a convenience

sampling technique and identified through established working relationships with practitioners in the Merseyside area.

All results shown below relate to findings from the focus group research. Where the findings for the focus group research concur with findings from the effectiveness and cost effectiveness reviews this is indicated by referencing the corresponding evidence statements from those reviews. For example one of our findings suggests that television adverts were viewed by young people as the most effective means of delivering health promotion campaigns. Method of delivering an intervention is covered in effectiveness Evidence statement 1.3.2 therefore this statement has been referenced in the relevant results section (e.g. Evidence statement 1.3.2). Where findings are not in agreement with the evidence review this has been discussed and referenced to the corresponding review statement.

Findings

Although the review of effectiveness (Richardson et al., 2007; citation used throughout) indicated that intervention effectiveness varied as a function of several participant characteristics (e.g. Evidence statements 1.5.1), overall, findings from the current research did not vary greatly by young people's age, socio-economic status, sex, smoking status, or risk of school exclusion. This may be a result of differing methodological approaches and the broad areas of investigation explored in this study.

Use of contemporary media and delivery of health promotion campaigns

Study findings demonstrated that young people regularly access a range of media sources which may all provide suitable means of delivering health promotion messages. The internet and television were the most commonly accessed media formats. In accordance with findings from the review of effectiveness (Effectiveness Evidence statement 1.3.2) television adverts were recalled more often and regarded as the most effective means of delivering health promotion campaigns than the other media formats assessed.

The review evidence suggested that whilst exposure to television campaigns increased intentions to quit, this was not accompanied by actual attempts. In the

current research, smokers were significantly less likely than abstainers to believe that media adverts could affect either smoking attitudes or behaviours.

The internet and billboard advertisements were viewed as providing appropriate means of delivering health promotion campaigns to young people, although other formats such as posters, and cigarette packets health warnings were suggested. Young people did not believe the radio to be an effective means of delivering health promotion campaigns. If the radio is to be used as a method of health promotion campaign delivery, local independent radio was preferred to national/BBC stations.

Young people believed that new media formats, including the internet, would be an effective means of delivering campaigns to young people; however a number of issues must be taken into consideration. Text messages, and instant messaging were viewed as potentially effective means of delivery as long as no cost was passed on to the young person. Young people are also selective in their use of internet sites therefore health promotion campaigns need to target specific websites. The communication websites MSN and MySpace were the most common sites suggested by groups for the placement of campaigns.

Young people are cautious of internet content and require assurance that a website is trustworthy; this can be achieved through the use of a prominent recognizable logo such as the National Health Service (NHS) logo. Embedded and 'pop-up' adverts were a particular source of annoyance and mistrust. In accordance with the effectiveness review (Evidence statement 1.3.2) young people stated that internet based health promotion campaigns needed to be interactive, and have stylish and modern designs to be noticed.

Although the evidence review failed to differentiate the impact of deliverer upon effectiveness, young people in this study expressed a preference for an association of prevention messages with celebrities or athletes (Evidence statement 1.4.1). However focus group participants stated that in order for the messages celebrities were conveying to appear real to young people, the celebrity should have a personal smoking experience to share.

Online access was not suitable for all young people. Some would prefer to speak to a professional in person about smoking related matters, such as their GP, rather than obtaining information from the internet.

Assessment of current health promotion campaigns

The findings suggest that young people who were non smokers were much more likely to believe that prevention campaigns would affect smoking behaviours and knowledge than smokers. They were also more likely to visit smoking prevention/cessation websites.

Young people in focus groups were generally unaware of industry manipulation advertisements (Evidence statement 1.1.1). Those that had seen such adverts stated that they were hosted on non-UK websites and respondents were vague about the messages provided which suggests they had not been effective in encouraging pro-smoking behaviours and attitudes.

As the evidence from previous UK and USA studies has also shown (Evidence statement 1.3.1) young people interviewed regarded the content of an intervention as influential upon its effectiveness. A wide range of campaign messages were proposed by groups which suggests that no single anti smoking message is likely to have universal appeal (Evidence statements 1.3.3, 1.3.4, 1.3.5). Regardless of whether it was thought they would be effective, respondents believed the long term effects of smoking were the most appropriate message for prevention campaigns targeting the <18 age group. Smoking mortality, the financial burden of smoking, and the impact of smoking upon physical appearance were the most frequent messages offered by participants, regardless of age and sex. The financial cost of smoking was also believed to be an effective message, predominantly amongst groups of smokers in more deprived urban areas.

In keeping with other qualitative literature, young participants expressed a preference for fear evoking messages, and were able to recall the message and source of such campaigns long after such campaigns had finished broadcasting. However, review evidence suggests that balanced, and social normalisation messages are the most effective (Evidence statement 1.3.1).

The use of small children in health promotion campaigns was viewed by participants (mainly female) as the most effective means of highlighting the dangers of passive smoking. There were no other notable age, sex or socioeconomic differences observed in the message content of campaigns suggested by young people, which

highlights the need to exercise caution in the creation of health promotion campaigns targeting a specific demographic group (Evidence statements 1.7.1, 1.7.2).

As the evidence review also indicated (Evidence statement 1.6.1), the length of a smoking prevention campaign was seen by focus group participants as an important factor in the prevention of smoking uptake. Young people felt that messages need to be regularly repeated to be effective. One month was viewed as the optimum time for such a campaign as young people stated that based on previous experience, if a campaign (mostly media campaigns rather than specific cessation interventions) was delivered for a prolonged period of time, then they lost interest. This is a much shorter time period than the minimum of six months suggested by guidelines developed by the Center of Disease Control in the USA (Evidence statement 1.8.1). In order to maintain young people's interest in a long running campaign a key aspect of the content should change, such as the celebrity used or updated smoking related statistics. The use of music appealing to young people was also viewed as a key factor in keeping a campaign interesting to the 11 to 18 year age group.

Despite many suggestions on what would constitute an 'ideal' smoking prevention campaign a common theme evident throughout the research was that most young people did not believe that any form of campaign would be effective in preventing smoking uptake amongst their peers. Such views however are not supported by the evidence base (Richardson et al., 2007).

Smoking knowledge and attitudes

Young people had a good knowledge of the harmful effects of smoking and recent changes in minimum legal age for buying tobacco products. Poster campaigns and television adverts were believed to have been the most effective formats conveying the recent legal smoking age limit messages to children and young people. Shops (mainly newspaper/convenience stores) were the most recalled placement of poster campaigns.

Despite equal levels of knowledge, smokers had more positive attitudes towards smoking, which was greatest in males. There was also no relationship between smoking attitudes and knowledge.

Reasons provided by non smokers on why they had abstained from regular smoking support the evidence that knowledge of effects is important but insufficient as a stand alone prevention strategy. The smell of smoking, a smoking-related death of a family member, parental influence and cost were all reasons provided by young people on why they had chosen not to smoke on a regular basis (Evidence statement 1.3.1). Positive smoking attitudes were the only significant predictor of smoking status identified.

Young Access Interventions

Children and young people did not feel that the change in law would be effective in the prevention or cessation of smoking in young people under the age of 18 years, although approximately half of non smokers sampled felt the law may make access difficult.

In concordance with findings from international studies (Evidence statement 2.5.1), despite legislative attempts to prevent the purchase of tobacco products from commercial resources by young people under the age of 18, the most common means of accessing cigarettes within our sample was to purchase cigarettes from shops. Participants aged between 13 and 17 years stated they were able to purchase cigarettes from shops across Merseyside such as newsagents and grocery shops. Regular smokers aged 16-17 years encountered point of sale access restrictions less frequently than other groups, which they felt was due to merchants presuming they were over 18 years as they had been purchasing cigarettes from the same shop for a number of years.

Young people were not using vending machines to obtain cigarettes, which is where the current sample's access to cigarettes differed from those presented in US based evidence (Evidence statement 2.5.1).

In more deprived urban areas, young people were purchasing cigarettes from adults who were selling cigarettes from their residence to young people at lower than retail cost. Some young people were aware that they were being sold illegal 'black market' cigarettes and were aware of the associated health risks; however they felt they had no choice due to access restrictions.

Our findings support the evidence (Evidence statements 2.5.1, 2.8.1) that access restrictions are impeded by a young person's ability to access tobacco products from 'social sources' such as friends, family members, and strangers. A small number of young people in one urban area stated that they were able to purchase cigarettes from market stalls.

Young people's views on whether the national proof of age standards scheme (PASS) would prevent young people from purchasing cigarettes were mixed, although over half of those sampled did not think it would be an effective prevention strategy (Evidence statement 2.3.1, 2.3.2).

Recommendations

1. On the basis of young people's recognition of the format, television campaigns should be continued to be used as part of comprehensive prevention/cessation campaigns.
2. There was evidence to suggest that national smoking prevention campaigns with both adult and youth orientated messages would be successful means of delivering campaigns.
3. Health promotion campaigns using the internet will benefit from contemporary design and programming, which will have important resource implications.
4. Social networking and communication sites may be useful hosts of electronic smoking prevention interventions. However, these should be well designed 'click-through adverts' with clear NHS branding, rather than dedicated pages within the sites.
5. Despite similar levels of knowledge about the harmful effects of smoking, current smokers had more positive smoking attitudes, and were less likely to believe that prevention campaigns could be effective. Smoking cessation and prevention campaigns are therefore likely to have differential effects, depending upon current smoking status. Content should be altered depending upon whether the aim of the intervention is to prevent uptake, delay uptake, or promote cessation.
6. From the results obtained in this sample, male smokers may be most resistant to attempts to persuade them to change their smoking behaviours.
7. If asked to express a preference, young people tend to value 'socially desirable' traditional intervention techniques such as fear arousal/'shock

tactics' rather than evidence based approaches. Some campaign elements should therefore proceed in opposition to young people's preferences.

8. Young people would prefer campaigns to be delivered by well known individuals with personal smoking stories.
9. Young people aged under 18 years old are able to obtain cigarettes from a wide variety of sources that circumvent legal controls. Proof of age schemes will not be effective for young people who obtain contraband or illegally imported cigarettes. Furthermore, young people are able to purchase cigarettes online with minimum information checking by retailers. Proof of age schemes need to be supported by test purchasing and enforcement.

1. Introduction

Smoking, as the primary preventable cause of death in the UK is a major public health challenge (NICE, 2007). Its significant impact on health and inequalities has put it at the forefront of the current political agenda. As the majority of smokers initiate use prior to the age of 18, prevention efforts that target children and young people are imperative to prevent uptake and to foster healthy lifestyle choices.

There has been a concerted effort on targeting children and young people as a priority group for smoking prevention in the UK. Smoking prevention education has been embedded in the school curricula since the 1970's (ASH, 2007), and a range of youth based health promotion initiatives aimed at preventing or reducing smoking prevalence have been implemented. However, the effectiveness of tobacco prevention and control strategies for children and young people are varied (Richardson et al., 2007).

There is little evidence in the literature that smoking prevention interventions have great impact on the uptake of smoking (Richardson et al., 2007). The findings emerging from systematic evidence review suggest that long-term, repeated mass media campaigns can have some effects upon attitudes, knowledge, and behaviour when combined with broader tobacco control initiatives, but it is not possible to distinguish between interventions that delay onset rather than reduce uptake or preventing smoking altogether. Although few studies assessed effects on prevention, access restriction interventions were effective at reducing illegal sales, and increasing merchant compliance. These were most effective when combined with active enforcement and proof of age schemes.

In 1998, the White Paper *Smoking Kills* outlined the government's prioritization and investment in smoking prevention and cessation services in England with £110 million pledged over a three year period. Despite the huge investment in prevention and cessation programmes for children and young people, currently 9% of 11 to 15 year olds in England are regular smokers (defined as smoking at least one cigarette per week), a rate that has remained unchanged since 2003 (Fuller, 2007). Prevalence rates vary by gender, age, ethnicity and social class. Girls are more likely than boys to be regular smokers, 10% and 7% respectively. Adolescent smokers tend to be of white ethnic origin and come from low income backgrounds. Older

children are more likely to smoke than younger, and those who have been excluded from school are more than twice as likely as those who had not to be regular smokers (Fuller, 2007). Government targets reflect smoking age differentials in relation to the prevention of smoking amongst young people with a focus upon two age groups, 11-15 years and 16-17 years. In 1998, a target of reducing prevalence among 11-15 year olds to 9% by 2010 was set, whilst the target for the reduction in smoking rates amongst adults was set at 21% (Department of Health, 1998)

In October 2007 legislation was amended, to increase the legal age to purchase tobacco products in England from 16 to 18 years. This policy change mirrors youth access policies in countries such as the USA, Canada, Australia and New Zealand. The amendment is designed to make it more difficult for young people to obtain cigarettes from shops and vending machines, to reinforce the dangers of smoking and to reduce the prevalence of smoking amongst young people. Currently, 78% of regular smokers aged 11-15 years purchase their cigarettes from shops (Fuller, 2007). Whilst this is a decreasing trend from 89% in 1996, shops continue to be the primary source for the purchase of cigarettes by older and regular adolescent smokers.

Contemporary electronic media

Contemporary electronic media is of increasing importance in the lives of children and young people today. It is now a mainstream activity and considered to be the medium of choice for this age group (Childwise- Children and the Internet, 2007). In the UK, the Media Literacy Audit (Ofcom, 2006) reported that 72% of children 8 to 15 years of age had access to digital television, 64% had access to the internet in their homes and 65% had their own mobile phones. On average, these children and young people reported spending 6.2 hours per week on the internet (Ofcom, 2006).

There is growing awareness that children and young people are very receptive to the media messages to which they are exposed. The persuasive nature of contemporary electronic media thus provides considerable opportunity for influence. Results from *'Growing up in a wired world': Phase Two* demonstrated that the top 50 sites selected by Canadian children were "all commercial sites designed to sell product, reinforce branding and advertise to youth" (Moscovitch, 2007). Identifying how children and young people access and utilise contemporary electronic media and exploring the

role of advertising on these sites is fundamental to understanding how best to maximise the effectiveness of electronic health promotion materials.

Knowledge of smoking

Children and young people are generally knowledgeable about the adverse effects of smoking (Slovic, 2000; Fuller, 2007). Adolescents possess detailed information about the risks of smoking (Tilleczek and Hine, 2006). They are aware of the negative aspects on health, physical appearance and the environment and many also perceive benefits to smoking (Devlin et al., 2007). However, young people can harbour misconceptions about the actual risks from cigarette smoking; they do not acknowledge the short term risks of smoking (compared with long term risks such as cancers) and tend to underestimate the addictive nature of tobacco (Slovic, 2000). There is recognition in the literature that knowledge about smoking is important to prevention but information in itself is insufficient to reduce prevalence of smoking (Tilleczek and Hine, 2006).

Attitudes to smoking

The importance of attitudes to understanding and predicting smoking behaviour is well documented in the literature. Attitudes to smoking are complex and their relationship to smoking behaviour is not straightforward. Attitudes are considered by some to be an important determinant of health risk behaviours like smoking (Ajzen, 2001). Others argue that attitudes may be a moderating rather than the driving force in smoking behaviour as smokers themselves tend to hold negative attitudes about smoking albeit less negative than non smokers (Huidking et al., 2005).

There is some evidence to suggest that attitudes can become increasingly more favourable in adolescence. Blenkinsop and Wilson (2007) suggest this may be a consequence of smoking experience rather than age. They found that older pupils were more likely than younger ones to associate smoking with positive psychological factors and were of the opinion that these positive attitudes reflected the increase in numbers of smokers in the older age groups. They also found that attitudes toward acceptability of smoking mirrored the pattern of smoking prevalence – girls and older adolescents were more likely to think it was OK to for someone their age to smoke than younger ones (Fuller, 2007).

Assessment of current health promotion campaigns

There is evidence to suggest that using mass media is an appropriate and effective means of delivering health promotion messages to young people (Hafstad et al., 1996; Lantz et al., 2000; HDA, 2004, Devlin et al., 2007; Richardson et al., 2007). In 2005-2006 the UK government spent £22.7 million on national smoking campaigns (Commons Hansard, 2007). Although the television is the most popular delivery format, online campaigns can also be effective (Parlove et al., 2004). For example, an evaluation of CyberIsle, an interactive website for young people, demonstrated that the internet could be used successfully to engage adolescents in health promotion and encourage them to consider changing smoking behaviour (OPHE, 1997). Mass media campaigns can raise awareness of smoking as a health issue and can help to reinforce the medical evidence on the dangers of smoking (UICC Tobacco Control Fact Sheet 9). They work best if the health risks are appropriately framed and personally salient to young people on the basis of age, sex, and ethnicity (Richardson et al., 2007). However, there is little evidence to suggest that media campaigns *per se* are an effective prevention tool. Furthermore, young people view campaigns sponsored by tobacco companies less favourably and trustworthy than those commissioned by health promoters

The relevance of current anti smoking media campaigns to children and young people in England is unknown. Assessing awareness and understanding of current campaigns, their influence on behaviour and gauging young people's views on how to develop an 'ideal' health promotion campaign targeted at their peers is needed; to maximize effectiveness of future health promotion media based interventions.

Young access interventions

Whilst limiting access to tobacco products through legislation is a well established intervention in the prevention of smoking uptake in young people, its effectiveness is inconclusive. Youth access policies may lead to a general decline in the illegal sales of cigarettes to young people under 18 (Lantz et al., 2000), but such legislation tends to influence retailer rather than youth smoking behaviour and needs to be supported by consistent and sustained enforcement (NHS Centre for Reviews and Dissemination, 1999). Review evidence suggests that placing youth access interventions within multicomponented approaches, including education, increases in

taxation, proof of identity schemes, and restrictions on smoking in public places, increases the effectiveness (Stead et al., 2005; Richardson et al., 2007).

One reason why such restrictive measures are ineffective in reducing smoking behaviour may stem from the fact that young smokers often obtain their cigarettes from 'social sources' like friends and family instead of commercial sources (Lantz et al., 2000; Fichtenberg et al., 2002).

Since England has recently amended its regulations on tobacco sales thereby creating a new group of underage smokers (16-18 year olds), it is of importance to explore young people's knowledge and opinion of this new legislation and to identify how they access cigarette and what strategies might be used to circumvent the legal restriction.

Research questions

The main objective of this research was to explore the views of children and young people on the prevention of smoking uptake with reference to the areas of mass media and the sale of tobacco products. This incorporated the examination of young people's knowledge and attitudes towards the use of media including new media, smoking and the legal age of purchasing cigarettes, including access to cigarettes and their comprehension and appreciation of health promoting messages including anti-smoking campaigns.

i) Use of contemporary media

This provided an examination social networking, entertainment, and information media accessed by young people. Young people were asked to generate the names of popular websites and ascertain levels of use, expectations of sites, and purpose of visits. The potential impact of advertising on these sites was explored, including what makes young people 'click through' on adverts, and with comparisons made with 'traditional' media. Young people were asked to describe characteristics (e.g. design) of web banners that they are most likely to click on, and what would encourage them to respond to electronic health promotion materials.

ii) Knowledge of smoking

Quantitative information on young people's knowledge of the short and long term health effects of smoking, as well as mechanisms of toxicity (e.g. tobacco smoke and carcinogens) and individual financial costs.

iii) Attitudes to smoking

Differences in attitudes were explored including whether cognitive and affective responses to smoking are differentiated by smoking profiles.

iv) Assessment of current health promotion campaigns

Groups were asked to spontaneously recall the names and content of recent smoking prevention campaigns. They were presented with a small selection of (age-appropriate) visual (e.g. TV adverts), aural (e.g. radio), printed (e.g. leaflet), and electronic (e.g. web page) materials, and asked to respond in a standardised way. Information was sought on recognition, perceived content of message, and influences on behaviour. Specific questions were asked on whether they believed the particular campaign was relevant to them, was something they would talk to friends about, and whether new information was presented. Finally, participants were asked to suggest what an 'ideal' campaign targeted towards their age group and smoking history would look like.

v) Young Access Interventions

Young people's knowledge of the recent change in law concerning purchasing age restrictions was explored including how young people and their peers may circumvent legal restrictions in order to obtain tobacco.

2. Methodology

2.1 Design

The research design incorporated a range of both qualitative and quantitative research methods, including screening questionnaires, focus groups and the use of an interactive electronic voting tool (Turning Point 2006¹). The electronic voting system was integrated into the delivery of focus groups, thus enabling respondents to anonymously reply to questions using an electronic handset as well as responding verbally to questions administered to the group by the researcher. The voting system

¹ <http://www.turningtechnologies.co.uk/>

enabled researchers to test young people's smoking knowledge and gather opinions whilst providing an ideal means of obtaining confidential information in a group setting.

A number of previously validated questions were used in addition to questions developed by the research team in order to cover all five areas of investigation outlined in section 1. Questions which were used to test young people's knowledge were taken from the following surveys: CBBC Newsround smoking quiz (2007); Bupa Smoking Quiz (2007) and ASCH 'what every teen should know about tobacco' (2007). Young people's attitudes towards smoking were tested using questions from The Office of Tobacco Control (2006) Children, Youth and Tobacco: behaviours, perception and Public Attitudes. Naas, Co.Kildare. Smoking status questions, which were also used in the screening questionnaire were taken from the Drug use, Smoking and Drinking among young people in England survey (NatCen and Nfer; 2006). All other questions were derived by the researchers in conjunction with the NICE technical team. In addition, the NCCDP were provided with evidence tables extracted from the NICE evidence review of interventions to prevent the uptake of smoking in children and young people to ensure that relevant areas of questioning were covered.

A flexible approach was used in the administration of qualitative focus group questions thus enabling the exploration of young people's views and opinions. Views on anti-smoking campaigns were generated through the use of a selection of recent age-appropriate visual (e.g. TV adverts), aural (e.g. radio), printed (e.g. leaflet), and electronic (e.g. web page) materials which were shown on a laptop computer during focus group sessions. These materials were selected through expert consensus and where locally-developed materials were used, were likely to have been seen by the participant group. Flip chart material was used in two focus groups to assist in the generation of ideas of what young people regarded as an ideal smoking prevention campaign when attempts to encourage group discussion failed.

2.2 Sample

The sample comprised young people in school and sixth form colleges (n= 147) and two additional groups of young people who were at risk of, or had been excluded from, mainstream education (n=7) and young people in contact with smoking

cessation services (n=12). Twenty one focus groups have been conducted to date, with a total of 166 children and young people aged between 11 and 17 years.

There were 94 males (56.6%) and 73 females (43.4%). The modal age of children was 17 although across the study population there were few aged under 14 (age 11 = 4.2%; 12 = 4.8%; 13 = 5.4%; 14 = 18.7%; 15=22.9%; 16 = 20.9%; 17 = 23.5%). There were fewer pupils from city (urban) areas (45.3 %) compared with non-urban (54.7 %) areas although this reflects the wider geographic distribution of Merseyside.

Table 1 details current smoking status and Table 2 breaks this information down by age. The majority of the population reported either never smoking or smoking occasionally in the past. A greater percentage of males reported either never smoking, or smoking > 6 cigarettes per week compared with females, whilst females reported more regular, low frequency smoking. With respect to parental smoking status, where this was known, more mothers than fathers were current smokers. Across all participants, most young people reported that a few of their friends were smokers. However, when compared on the basis of their own smoking status, more of the regular smokers (> 1 cigarette per week) reported that most of their friends were also smokers, and that their fathers were more likely to smoke than non- or irregular smokers.

	All	Male	Female
<i>Own smoking frequency</i>			
Never smoked	51 (30.7)	33 (35.1)	18 (25.0)
Smoked once	32 (19.3)	20 (21.3)	12 (16.7)
Used to smoke sometimes	19 (11.4)	7 (7.4)	12 (16.7)
Infrequent use (< once/week)	10 (6.0)	3 (3.2)	7 (9.7)
1-6 cigarettes/week	8 (4.8)	4 (4.3)	4 (5.6)
>6 cigarettes/week	46 (27.7)	27 (28.7)	19 (26.4)
<i>Parental smoking status (where known)</i>			
Mother	80 (48.2)	42 (44.7)	38 (52.8)
Father	50 (30.1)	29 (30.9)	21 (29.2)

<i>Estimated proportion of friends smoking</i>			
None	43 (25.9)	24 (25.5)	19 (26.4)
A few	50 (30.1)	25 (26.6)	25 (37.4)
About half	19 (11.4)	11 (11.7)	8 (11.1)
Most	45 (27.1)	27 (28.7)	18 (25.0)
All	7 (4.2)	6 (6.4)	1 (1.4)

Table 1 Own smoking frequency, estimates of proportion of friends smoking, and parental smoking status (where known). Shown are n (%).

	11	12	13	14	15	16	17
<i>Own smoking frequency</i>							
Never smoked	7 (100.0)	2 (25.0)	4 (44.4)	16 (51.6)	12 (31.6)	5 (14.7)	5 (12.8)
Smoked once	-	-	2 (22.2)	9 (29.0)	6 (15.8)	11 (32.4)	4 (10.3)
Used to smoke sometimes	-	3 (37.5)-	-	-	5 (13.2)	5 (14.7)	6 (15.4)
Infrequent use (< once/week)	-	-	-	1 (3.2)	-	4 (11.8)	5 (12.8)
1-6 cigarettes/week	-	-	1 (11.1)	-	1 (2.6)	4 (11.8)	2 (5.1)
>6 cigarettes/week	-	3 (37.5)	2 (22.2)	5 (16.1)	14 (36.8)	5 (14.7)	17 (43.6)
<i>Parental smoking status</i>							
Mother	2 (28.6)	7 (87.5)	8 (88.9)	15 (48.4)	21 (55.3)	13 (38.2)	14 (35.9)
Father	2 (28.6)	4 (50.0)	3 (33.3)	7 (22.6)	16 (42.1)	7 (20.6)	11 (28.2)
<i>Estimated proportion of friends smoking</i>							
None	5 (71.4)	2 (25.0)	2 (22.2)	16 (51.6)	5 (13.2)	9 (26.5)	4 (10.3)
A few	2 (28.6)	1 (12.5)	1 (11.1)	4 (12.9)	14 (39.5)	9 (26.5)	18 (46.2)
About half	-	-	-	-	6	5	8

					(15.8)	(14.7)	(20.5)
Most	-	5 (62.5)	5 (55.6)	8 (25.8)	8 (21.1)	10 (29.4)	9 (23.1)
All	-	-	1 (11.1)	1 (3.2)	4 (10.5)	-	-

Table 2 Own smoking frequency, estimates of proportion of friends smoking, and parental smoking status (where known) by age of respondent. Shown are n (%)

A two stage sampling methodology was utilised in order to recruit and allocate school and college based young people (referred to throughout this report as the school sample) to focus groups. Firstly, a purposive sampling framework (see Table 3) was developed in order to ensure that focus groups were stratified by the variables of age, sex, smoking and socioeconomic status, all of which have effects upon smoking behaviour and attitudes (Devlin et al., 2007; Barton, 1998; Marsh and Mackay, 1994). A brief screening questionnaire (see Appendix A) was then developed to identify the smoking status, gender and age of young people in schools and colleges in order to allocate young people to one of the eighteen groups shown in table 3.

Group	Urban		Group	Non-Urban	
	Age and Gender	Smoking status		Age and Gender	Smoking status
1	11-12 years M + F	Never tried and experimenters	10	11-12 years M + F	Never tried and experimenters
2	13-15 years M	Never tried and experimenters	11	13-15 years M	Never tried and experimenters
3	13-15 years M	Regular smokers	12	13-15 years M	Regular smokers
4 (part 1)	13-15 years F	Never tried and experimenters	13	13-15 years F	Never tried and experimenters
4 (part 2)	13-15 years F	Never tried and experimenters			
5	13-15 years F	Regular smokers	14	13-15 years F	Regular smokers
6	16-17 years M	Never tried and experimenters	15	16-17 years M	Never tried and experimenters
7	16-17 years M	Regular smokers	16	16-17 years M	Regular smokers
8	16-17 years F	Never tried and experimenters	17	16-17 years F	Never tried and experimenters
9	16-17 years F	Regular smokers	18	16-17 years F	Regular smokers

Table 3 School sampling framework

The 'school excludees' and 'smoking cessation' groups were recruited using a convenience sampling technique and identified through established working relationships with practitioners in the Merseyside area. Both groups were of mixed age, gender and smoking status and aged between 11 and 17 years. Both groups contained children and young people who lived in Urban areas (Liverpool and Knowsley).

An additional school based focus group was conducted to capture children who did not attend the first organised focus group (number four) (see table 3). Although statistical findings for these two groups will be presented as one homogenous group, qualitative findings were analyzed and presented separately due to the flexible nature of questions and prompts used in each focus group.

2.2.1 Sample area profiles

The Merseyside areas of Liverpool, Sefton, Knowsley and Wirral were selected as the geographical focus of this study as they provided a range of socioeconomic, sociodemographic, and urban profiles. Whilst both Liverpool and Knowsley are densely populated urban areas, Wirral and Sefton have varied environments including coastal, rural, and urban conurbations (Census, 2003).

This population differs from the general UK population as overall, it contains areas of higher than national average smoking prevalence (young people and adults) and contains some of the most deprived local authorities in England (HDA, 2004; ONS, 2004). However, the four regions within Merseyside provide a wide range of demographics. Levels of deprivation vary across the four sample areas. Liverpool is one of the most deprived local authorities in England, ranking 1 in the top Indices of Multiple Deprivation (IMD) quintile for 2004 out of 354 (average score = 49.8) (ONS, 2004; NCHOD, 2006). Knowsley is third most deprived local authority (IMD, 2004 average score = 46.6) whilst Wirral and Sefton rank much lower at 48 and 73 respectively (Wirral IMD 2004 average score = 30.1; Sefton IIMD 2004 average score = 26.1).

According to the HDA (2004) adult smoking prevalence in Merseyside is over 31% higher than the national average. The Health Survey for Greater Merseyside (2005) reported that 32% men in Merseyside aged 16-24 smoke and 38% of women aged 16-24 smoke (Capewell et al., 2005). In these studies, smoking prevalence data on

young people by age groups 11-15 and 16-17 years for each of the four sample area are not specified. In addition, data on young people's smoking prevalence are not comparable due to varying methodologies and date of data collection. Data suggest however that smoking prevalence among young people in Merseyside is higher than the national average as the percentage of current smokers in 15-24 age range varies across the borough from 16% to 42%. (Barr et al., 2005),

In 2003, 23% of men aged 15-24 and 25% of women aged 15-24 in Liverpool and Sefton smoked (Barr et al., 2003). Data for Sefton (2002) also showed that 23% of 14-15 years olds smoke regularly (2002) (Sefton's Health, 2005). In Knowsley (2004) 12 % of secondary school children aged 12-13 and 14-15 had smoked in the last week (Balding, 2004). Also in 2004 a survey of all Wirral school children aged 9-10 years, 16% reported having smoking cigarette in last week with 5% smoking regularly and 1% wanted to quit smoking (Birkenhead and Wallasey PCT, 2005).

2.3 Procedure

All principals and head teachers of secondary schools, pupil referral units (PRU) and sixth form colleges in each of the four Merseyside areas (Wirral (total n =29), Liverpool (n =40), Knowsley (n =17) and Sefton (n =33) were sent a letter detailing the aims and requirements of the study and requesting their participation (See Appendix B). Sixteen schools and colleges expressed an interest in being involved. Schools were then organised into groups according to area (urban and non-urban) and region (Wirral, Liverpool, Sefton and Knowsley). Four schools (one in each area, two urban and two non urban) were selected at random from each of the groups. Two additional schools, one in Wirral and one in Sefton areas were added at a later stage to ensure that all groups in the sampling frame were included as screening questionnaires were lost in the national postal strike. The additional schools were matched against the required geographical characteristics.

Screening questionnaires and participant information sheets (See Appendix A) explaining the aims and objectives of the study were administered by teachers to pupils during school hours. In order to ensure confidentiality young people were asked to provide their initials and date of birth and instructed to seal questionnaires in an envelope provided before handing the questionnaire back to the teacher.

A total of 852 young people were sampled using the screening questionnaire, with 240 young people allocated to one of the 18 school based focus groups (see table 1). All smokers were selected for focus group sessions in order to boost the sample, whilst selected non smokers and ex-smokers were representative of the wider sample population (data not shown). Selected pupils Analysis of screening data is included in Appendix E. A minimum of eight young people were required for each group, therefore twelve young people were randomly selected to cover for possible attrition (due to non attendance or parental 'opt out'). Details (initials and dates of birth) of pupils selected for each group were sent to teachers. At no point were teachers or project workers informed of the smoking status of groups.

For those pupils under the age of 16 years a parental 'opt out' form was sent home with pupils outlining the aims of the study and offering parents a chance to withdraw their child/ren from the recruitment phase of the study by returning an 'opt out' form in a stamped addressed envelope within a seven day period. The national postal strike (which was extended by one week in the Liverpool area) resulted in approximately a seven week delay in the research procedure in order that all parental 'opt' out forms had been received before focus groups could commence.

For the additional two groups of school excludees and smoking cessation, staff agreed to act as gatekeepers by requesting young people's participation and sending parental 'opt out' consent forms home after a session at their project or smoking cessation group.

All focus groups were designed to last one hour and were arranged to cause as limited disruption to school or project timetables as possible.

2.4 Analysis

All focus group interviews were digitally recorded with the consent of young people and professionally transcribed verbatim (Ubiquis Ltd, London) for analysis with identifiable data anonymised. Data management and analysis was conducted using the Nvivo (2.0) qualitative data analysis programme. Analysis progressed throughout the active research period enabling the lead researcher to explore emerging themes with young people. Comments made by young people during voting sections and flip chart assisted sections of the focus group were also transcribed and included in the qualitative data analysis.

Key patterns were then identified and coded by a team of researchers using an inductive (themes generated from the data) thematic analysis approach to data analysis (Krippendorff, 1980). Content analysis was also used to quantify forms of media recalled by young people in the first section (Use of contemporary and electronic media) of focus groups. Coding results have been shown by participant and group. As transcribers were not able to differentiate between individuals, researchers could not be sure that comments were made by the same individual on a number of occasions. Presentation of themes by group as well as participant therefore provide a more accurate portrayal of the number of times themes arose across focus groups. Multiple illustrative quotations of identified themes were selected and presented in research findings (section 3) to portray thematic similarities across groups of varying age, sex, smoking status and geographical profile.

The same researchers who conducted the focus groups were involved in the coding of groups to ensure consistency. Although work of this nature is inevitably subject to subjective interpretation by the researcher, the use of independent coding and multiple sources of thematic analysis aimed to reduce sources of bias.

Statistical data from the voting sessions and screening questionnaires were analysed using SPSS (v 14.0). Several appropriate data analyses were performed, including Chi-Square analysis, correlation analysis, ANOVA, t-test, regression analysis to investigate the statistical associations between groups of young people across the five areas of investigation.

2.5 Ethical approval and ethical issues

Ethical approval for all elements of the project was granted by Liverpool John Moores University Research Board in August 2007. All NCCDP field research staff had clearance from the Criminal Records Bureau, allowing work with young people. The advice of teachers and specialist smoking cessation professionals was sought to ensure that the research team was mindful and sensitive to any particular needs of participants. Full study information accompanied all research materials (including the screening questionnaire). Written and verbal consent was obtained from all focus group participants before each evaluation stage. Responses were anonymised

before analysis, and data was not reported on an individual level. At the beginning of data collection phases participants were explicitly and repeatedly reminded of confidentiality. All data sharing procedures complied with the Liverpool John Moores University data protection policy. All work conducted by the NCCDP complies with the British Psychological Society's *Ethical Guidelines* (2006), and proceed according to Fraser and Department of Health (Seeking consent: working with children, 2001) guidelines. The Centre for Public Health also has a robust Child Welfare policy (available upon request) in which all NCCDP staff has received training.

2.6 Strengths and limitations

The use of voting systems in a focus group situation enabled the triangulation of research data to gain further insight and context to questions at the same time as gathering statistical data. Voting systems enabled researchers to question young people on sensitive issues such as illegal activities in a group situation whilst maintain personal confidentiality. Researchers also believed that the use of voting systems created a talking point at the beginning of focus groups which acted as an icebreaker in generating discussion and making young people feel at ease with the process. A final strength of this format was the ability to gather data from shy participants who would not verbally respond to questions in a group situation even when prompted.

Restricted timelines (approximately four months from start to first draft) meant that inter-rater reliability could not be calculated therefore the level of concordance in the coding of different researchers in the team is not known.

Two focus groups were cut short due to changes in school timetabling. Data presented in section 3.4 (Youth access interventions) is therefore from 148 children and young people rather than the total population sampled (n = 166)

3. Results

3.1. Use of contemporary media

Children and young people’s use of media was explored. This included questions on the use of social networking sites, entertainment (including internet, television, radio and magazines), and information media (mainly internet and newspapers) accessed.

Participants were requested to recall the names of popular websites and ascertain levels of use, expectations of sites, and purpose of visits. The views and potential impact of advertising on these sites were also explored including questions on what makes young people ‘click through’ on adverts and what they felt were the characteristics (e.g. design) of adverts that they are most likely to click on. Electronic health promotion materials were discussed including what would encourage young people to click on adverts which were about health such as information in smoking cessation or alcohol consumption.

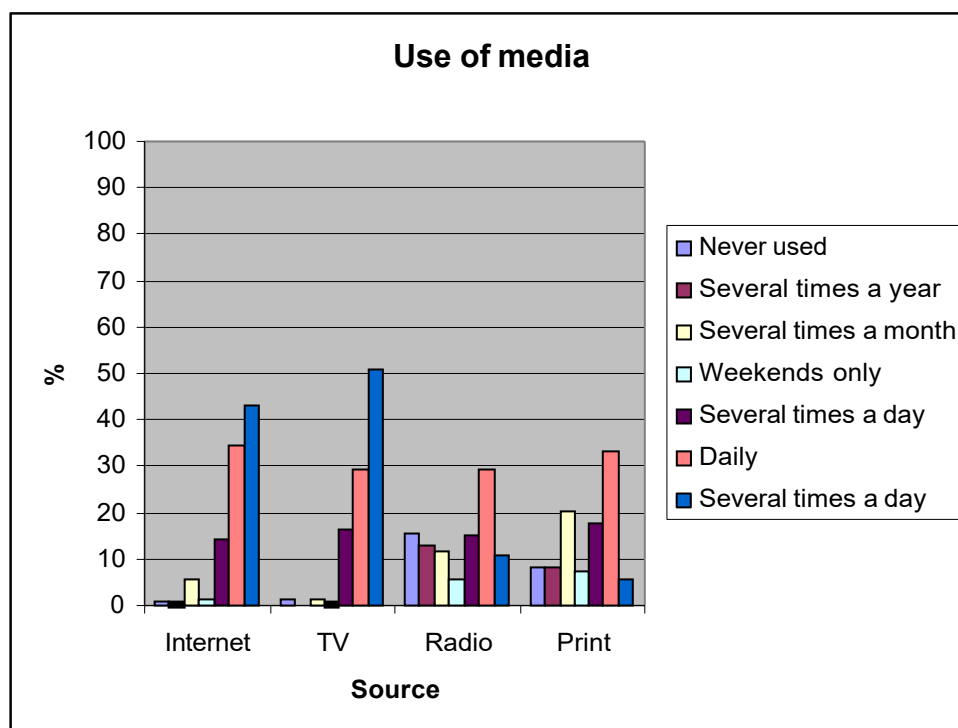


Figure 1 Frequency of media use

Participants reported use of all media formats (Figure 1). The internet and TV were the most frequently accessed, with the majority reporting daily use. Radio and print

media were accessed less frequently, although the majority were still exposed on a daily basis. Mann Whitney test indicated that media access frequency did not differ between urban status (Internet, urban mode = several times/day vs non urban mode = several times/day, $U = 2873$; TV, several times/day vs several times/day, $U = 2840$; Radio, daily vs daily, $U = 2798$; Print, daily vs daily, $U = 2619$), or sex (Internet, several times/day vs daily, $U = 3013$; TV, several times/day vs several times/day, $U = 3149$; Radio, daily vs daily, $U = 3016$), although frequency of female access to print media was higher (several times/month vs daily, $U = 2729$, $p < 0.05$). However there were differences on the basis of smoking status. Smokers accessed the Internet (non smoking mode = several times/day vs smoking mode = several times/week; $U = 1997.5$, $p < 0.001$), TV (several times/day vs several times/day; $U = 2431.5$, $p < 0.05$) and print media (several times/month vs daily; $U = 2276$, $p < 0.01$) more frequently than non smokers. Radio access was similar between groups (several times/week vs daily; $U = 2931$).

There was wide variation in the amount of time spent on the internet at one time, and although subjects reported often spending up to several hours a day online, especially at the weekend, this was not always active use as the computer would be left online in the background whilst the young person was pursuing other activities.

Participants were asked to spontaneously recall the names of media sources that they regularly accessed. These are summarised in Table 4. The most frequently reported type of websites used were search engines (such as Google), communications (such as Hotmail and MSN), and social networking sites (such as Myspace), although some reported use of Wikipedia, primarily for homework. Email and social network sites had been blocked by most schools and so access to these was primarily at home. The video website YouTube was mentioned by participants, although this was not as popular as other entertainment sites. With regard to printed media, tabloid newspapers were the most commonly reported; females predominately read celebrity or weekly magazine (e.g. Heat), whilst boys primarily read 'lad mags' such as *Nuts* or *Zoo* (sex comparison data not shown). Local independent radio stations were the most frequently reported, followed by BBC Radio 1. Very few examples of other radio stations were provided. Finally, BBC 1 was the most frequently cited TV channel, although as a class, entertainment channels on cable/satellite (e.g. Sky 1) comprised the greatest number of mentions.

Social networking sites were considered an effective means of keeping in touch with friends after the school day had finished. Whilst online networking groups were used to arrange social events between friends and write blogs, participants were unlikely to join groups outside of their immediate peer network, one of the unique features of these types of site:

“I use them to see what people are doing. If they want to go out somewhere. My friends live far away”

(16-17, Male, non-urban, never tried and experimenter group)

“I wouldn't join groups and things on Facebook”

(13-15, Male, non-urban, never tried and experimenter group)

Participants were asked specific questions about their use of the internet. A large proportion (84.9%) had seen adverts on websites, but almost half of these (44.6%) never read them. Of the remaining, most would only sometimes (45.2%) read them. In addition, most participants who had seen internet adverts would never click on them (73.9%), and tended to find them annoying rather than appealing. The use of pop up blocking software meant that a lot of the time participants were not aware that a website had launched certain types of adverts. Analysis showed that there were no differences between the number of regular smokers and non smokers/experimenters seeing internet adverts (90.7% vs 82.1%; $\chi^2= 1.543$), the frequency of reading them (mode = never vs sometimes; U = 1715) and the frequency of clicking on them (never vs never; U = 1887).

“They are very annoying and will get you a virus”

(16-17, female, urban, never tried and experimenter group)

“It's like, 'hmm, you have just won a virus!'”

(16-17, male, non-urban, never tried and experimenter group)

“They keep on popping up”

(16-17, female, urban, never tried and experimenter group)

“I do not believe them. They are trying to con you into something”

(16-17, female, urban, regular smokers group)

“You are more likely not to do what the advert wants you to do because it annoys you so much”

(16-17, female, non-urban, never tried and experimenter group)

When asked what features might persuade young people to click on an online advertisement or message, participants were quite specific in the elements that they wanted to see. The adverts would need to have a modern, stylish design; use intelligent language; be specific to young people’s interests; be colourful; and not make offers of rewards that would not be fulfilled. ‘Gimmicks’ and unnecessary media use (e.g. videos and sounds) were to be avoided. One suggested way of attracting attention was the licensed use of celebrity images (indicating the celebrity endorsed the advert or campaign) or intriguing questions that made the reader want to find out more:

“Just the subject, something that you want to read more about”

(16-17, male, non-urban, never tried and experimenter group)

Around one quarter of participants (27.0%) had seen cigarettes adverts on the internet. The most commonly reported brand was Lambert and Butler, and there was the perception that these were mostly advertised on non-UK websites (data not shown). Young people were vague about messages and specific placement of adverts which would not suggest they had been effective in encouraging young people to smoke.

Internet	N (% of all responses)	Print	N (% of all responses)	Radio	N (% of all responses)	TV	N (% of all responses)
Search engine	23	Broadsheet	2	5 Live	2	<i>Terrestrial</i>	
Social networking	28	'Lads mag'	6	Radio 4	1	BBC1	22
ebay	2	Local newspapers	10	Talksport	1	BBC 2	5
Sport	4	Music	4	Local BBC	1	Channel 4	16
Games	7	Tabloid	17	Radio 2	3	Five	3
Music	5	Weekly/celebrity	30	Radio 1	19	ITV 1	13
Communication	25	Other	8	Local independent	39	<i>Cable</i>	
Wikipedia	9			Smooth	3	Entertainment	33
YouTube	12					Children's	10
						Music	25
						Sport	22

Table 4 Content analysis of media sources spontaneously recalled by participants. Communication websites include email (e.g. hotmail) and other messenger sites (e.g. AIM, Windows Live Messenger); examples of social networking websites include MySpace and Facebook

3.2 Smoking knowledge and attitudes

Smoking knowledge

In general, participants had good knowledge of the health effects and law regarding smoking (Table 5), whilst the majority did not know the number of smoking related deaths, or the age group with the greatest smoking prevalence (most believed under 16s to have the greatest prevalence), they understood the harmful effects of smoking and were also aware of the recent changes in minimum legal age for buying tobacco products. Examining differences in knowledge between regular and non/ex smokers, chi square analysis showed that groups were comparable in knowledge with regards to the minimum legal age for buying tobacco products; the change in purchasing law on October 1st 2007; the annual number of deaths from smoking related heart disease; the association between smoking and lung cancer; the effects of smoking on teenage development; constituents of cigarette smoke and general health effects of smoking (data not shown). Further analysis showed that there were generally no sex differences in response, although fewer females knew the correct number of deaths from smoking related heart disease each year ($\chi^2 = 4.994$; $p < 0.05$), and fewer males knew the age group that reported the greatest prevalence of smoking ($\chi^2 = 6.228$; $p < 0.05$). Loglinear analysis indicated that there were no significant differences or interactions between age, sex and/or smoking status with knowledge (data not shown).

	% answering correctly		
	<i>All</i>	<i>Regular Smokers</i>	<i>Non-smokers and experimenters</i>
Minimum legal age for buying tobacco	89.2	94.4	86.6
Knew of age law change	89.2	92.6	87.5
Number of heart disease deaths	31.3	33.3	30.4
Association between smoking and lung cancer	86.7	85.2	87.5
Smoking effects on teenagers	81.3	79.6	82.1
Type of substances in cigarette smoke	63.3	53.7	67.9
Greatest prevalence	26.5	20.4	29.5
Health effects	84.3	88.9	82.1

Table 5 Smoking knowledge (see Appendix D for full questions)

When asked about how young people found out about the legislative change, poster and TV adverts were the most commonly recalled forms of media campaigns (Table 6). Shops were the place where most poster campaigns were seen (n = 11 participants) as well as bus stops (n= 3 participant) and doctors surgeries (n= 1 participant). Eleven young people (n = 8 focus groups) stated that they found out about the change when they were purchasing cigarettes in shops, either prior to the day of change (n= 3 participants) or on day of legislative change (n= 8 participants). Friends (n = 7 participants, 6 groups) and news reports (including printed, TV and radio) were also recalled as the source of law change knowledge by participants in more than one group.

<i>Source of knowledge</i>	<i>Participants (n)</i>	<i>Groups (n)</i>
Poster campaign	20	13
TV advert	10	8
When purchasing cigarettes	11	8
Friends	7	6
TV News report	6	4
Radio news report	4	3
Newspaper	2	2
Leaflet	2	2
Website	1	1
School based education	1	1

Table 6 How young people found out about the legal smoking age limit increase

Children and young people’s opinions on the age limit change were mixed, however a larger proportion held negative views towards the change. Negative comments were made by 23 young people across 12 focus groups, whilst positive comments were made by nine young people across six focus groups.

Young people with negative comments stated that they did not think the law change would prevent young people from smoking. There were no notable differences in the smoking status of groups and negative views of the change in law.

“You smoke before 16 anyway. It makes no difference to smoking before you are 18”
(16-17, female, urban, never tried and experimenter group)

“It doesn’t stop us. It is just a hassle”
(16-17, male, urban, regular smoking group)

“I think it’s a good idea but if they want to smoke, it’s not going to stop them at all”
(13-15, female, urban, never tried and experimenter group).

Comments relating to access were made by 20 participants (n= 10 groups) who stated that the age increase would not prevent young people’s access to cigarettes. These young people were predominantly from urban areas (n= 8 groups).

“They can still get them from places so it’s not really doing anything to them”
(13-15, female, urban, never tried and experimenter group).

Positive responses (n= 9 participants, 6 groups) related to how the change in law may prevent younger children’s future smoking uptake. Four of these groups were non smokers of mixed demographic.

“I think it is better for young people though. It stops you starting when you are younger”. (16-17, male, urban, smoking group)

A small number of smokers (n= 3 participants, 3 groups) and one non smoker expressed their anger towards the age change as they felt that by the age of 16 it should be a individuals right to be able to smoke if they wish to do so:

“I do not smoke, but I wanted the legal right to buy them at 16”
(16-17, female, urban, never tried and experimenter group)

“It wasn’t fair because people said they couldn’t serve us anymore. It was annoying”
(16-17, male, urban, regular smokers group).

“Because by the time we’re 16, we’ve left school, and it’s like our decision whether we want to smoke or not”
(13-15, female, urban, regular smokers group).

Smoking attitudes

Participants were also asked a series of 16 attitudinal questions (see Appendix D), and indicate their level of agreement on a 5 point Likert scale. From these scores a

composite smoking attitudes score was calculated (where a complete set of data was available, and with appropriate reverse scoring of some items).

Figures 2-5 show attitudes across the whole study population. Most were in agreement that smoking was addictive, was difficult to give up, and that most smokers died younger than their non-smoking counterparts (Figure 2). There was also some indication that participants held negative social and cultural perceptions of smoking, with the majority thinking that smoking did not make young people look grown up, and in fact made them less attractive (Figures 3). Participants also disagreed that smoking was socially advantageous or that smokers necessarily made more friends or were more popular (Figure 4). Although most believed that smoking reduced stress, participants did not generally believe that it was a useful slimming aid or an enjoyable and satisfying activity, and believed that smoking represented poor value for money (Figure 5)

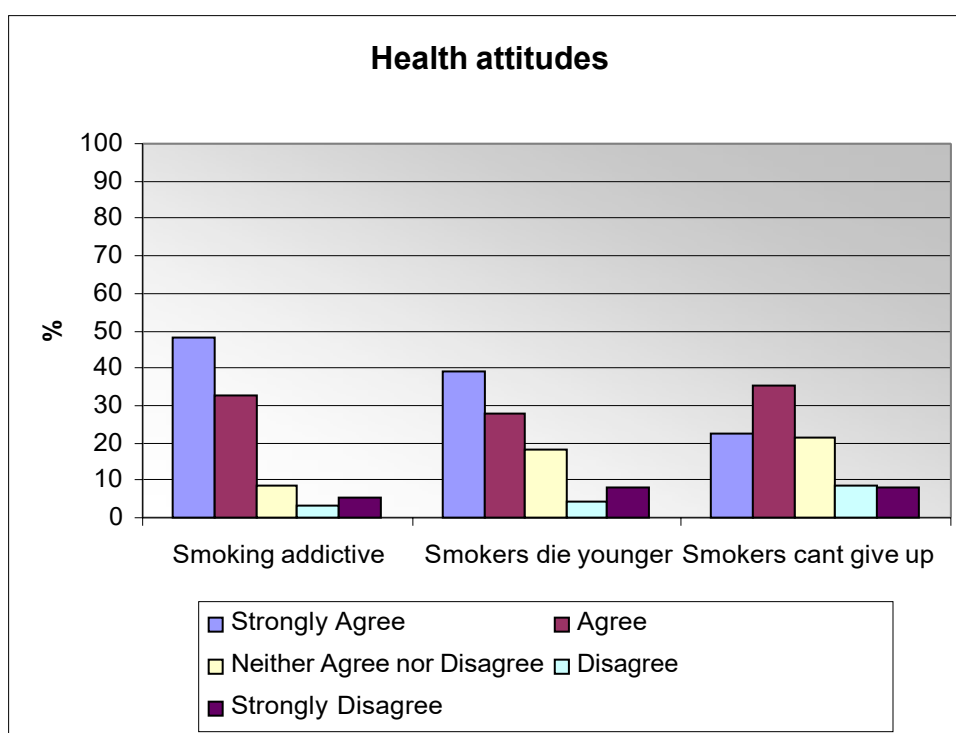


Figure 2 Health attitudes towards cigarettes

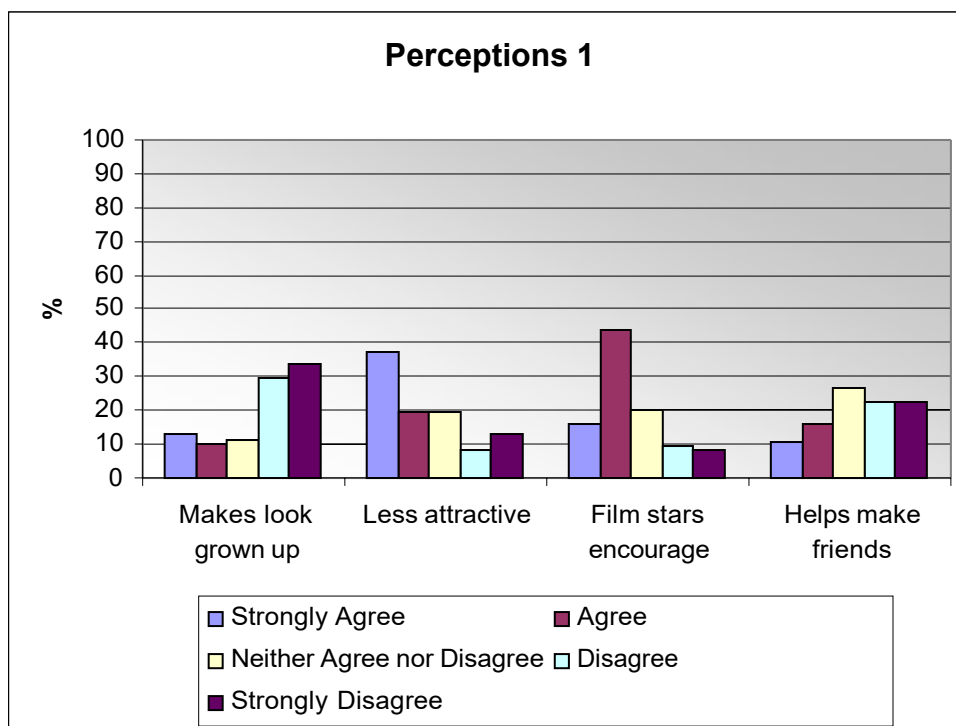


Figure 3 Social and cultural perceptions and attitudes of smoking

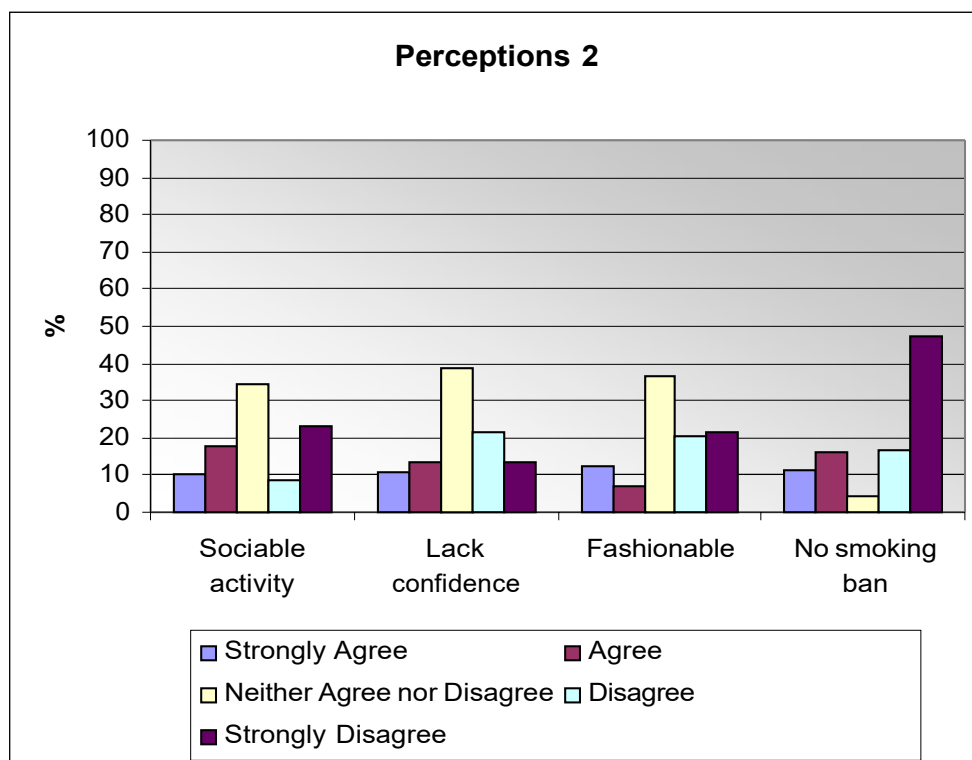


Figure 4 Social and cultural perceptions and attitudes of smoking (continued)

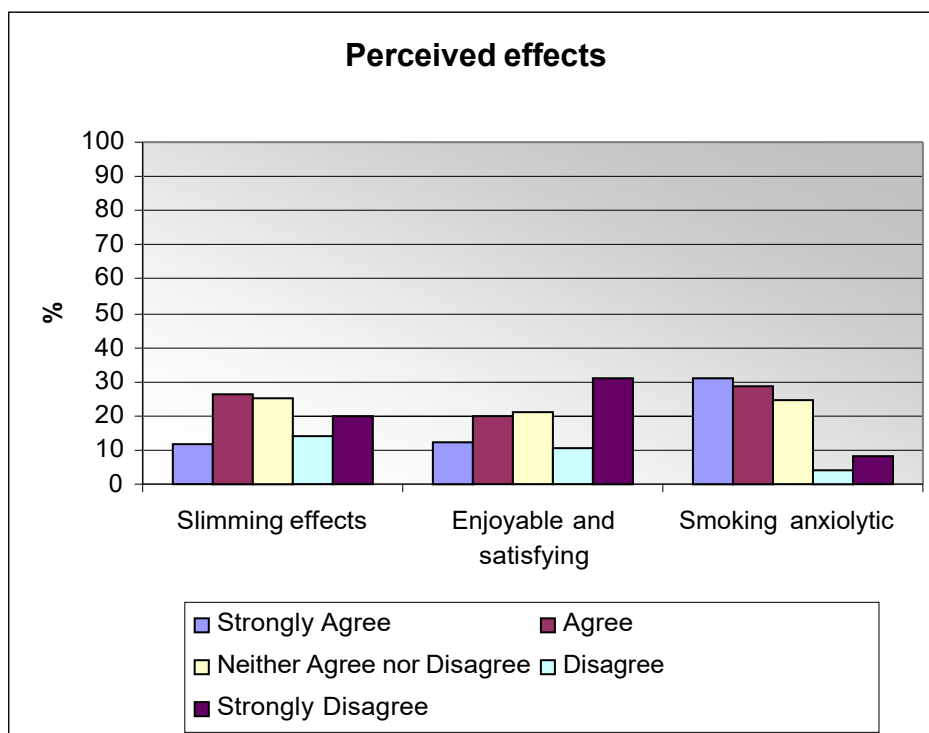


Figure 5 Perceived effects of smoking

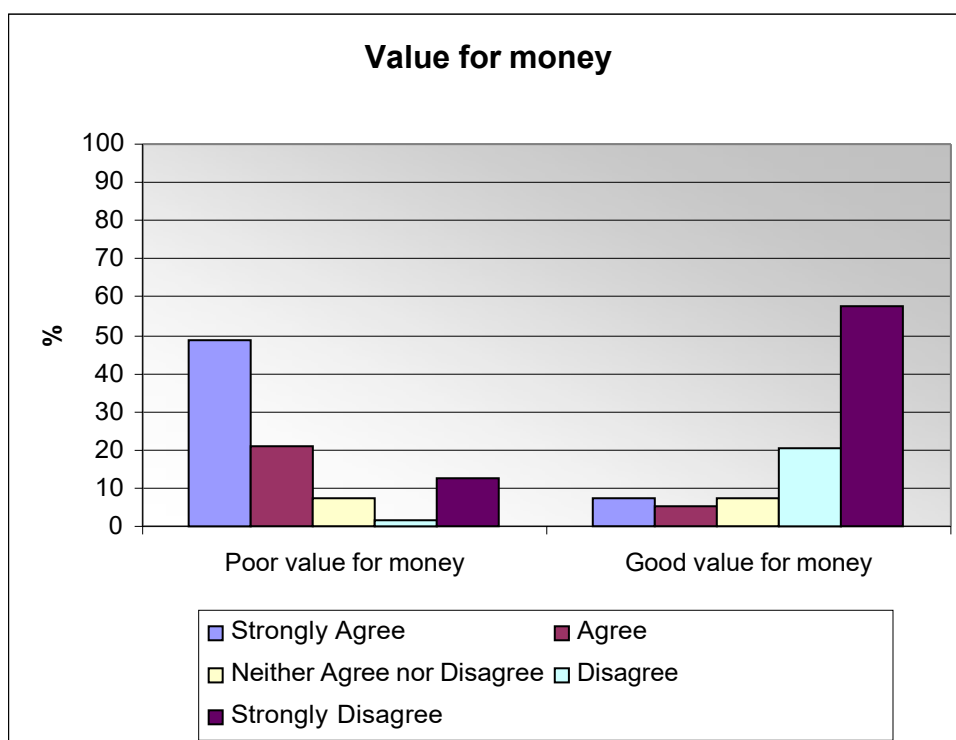


Figure 6 Value for money of smoking

Composite attitudinal score did not significantly correlate with knowledge score ($r = -0.065$, NS), meaning that those with more positive attitudes towards cigarettes did not have worse knowledge of smoking and its effects (or vice versa). There were no significant differences in composite smoking knowledge ($t = 0.990$, NS) and attitudes ($t = 1.441$, NS) between males and females. However, 15-17 year olds reported greater knowledge of smoking than younger participants ($t = 3.402$, $p < 0.01$), but similar attitudes ($t = 0.766$, NS). Although smokers and non-smokers had equal knowledge ($t = 1.036$, NS), the former had significantly more positive attitudes towards smoking ($t = 4.427$, $p < 0.001$). ANOVA showed that there were no significant interactions between smoking status, sex and age with smoking knowledge ($F_{1,140} = 1.374$), although there was a 2-way interaction between sex and smoking status and attitudes ($F_{1,108} = 8.020$, $p < 0.01$), with male smokers reporting more positive smoking attitudes.

Logistic regression was used to predict smoking status on the basis of smoking attitudes and knowledge, sex, age, and parental and peer smoking. The regression model was significant (Nagelkerke $R^2 = 0.424$, $p < 0.001$), although only smoking attitudes was identified as a significant predictor ($p < 0.05$). It is not known whether positive smoking attitudes preceded smoking initiation/maintenance or vice versa.

3.4 Assessment of current health promotion campaigns

Groups were asked to spontaneously recall the names and content of smoking prevention campaigns which they had seen or heard. As Table 7 below shows, NHS adverts were the most commonly recalled by groups ($n = 63$ participants) with the 'Give up before you clog up completely' campaign being recalled 18 times by 12 of the 21 groups. The NHS second hand smoke advert, which showed a small child breathing in second hand smoke was the second most commonly recalled advert ($n = 16$ participants, $n = 9$ groups). Both of these health promotion campaigns used shock tactics as a means of portraying their messages. Information on the cost and or intensity of these campaigns could not be obtained by the research team; therefore it is not known whether it was the content or exposure of each campaign that created the level of recall.

The Novartis Consumer Health group 'Nicotinell' adverts were the second most commonly recalled adverts (total $n = 13$). There were no observable demographical

differences in the type of adverts recalled by groups, apart from the NHS impotence advert which was recalled only by male groups and the school excludees groups, which was a predominantly male group. The fire service 'smoking kills' (n=3 participants) and Roy Castle Lung foundation 'Fag Ends' smoking cessation group adverts were also recalled (n=3 participants).

<i>Campaign description</i>	<i>Source</i>	<i>times recalled (n)</i>
Give up before you clog up completely (Arteries and fat)	NHS	18
Second hand smoke (baby breathing in smoke)	NHS	16
Impotence advert (Finger puppet)	NHS	12
Cancer patient (Real life cases in hospital setting)	NHS	6
Nicotinell (non specific)	Novartis Consumer Health	4
Send off- Many methods (Ways to dispose of cigarettes)	NHS	6
Fag ends	Roy Castle Lung Cancer Foundation	3
Fire Service (Smoking kills)	Fire Service	3
Nicotinell – Lose the smoke keep the fire	Novartis Consumer Health	3
Nicotinell (man dressed as cigarette)	Novartis Consumer Health	6
Smoke Free	NHS	3
Get unhooked	NHS	2

Table 7 Smoking prevention campaigns spontaneously recalled by focus group participants

The television was the most commonly recalled source of health promotion campaigns (n= 14 groups) followed by the internet (n= 7 groups), billboards (n= 6 groups), radio (n= 6 groups) magazines (n= 5 groups) and newspapers (n= 3 groups) and poster and leaflets (n= 1 group). It is not known whether recalled source of campaign reflects level of time spent by young people accessing a specific form of media or the placement of campaigns by their creators.

Although the majority of young people could not recall the specific channel, site or radio station they saw or heard the recalled advert, four individuals recalled social networking sites such as MSN with two young people stating that they may have

seen the advert on Faceparty or MySpace but could not be certain. All three websites are used by young people for communication purposes.

Responses to adverts shown to groups

Participants were presented with a selection of (age-appropriate) recently published (2007) visual (e.g. TV adverts), aural (e.g. radio), printed (e.g. leaflet), and electronic (e.g. web page) materials. Examples of materials presented can be seen in Appendix C.

	% reporting		
	Total	Regular Smokers	Non-smokers/experimenters
TV advert			
Seen	56.6	59.6	57.3
Aimed at their age group	9.9	8.8	11.1
Would change attitude	45.7	17.0	59.5
Would prevent smoking	20.5	3.9	28.2
Talk to friends about campaign	20.2	16.7	22.0
Radio advert			
Heard	33.7	25.5	37.5
Aimed at their age group	11.7	10.9	13.5
Would change attitude	18.0	5.8	23.9
Would prevent smoking	9.8	3.9	12.5
Would talk to friends about campaign	18.2	12.5	20.7
Printed advert			
Seen	75.8	84.6	72.3
Aimed at their age group	23.8	26.8	25.5
Would change attitude	41.1	20.4	53.3
Would prevent smoking	35.0	17.3	43.6
Would talk to friends about campaign	42.2	47.7	32.7

Table 8 Participant responses to examples of TV, radio, and printed smoking prevention campaigns

Table 8 shows participant responses to examples of smoking prevention campaigns shown to them during the focus group sessions. Overall, the printed advert resonated most, with the highest proportion of subjects reporting having seen it, believing it was aimed at their age groups, believing it would prevent smoking, and reporting they would talk to their friends about the campaign. This advert however was also shown as a television advert as part of a multi media campaign. Clear differences emerged after examining responses on the basis of smoking status. There were no differences between young people's views on the effectiveness of adverts shown based on age, sex or urbanicity (data not shown).

Non smokers were significantly more likely to believe that the TV ($\chi^2 = 38.235$, $p < 0.001$; $\chi^2 = 21.429$, $p < 0.001$), radio ($\chi^2 = 12.706$, $p < 0.01$; $\chi^2 = 5.108$, $p < 0.05$) and printed campaigns ($\chi^2 = 21.801$, $p < 0.001$; $\chi^2 = 17.195$, $p < 0.001$) would change attitudes and prevent smoking/encourage quitting. There were no significant differences in the perceptions of which age group the campaigns were targeted at, and although most reported that they would not talk about the different campaigns to their friends, the exception was with the printed advert ($\chi^2 = 21.429$, $p < 0.001$).

There were no significant differences in smoking attitudes and knowledge between participants who reported seeing the example TV prevention campaigns ($t = 1.484$; $t = 1.423$ respectively). However, those who believed such adverts could subsequently affect smoking attitudes, and behaviour had lower composite attitude scores than those who did not ($t = 3.430$, $p < 0.01$; $t = 3.326$, $p < 0.01$ respectively); knowledge differences were non significant ($t = 1.982$; $t = 0.740$).

There were no differences in knowledge ($t = 1.165$) or attitudes ($t = 0.849$) between those participants that had or had not seen or heard radio adverts displayed in the focus groups or who believed radio campaigns would encourage prevention/quitting ($t = 0.535$; $t = 0.722$ respectively). Participants who believed the radio adverts could change attitudes had lower smoking knowledge ($t = 2.264$, $p < 0.05$). Similarly knowledge ($t = 0.305$) and attitudes ($t = 0.721$) were equivalent in those who reported seeing the print campaign. Whilst those who believed the printed advert could change smoking attitudes or prevent use had lower composite attitudes themselves ($t = 2.523$, $p < 0.05$; $t = 2.915$, $p < 0.01$ respectively), there was no difference in knowledge between them ($t = 1.031$; $t = 0.401$).

Printed advert

The NHS 'Hook' advert was shown to groups in a printed format. This advert, as with many such health promotion campaigns, had been shown in a number of formats including TV, poster and billboards. It had been seen by 76% of participants (85% smokers, 72% non-smokers). Young people stated correctly that the addictive nature of smoking cigarettes was the main message portrayed by the advert (n= 23 participants, 11 groups).

“Do not get hooked. So addiction”

(16-17, male, non urban, never tried and experimenter group)

“Do not even try”

(16-17, female, urban, never tried and experimenter group).

The second message identified by young people (n =11 participants, 5 groups) was in relation to smoking cessation as they felt that the message was targeting smokers as a means of encouraging them to quit by showing the addiction. Three out of these five groups contained regular smokers.

“Stop smoking”

(Smoking cessation group)

“Get unhooked”

(School excludees group)

TV advert

The TV advert 'wedding' had been seen previously by 57% of participants (60% smokers, 57% non-smokers) the majority of respondents (n = 32 participants, 18 groups) correctly stated that this advert highlighted the dangers of second hand smoke as an 'invisible killer'.

“Second hand smoking is a killer and you cannot see the bad stuff”

(16-17, male, non urban, never tried and experimenter group)

“You're damaging your health, but you're also damaging the people around you”

(13-15, female, urban, never tried and experimenter group).

Other comments made related to smoking cessation (n= 5 participants, 3 groups) such as:

“Just do not smoke”

(16-17, female, urban, never tried and experimenter group).

“Don’t smoke it. It will kill you”.

(13-15, female, urban, never tried and experimenter group)

Radio advert

The radio advert ‘Many methods’ was the least recalled campaign with 34% stating that they had heard the advert previously (26% smokers, 38% non-smokers). Three young people were not sure what message the advert was trying to portray. The main message of the advert correctly stated by (n= 33 participant, 15 group) was to inform people of the help available for smokers if they want to stop smoking.

“There are all sorts of ways of helping to quit smoking”.

(16-17, female, non urban, never tried and experimenter group)

Media format and type of people (i.e. young) used by adverts did not appear to impact upon the age group which young people felt were being targeted, as 71% (print, hook; 76% smokers), 80% (radio, many methods; 83% smokers) and 74% (TV, wedding; 83% smokers) stated that they thought such adverts were targeted towards all age groups.

A high proportion of young people (65% print ‘Hook’, 79.5% TV ‘Wedding’) did not think that either advert would prevent smoking uptake by young people. Only 10% of young people stated that they thought the radio advert ‘Many methods’ would make people of their age think about trying to quit smoking. The reasons given were that it was boring (n= 4 participants, 4 groups) and that the radio was not the most appropriate means of delivering such an advert (n= 5 participants, 4 groups) as people are often doing other things whilst listening to the radio:

“I am probably doing other things while I am listening to the radio and I am probably not going to pay any attention to it. People are driving, so they are concentrating on other things”

(16-17, female, non urban, regular smokers).

A common theme generated from focus groups was that the radio was not the best means of delivering smoking prevention campaigns as young people do not listen to adverts on the radio (n=10 participants, 8 groups) and as shown in section 3.1 the radio was the least popular media format for young people.

The majority of young people stated that they would not talk to friends about any of the three campaigns shown as they either stated that this was just something they would not do, as the following examples show:

“I’ve got better things to talk about”

(13-15, female, non urban, never tried and experimenter group)

“Better things to do to than talk about smoking advert, you know”

(16-17, female, urban, regular smokers).

When asked about the printed ‘Hook’ campaign however, 42% stated that they would talk to their friends about it, although it was unclear whether this would be about its prevention message or creative content. There were no significant differences between a young person’s age or gender and whether they would talk to their friends about this advert (data not shown). Seventeen young people (n= 9 groups) stated that the shocking nature of this advert did create a talking point:

“I would make a joke about it”

(16-17, male, non urban, never tried and experimenter group)

“Yeah, it’s horrible. He gets pulled across around five floors with a hook in his mouth” (11-12, mixed, non urban, never tried and experimenter group)”

For all but two young people however, the talking point would not be in a smoking related capacity and would be more about the shock tactics used:

“It wouldn’t be like ‘Would that change your mind about smoking?’ Do you know what I mean? (16-17, female, urban, regular smokers).

NHS Smoke Free website

An image of the NHS Go Smokefree website² was shown to groups in order to generate views on the format of websites which would be appealing to young people. Young people stated that the website could be made more appealing to their age group by reducing the amount of writing on the home page (n= 4 participants, 4 groups) and using pictures or games (n=24 participants, 10 groups).

“It needs more pictures, because it’s boring”
(11-12, mixed, urban, never tried and experimenter group)

“Because if it’s got cartoons on it. You think, ‘Oooh! Cartoon”
(13-15, male, urban, regular smokers group)

“Maybe they could have some better fonts, better pictures, that kind of thing”.
(13-15, female, urban, never tried and experimenter group)

“It should have a game”
(11-12, mixed, urban, never tried and experimenter group).

In terms of usage, 93% of participants stated that they had not previously seen the website although approximately half (48%) stated that they would use it to access information on smoking in the future. Non smokers reported being more likely to visit a prevention orientated website than regular smokers ($\chi^2 = 22.281$, $p < 0.001$), although there was no interaction between smoking status and gender on the likelihood of visiting ($\chi^2 = 0.549$). A common theme was young people who said they would not use a website for such information as they would rather speak to a person about smoking related matters (n= 11 participants, 8 groups), such as a GP (n= 3 participants, 3 groups). Frank was also viewed as a preferable source of information on smoking (n= 4 participants) by one group of smokers. ‘Talk to Frank’ is a confidential internet and telephone based helpline service which offers advice,

² <http://www.gosmokefree.co.uk/>

information and support for young people and family members on substances including drugs and alcohol³.

Two groups of young people discussed the trustworthiness of such a website and concluded that if the NHS sign was visible they would trust its content.

Children and young people’s views on the ‘ideal’ smoking prevention advert targeted at the 11-17 age group.

Young people suggested a range of key messages which they thought may prevent the uptake of smoking by their peers. Themes developed from groups presented a range of predominantly long, but also short term smoking effects. As shown in Table 9, depictions of death was the most common theme identified by 21 children and young people in six of the 21 focus groups.

“And the death one because everyone should be scared of death”

(16-17, male, urban, never tried and experimenter group)

“Real life stories where people have actually died from it”

(16-17, female, urban, never tried and experimenter group)

“A coffin made out of the ciggie box”

(School excludees group)

“Keep on smoking and you will end up choking”

(School excludees group).

Physical appearance was also suggested as a theme by 20 participants (n= 5 groups) including the impact smoking has upon a person’s teeth and skin. These groups included two male, one female and both of the additional non school groups of mixed gender, there were no notable differences in the urban profile of these groups.

The financial cost of smoking was discussed by five groups, three of which were groups of regular smokers and three were from urban and therefore more deprived areas of Merseyside.

³ http://www.talktofrank.com/home_html.aspx

“I’d only stop smoking to save money or something like that”.

(13-15, female, non urban, regular smokers group)

Young people also felt that changes in a person’s physical health or appearance shown over a period of time would be an effective prevention strategy:

“Showing someone really healthy and then two years down the line”

(16-17, Male, non urban, regular smokers group)

“They should tell you what you look like now and what you will look like after five years of smoking”

(16-17, male, urban, never tried and experimenter group)

Five participants also emphasized the need to show such changes over a relatively short period of time (between two and five years) although examples provided were not particularly based on factual evidence to make it seem more relevant to people of their age group:

“If it showed a kid my age who start smoking at 16 and then showed them at 18 in the hospital and dead at 22. Because you think, that could easily happen to you”

(16-17, male, urban, never tried and experimenter group).

The use of small children in adverts (n= 5 participants, 3 groups) to show the impact of passive smoking was suggested by female participants.

Message of ideal campaign	Participants (n)	Groups (n)
Death	21	6
The effect upon physical appearance	20	5
Cost	12	5
Changes over time	9	6
Something shocking (nothing specified)	12	8
Tar in lungs	6	3
The effect upon small children	5	3
Cancer (patient in hospital)	7	5
Passive smoking	4	3

Chemicals in a cigarette	3	2
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Table 9 Ideal message of a smoking prevention campaign targeted towards 11-17 year olds

The effectiveness of shock tactics in smoking prevention campaigns was discussed in groups, with 18 participants in ten of the focus groups stating that shock tactics were an effective means of delivering smoking prevention messages:

“It starts to get people like us scared”

(16-17, female, non urban, never tried and experimenter group).

“I think the shock tactics would have an effect”

(16-17, female, non urban, regular smokers group)”.

There were no observable differences between young people’s positive views on shock tactics and their smoking status, gender age or area. Five participants in five groups stated that they did not feel that shock tactics would actually prevent young people from smoking.

“No matter how horrible it is, if people want to smoke, they’re going to smoke”

(16-17, female, non urban, regular smokers group)”.

Four out of these five groups were male, whilst three were groups of regular smokers in urban areas.

Type of people in an ideal campaign	Participants (n)	groups (n)
Celebrity	29	10
Young people	17	10
Children	12	8
Not a celebrity	8	6
All age groups	2	2

Table 10 Type of people in an ideal prevention campaign targeted towards 11-17 year olds

The use of celebrities in smoking prevention campaigns was heavily debated in some focus groups. Their use was advocated by 29 participants in ten of the focus groups conducted (see Table 10), however eight participants (n= 6 groups) did not think it was an affective means of engaging their peers.

The use of sports personalities in campaigns, such as footballers was proposed by four of the focus groups (two male and two female groups). A common theme in such debates was the need for such campaigns to be realistic for young people to believe the anti-smoking messages being presented. Five participants felt that the use of a celebrity would be effective if they had personal experience of the effects of smoking:

“Celebrities showing us how lung cancer had affected one of their families”.

(16-17, female, urban, never tried and experimenter group).

Participants stated that if the government want to gain the attention of young people then it is their age group (11-17 years) of young people who should be used in such campaigns (n= 17 participants, 10 groups) rather than adults. The use of very young children was viewed as the most effective means of highlighting the dangers of passive smoking (n= 12 participants, 8 groups) by both male and female groups of all age groups sampled. Two participants stated that the use of young people would make them think about their own family and act as an effective preventative message.

“I think if I was down at my sisters and I thought I was damaging my niece that would stop me” (13-15, female, urban, regular smokers group)

The length of a smoking prevention campaign was seen as an important factor as young people stated that if an advert is shown for a prolonged period of time they loose interest. One month was viewed as the optimum time for such a campaign (n= 5 participants, 3 groups). In order to maintain young people’s interest in the campaign it was suggested by eight participants in five groups that a key aspect of the advert should change, such as the celebrity used or smoking related statistics. The use of music was also viewed as a key factor in keeping an advert interesting (n= 5 participants, 2 groups).

“If they had a catchy song on or something”.

(13-15, female, urban, never tried and experimenter group)

Such comments were made by both male and females in the 13-15 year age group (1 urban and 1 non urban group).

<i>Media format of ideal campaign</i>	<i>Participants (n)</i>	<i>Groups (n)</i>
Television	28	13
Internet	17	8
Not Internet	9	5
Billboards	8	4
Text message	6	5
Cigarette packet	6	2
All media	4	3
Posters	4	3
Movie/film trailer	4	2
Radio	3	3

Table 11 Media format of an ideal prevention campaign targeted towards 11-17 year olds

As shown in table 11 the television was viewed as the most effective means of delivering such campaigns by 28 participants in 13 out of the 21 focus groups conducted. The use of the internet was again a contentious topic of discussion in groups.

The overall (n= 7 participants, 5 groups) consensus was that young people were very selective in their use of internet sites and often had a single purpose for accessing specific sites (e.g. communication with friends on MSN). These young people (of mixed age and gender but all from urban areas) felt that any form of advertising or information would not be read or they would not browse for information, unless it was placed on specific sites such as MSN, MySpace or Youtube and then some young people may look at it.

“They do their own thing”

(13-15, female, non urban, never tried and experimenter group)

“No, I think TV’s better because you can’t be arsed looking up links”

(16-17, male, urban, regular smokers group)

“People have different interests. If it was somewhere where everyone goes, like MySpace or MSN, it might be a little different”

(16-17, male, urban, never tried and experimenter group).

Six participants (5 groups) thought that the use of text messages (including picture text messages) would be effective, as long as there was no financial cost passed on to the individual.

The use of proposed EU health cigarette warnings was discussed by three groups of 16-17 year old smokers whom stated that as a method of smoking cessation it would not be effective with a number (n= 4) of young people stating they were aggravated by the proposals:

“They’re not going to stop us now, there’s nothing”

(16-17, male, urban, smokers group)

“That’s horrible, that. I mean, you wouldn’t have like a picture of a hobo on a whisky bottle, would you? You know what I mean?”

(16-17, female, urban, smokers group)

“No, because people just don’t even look at ciggie boxes”

(16-17, male, urban, smokers group).

The use of cigarette packets health warnings as a means of prevention however was proposed by six participants in two focus groups of non smokers. Two of these young people stated that the use of pictures would attract the attention of young people:

“I think that’s going to catch people’s attention more”

(13-15, female, urban, never tried and experimenter group).

More conventional media formats used by smoking prevention campaigns were also suggested as effective methods of conveying messages to children and young people including billboards (n = 8 participants, 4 groups of mixed demographic and smoking status), poster (n = 4 participants, 3 groups of mixed demographic and smoking status), movie trailers (n = 4 participants, 2 groups of 16 -17 year olds) and the radio (n = 3 participants, 3 groups of mixed demographic and smoking status). Shops were suggested as the best placement for posters (n= 11 participants, 8 groups).

During this section of focus groups however 29 participants (n=13 groups) in predominantly urban areas (n=9) stated that that they did not believe that any form of campaign would be effective in preventing the smoking uptake of their peers:

“There are loads of adverts and they are not preventing it”.
(16-17, male, urban, never tried and experimenter group)

“You can’t stop them”
(13-15, male, non urban, never tried and experimenter group)

“People are going to smoke anyway, no matter how many warnings they get or whatever, especially our age group”.
(16-17, male, urban, smokers group)

Three groups of young people refused to provide any suggestions on what would make an ‘ideal’ prevention campaign as they did not believe they were effective.

3.5 Young Access Interventions

Children and young people’s views of the change in law concerning purchasing age restrictions and how they have been circumventing legal restrictions in order to obtain tobacco were explored in groups.

Results indicated that young people did not feel that the change in law had, or would result in the prevention or cessation smoking in young people under the age of 18 years. Only three non smokers said that they thought the change in law would prevent smoking uptake by young people under the age of 18. Similar low level of smokers (n= 6 participants) stated that they had considered stopping smoking because of the age limit increase, none of whom had actually attempted to stop.

In terms of access, groups of smokers and non smokers were asked where they or their peers were obtaining cigarettes underage. Table 12 below shows the various methods of access which were identified.

<i>Means of access</i>	<i>Participants (n)</i>	<i>Groups (n)</i>
Purchasing from shop	27	13
Adults selling from houses	24	10
Asking strangers to purchase outside shop	16	9
Parents	14	11
Older peers purchasing	13	10
Duty free	6	5
Siblings	4	2
Market stall	2	2

Table 12 Under age access to cigarettes

Both smokers (n = 10 groups) and non smokers (n = 3 groups) stated that if they wished to purchase cigarettes they would go to a local shop. There were no notable differences in the gender of participants and whether they felt they could get served in a shop. No young people in the 11-12 year old age groups stated that their age group could get served, however six groups of 13-15 year olds and five 16-17 year olds stated they could purchase cigarettes from shops if they wished.

“There are little corner shops that’ll sell you them anyway”
(13-15, male, non urban, never tried and experimenter group)

“Some shopkeepers just give you them as well anyway because they’re not bothered”
(16-17, female, urban, regular smoker group)

“You get them in shops”
(13-15, female, urban, never tried and experimenter group).

Participants aged 16-17 years stated that they are still being served in the same shops where they purchasing cigarettes before the change in law as they thought the shop owners presumed they are over the legal age of 18 years.

“I always use the same shop and they know me. They must think I am 18”
(16-17, female, non urban, regular smokers group)

“If you have been served at 15, they think they you’re already 18 now”

(16-17, male, urban, regular smokers group)

Ten groups of participants (n = 24 participants), the majority of which (n= 22) resided in deprived urban areas stated that they would go to ‘houses’ or ‘doors’ in their local area to purchase cigarettes. These houses were owned by adults, some strangers, some parents of peers, who were selling cigarettes to young people at low cost (approximately 20 cigarettes for £3).

“People sell them at their houses”

(13-15, female, urban, regular smokers group)

“From houses”

(11-12, mixed, urban, mixed smoking status)

Another common means of access was for young people to obtain cigarettes from their parents (n= 14 participants, 11 group). Parents (including participant’s parents or friends parents) were reportedly purchasing cigarettes for children as young as 13 years of age.

“Mum and dad”

(Smoking cessation group)

“Sometimes you get them off your mum and dad”

(16- 17, male, non urban, never tried and experimenter group)

“My Mum”

(13-15, male, non urban, never tried and experimenter group)

Young people in both urban (n= 4 groups) and non urban groups (n= 4 groups) stated that they or their peers would stand outside shops and ask strangers (adults) to buy cigarettes for them. This was described as being the same strategy they used to purchase alcohol and are sometimes required to make a small payment to the person who would purchase the cigarettes for them.

“If you give them more money”

(13-15, male, non urban, never tried and experimenter group)

“You can get it from an adult who will sell them to you”
(16-17, male, non urban, never tried and experimenter group)

Older peers (n = 13 participants, 10 groups) and siblings (n= 4 participants, 2 groups) were also named as a means of access. Five groups named airport duty free as a means of access, whereby either the young person had themselves purchased cigarettes or other people they knew had bought them in bulk and sold them on at a reduced cost.

“People go on holiday, buy them and sell them on”
(16-17, female, urban, never tried and experimenter group)

“I buy them from duty free. It’s well cheap”
(16-17, female, non urban, regular smokers group)

Two young people in two urban groups stated that a local market sold cigarettes to under 18 years olds:

“The markets don’t even ask you. They don’t have a licence to sell them”
(Smoking cessation group).

Despite such findings however, 49% of non smokers stated that the change in law would make it more difficult for themselves and their peers to obtain cigarettes if they wished. There were no differences in the age of non smokers of area of residence and whether they thought they would have difficulty accessing cigarettes. There were also no differences in where young people lived (urban and non urban) and whether they reported difficulty in accessing cigarettes.

When questioned about illegal black market cigarettes, 42 % of non smokers reported that smokers would smoke them if they were unable to obtain legal cigarettes from a shop. The actual percentage of regular smokers who stated they would smoke illegal cigarettes was slightly higher with over half of regular smokers (56%) stating they would smoke them if they had to. When questioned about whether they had knowingly smoked black market cigarettes 64% (n= 39 participants) of smokers who responded to this question stated they had, whilst three were not sure. There were no demographic differences between young people who stated they had smoked black market cigarettes.

Comments made in focus groups however indicated that young people in urban areas who were purchasing cigarettes from adults in 'houses' were aware that sometimes the cigarettes were illegal (n= 13 participants, 7 groups)

“Sometimes they are fake, but sometimes they're alright”

(13-15, male, urban, smokers group)

“You can tell by the smell of them”

(13-15, male, urban, smokers group)

Some young people stated that were aware that by smoking black market cigarettes they were potentially damaging their health but they had no choice due to restricted access.

“People go ‘you've got to smoke ciggies, they're better for you than what the fake ones are’, but you can't”

(13-15, female, urban, smoking group)

“Well you end up smoking them because you can't buy them from the shop”

(13-15, female, urban, smoking group)

“I think stopping us from being able to get the real ciggies is making people unhealthier”

(13-15, female, urban, smoking group)

“You smoke anything”

(Smoking cessation group)

Because if you haven't got it you'd smoke anything”

(11-12, mixed, urban, mixed smoking status)

When questioned about whether young people had done anything illegal 11 smokers (28% of those who chose to respond) stated they had whilst 8% of smokers chose to abstain from this question. Due to the sensitive nature of this question details were not explored in focus groups.

Views on the potential efficacy of the national proof of age standards scheme (PASS) in the prevention of under 18's obtaining cigarettes from shops were obtained. As Figure 7 shows, over half (54%) of participants did not feel the PASS would be effective, whilst 39% stated they thought it would prevent underage purchasing. There were no significant differences in young people's views of the PASS according to smoking status, age, gender and urbanicity. Young people did not choose to discuss the potential efficacy of the proof of age card scheme in groups.

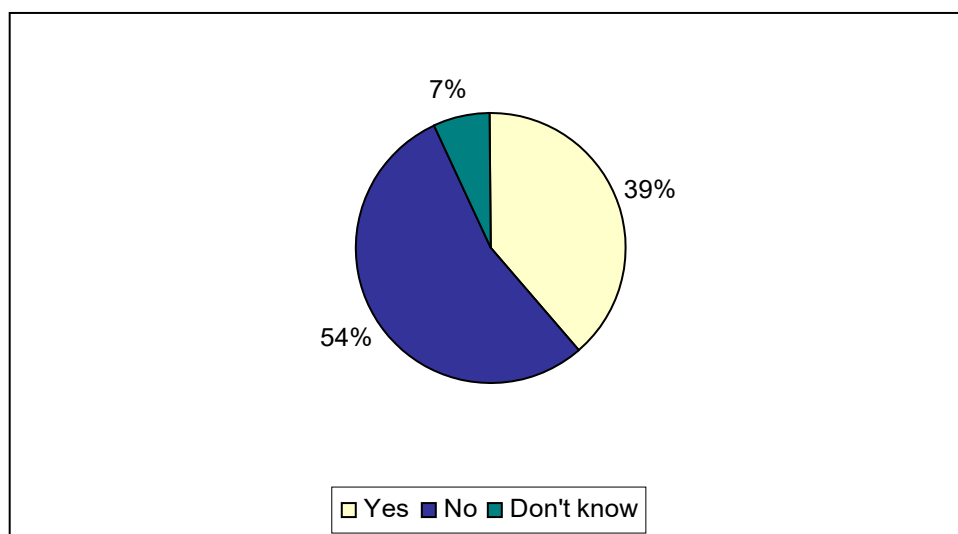


Figure 7 Views on the efficacy of the PASS in the preventing underage purchasing of cigarettes.

Young smokers were asked how they financed their smoking. Parents were funding the majority of participants cigarette smoking whether they were aware of it (n= 2 participants) or not, through pocket money (n = 3 participants) or money for lunch in school (n= 3 participants). Four participants aged between 16 and 17 had a part time job, whilst one smoker was using his Education Maintenance Allowance (EMA).

When smokers were asked what would make them smoke less six participants (n= 4 groups) stated that an increase in cost would make them consider stopping. Two young people stated that an increase to approximately £8 to £10 would be sufficient; the remaining participants said they would just smoke illegal black market cigarettes as they would always be cheaper.

Finally, non smokers and experimenters were asked what had prevented them from smoking on a regular basis (at least one cigarette a week).

Reason for not smoking	Participants (n)	Groups (n)
Knowledge of effects	9	6
Smell	9	5
Smoking related death of a family member	8	5
Parental influence	5	4
Cost	5	2
General dislike of smoking	3	3

Table 13 Non smokers and experimenters reasons for not smoking.

As shown in Table 13, the most common reason given by non smokers and experimenters for not choosing to smoke on a regular basis was due to their knowledge of its long term effects (n= 9 participants, 6 groups), including physical health effects (n= 5 participants), effects upon physical appearance (n= 2 participants) and the risk of cancer (n=2 participants). Not all reasons given were factually correct.

“You can’t run, you’re small, you stink”

(Smoking cessation group)

“The health things”

(13-15, male, non Urban, never tried and experimenter group)

“You get all wrinkly”

(Smoking cessation group)

“When you struggle to breathe”

(13-15, male, urban, never tried and experimenter group)

The smell of smoking was also a major deterrent (n= 9 participants, 5 groups) along with young people’s personal experience of the effects of smoking through the death of a family member.

“Half my family have died from it”.

(13-15, female, urban, never tried and experimenter group)

Parental influence was also named as an influential factor, including young people disliking the fact that their parents smoked (n= 2 participants) or for one person, the fear of his mother finding out that he smoked. The cost of smoking was raised by five young people (n= 2 groups) and a general dislike of smoking (n = 3 groups).

4 Discussion

The aim of this study was to explore the views of children and young people on the prevention of smoking uptake with reference to the areas of mass media and the sale of tobacco products. This incorporated the examination of young people’s knowledge and attitudes towards the use of media including new media, smoking and the legal age of purchasing cigarettes, including access to cigarettes and their comprehension and appreciation of health promoting messages including anti-smoking campaigns. In total, 21 focus groups have been conducted across the Merseyside areas of Sefton, Liverpool, Wirral and Knowsley involving 148 children and young people aged between 11 and 17 years.

This population differs from the general UK population as overall, it reports higher than national average smoking prevalence (young people and adults) and contains some of the most deprived local authorities in England (HDA, 2004; ONS, 2004). However, the four regions within Merseyside provide a wide range of demographics and levels of deprivation vary across the four sample areas.

Although the review of effectiveness (Richardson et al., 2007; citation used throughout) indicated that intervention effectiveness varied as a function of several participant characteristics (e.g. Evidence statements 1.5.1). Overall, findings from the current research did not vary greatly by young people’s age, socio-economic status, sex, smoking status or risk of school exclusion. This may be a result of differing methodological approaches and the broad areas of investigation explored in this study. There were some exceptions. In keeping with much of the substance use literature, current smokers (regardless of population characteristics) had good smoking knowledge and more positive attitudes towards smoking, and believed that prevention campaigns were unlikely to be successful. Non-smokers tended to show optimistic bias as they believed that prevention campaigns were more appealing to

the target audience, and held greater potential for success than the data from the smokers suggested. In particular, non-smokers were also more likely to regard mass media campaigns as effective and seek smoking prevention/cessation information on the internet, despite such information not being specifically targeted towards them. Regular smokers aged 16-17 years encountered point of sale access restrictions less frequently than other age groups, which may reflect changes in purchasing law as this research was taking place (October 2007), and indicates such approaches need continued support (Cost effectiveness evidence statement 1; Effectiveness evidence statements 2.3.2, 2.4.1, 2.5.1; 2.7.1, 2.7.2). However, intervention messages focusing on the financial cost of smoking was viewed as an effective message, predominantly amongst groups of smokers in more deprived urban areas, whilst females found the use of images of small children in mass media campaigns as most effective. In more deprived urban areas young people had easy access to cheaper illegal black market cigarettes which may undermine the effectiveness of young access interventions.

Use of contemporary media and delivery of health promotion campaigns

The findings demonstrated that young people regularly access a range of media sources which may all provide suitable means of delivering health promotion messages. The internet and television were the most commonly accessed media formats. In accordance with findings from the review of effectiveness (Effectiveness Evidence statement 1.3.2) television adverts were recalled more often and regarded as the most effective means of delivering health promotion campaigns than the other media formats assessed. The review evidence suggested that whilst exposure to television campaigns increased intentions to quit, this was not accompanied by actual attempts. In the current research, smokers were significantly less likely to believe that media adverts could affect either smoking attitudes or behaviours.

The internet and billboard advertisements were viewed as providing appropriate means of delivering health promotion campaigns to young people, although other formats such as posters, and cigarette packets health warnings were suggested.

Young people did not believe the radio to be an effective means of delivering health promotion campaigns as they felt their peers would not pay full attention to the messages conveyed. This view was substantiated further when a radio campaign excerpt played to groups was least popular and viewed as the least effective when

compared to television and printed campaigns assessed. If the radio is to be used as a method of health promotion campaign delivery, local independent radio was preferred to national/BBC stations.

In terms of use of new media, of those that reported use, internet access was frequent although the amount of time spent varied greatly. Online sites were frequently visited but did not hold the full attention of users as young people often use the internet for communication purposes whilst pursuing other activities. The most popular forms of online media were social networking and communication sites. Although avid consumers of sites such as Facebook and MySpace, young people tended to limit their interactions to their immediate peers and would not access wider social or campaign groups (e.g. health promotion groups).

Young people believed that new media formats, including the internet would be an effective means of delivering campaigns to young people; however a number of issues must be taken into consideration. Text messages, and instant messaging were viewed as potentially effective means of delivery as long as no cost was passed on to the young person. Young people are also selective in their use of internet sites therefore health promotion campaigns need to target specific websites in order to capture their target audience. The communication websites MSN and MySpace were the most common sites suggested by groups for the placement of campaigns. Websites which provide information on smoking related issues must also be made appealing to younger generations. This includes reducing the amount of text on home pages and increasing the use of pictures. Interactive games should also be used to engage young people in order to encourage access to smoking prevention materials.

Young people are cautious of internet content and require assurance that a website is trustworthy; this can be achieved through the use of a recognizable logo. Embedded and pop up adverts were a particular source of annoyance and mistrust. In concordance with the effectiveness review (Evidence statement 1.3.2) young people stated that internet based health promotion campaigns needed to be interactive, and have stylish and modern designs to be noticed. Although the evidence review failed to differentiate the impact of the deliverer upon effectiveness, young people expressed a preference for an association of prevention messages with celebrities or athletes (Evidence statement 1.4.1). However focus group participants stated that in order for the messages celebrities were conveying to

appear real to young people the celebrity used should have a personal smoking related experience to share. The supporter of the website should also be made prominent as young people stated they would trust the content of a website if it had a prominent National Health Service (NHS) logo. Online access was not suitable for all young people. Some would prefer to speak to a professional in person about smoking related matters, such as their GP, rather than obtaining information from the internet.

Assessment of current health promotion campaigns

As discussed above, the findings suggest that young people who were non smokers were much more likely to believe that prevention campaigns would affect smoking behaviours and knowledge than smokers. They were also more likely to visit smoking prevention/cessation websites. Young people were generally unaware of industry manipulation advertisements (Evidence statement 1.1.1). Those that had seen such adverts stated that they were hosted on non-UK websites and respondents were vague about the messages provided which suggests they had not been effective in encouraging pro smoking behaviours and attitudes.

As the evidence from previous UK and USA studies has also shown (Evidence statement 1.3.1) young participants regarded the message content of an intervention as influential upon its effectiveness. A wide range of campaign messages were proposed by groups which suggests that no single anti smoking message is likely to have universal appeal (Evidence statements 1.3.3, 1.3.4, 1.3.5, 2.3.1). Regardless of whether it was thought they would be effective, respondents believed the long term effects of smoking were the most appropriate message for prevention campaigns targeting the <18 age group. Smoking mortality, the financial burden of smoking and the impact smoking has upon physical appearance were the most common messages offered by participants.

The financial cost of smoking was believed to be an effective message, predominantly amongst groups of smokers in more deprived urban areas. In keeping with other qualitative literature, young people expressed a preference for fear evoking messages, and were able to recall the message and source of such campaigns long after such campaigns had finished broadcasting. However, review evidence suggests that balanced and social normalisation messages are the most effective (Evidence statement 1.3.1).

The use of small children in health promotion campaigns was viewed by participants (mainly female) as the most effective means of highlighting the dangers of passive smoking. There were no other notable age, sex or socioeconomic differences observed in the message content of campaigns suggested by young people, which highlights the need to exercise caution in the creation of health promotion campaigns targeting a specific demographic group (Evidence statements 1.7.1, 1.7.2).

As the evidence review also indicated (Evidence statement 1.6.1), the length of a smoking prevention campaign was seen as an important factor in the prevention of smoking uptake as young people felt that messages need to be regularly repeated to be effective. One month was viewed as the optimum time for such a campaign as young people stated that based on previous experience, if a campaign (mostly media campaigns rather than specific cessation interventions) was delivered for a prolonged period of time, then they lost interest. This is a much shorter time period than the minimum of six months suggested by guidelines developed by the Center of Disease Control (CDC) in the USA (Evidence statement 1.8.1). In order to maintain young people's interest in the campaign a key aspect of the content should change, such as the celebrity used or smoking related statistics. The use of music appealing to the younger generations was also viewed as a key factor in keeping a campaign interesting to the 11 to 18 year age group.

Despite many suggestions on what would constitute an 'ideal' smoking prevention campaign a common theme evident throughout the research was that young people did not believe that any form of campaign would be effective in preventing smoking uptake amongst their peers. Such views however are not supported by the evidence base (Richardson et al., 2007).

Smoking knowledge and attitudes

Young people had a good knowledge of the harmful effects of smoking and recent changes in minimum legal age for buying tobacco products. Poster campaigns and television adverts were believed to have been the most effective formats conveying the recent legal smoking age limit messages to children and young people. Shops (mainly newspaper/convenience stores) were the most recalled placement of poster campaigns.

Within the sample there was no relationship between smoking attitudes and knowledge scores. However, despite equal levels of knowledge, smokers had more positive attitudes towards smoking, which was greatest in males. Indeed, positive smoking attitudes were the only significant predictor of smoking status identified.

Reasons provided by non smokers on why they had abstained from regular smoking support the evidence that knowledge of effects is important but insufficient as a stand alone prevention strategy. The smell of smoking, smoking related death of a family member, parental influence and cost were all reasons provided by young people on why they had chosen not to smoke on a regular basis (Evidence statement 1.3.1).

Young Access Interventions

All focus groups were conducted in the immediate two month period (October – December 2007) after the change in UK legislation which increased the legal age of purchasing cigarettes from 16 to 18 years. The findings of the study therefore provide an insight into young people's views on the likely effectiveness of the change as well as its impact upon smoking related behaviour and young people's ability to access cigarettes; including merchant sales to young people.

Children and young people did not feel that the change in law would be effective in the prevention or cessation of smoking in young people under the age of 18 years, although approximately half of non smokers sampled felt the law may make access difficult. In concordance with findings from national and international studies (Evidence statement 2.5.1), despite legislative attempts to prevent the purchase of tobacco products from commercial resources by young people under the age of 18, the most common means of accessing cigarettes within our sample was to purchase cigarettes from shops. Participants aged between 13 and 17 years stated they were able to purchase cigarettes from shops across Merseyside such as newsagents and grocery shops. Young people were not using vending machines to obtain cigarettes, which is where the current sample's access to cigarettes differed from those presented in US based evidence (Evidence statement 2.5.1). Regular smokers aged 16-17 years encountered point of sale access restrictions less frequently, which they felt was due to merchants presuming they were over 18 years as they had been purchasing cigarettes from the same shop for a number of years.

In more deprived urban areas, young people were purchasing cigarettes from adults who were selling cigarettes from their residence to young people at lower than retail cost. Some young people were aware that they were being sold illegal ‘black market’ cigarettes and were aware of the associated health risks; however they felt they had no choice due to access restrictions.

Our findings support the evidence (Evidence statements 2.5.1, 2.8.1) that access restrictions are impeded by a young person’s ability to access tobacco products from ‘social sources’ such as friends, family members, and strangers. Participants also reported that strangers could be persuaded by groups of young people convening outside retailers to purchasing cigarettes for them for financial gain. A small number of young people in one urban area stated that they were able to purchase cigarettes from market stalls.

Young people’s views on whether the national proof of age standards scheme (PASS) would prevent young people from purchasing cigarettes were mixed, although over half of those sampled did not think it would be an effective prevention strategy (Evidence statement 2.3.1, 2.3.2).

5. Recommendations

Recommendations to NICE based upon research findings. Reference to the reviews of effectiveness and cost-effectiveness (Raikou and McGuire, 2007; Richardson et al., 2007) have been made where appropriate.

1. On the basis of young people’s recognition of the format, television campaigns should be continued to be funded as part of comprehensive prevention/cessation campaigns (Effectiveness Evidence statement 1.3.2).
2. There was evidence to suggest that national smoking prevention campaigns with both adult and youth orientated messages would be successful approaches for reducing smoking (Effectiveness Evidence statement 1.3.3).
3. Health promotion campaigns using the internet will benefit from cutting edge design and programming (Effectiveness Evidence statement 1.3.2).
4. Social networking and communication sites may be useful hosts of electronic smoking prevention interventions. However, these should be well designed

'click-through adverts' with clear NHS branding, rather than dedicated pages within the sites.

5. Despite similar levels of smoking knowledge, current smokers had more positive smoking attitudes, and were less likely to believe that prevention campaigns could be effective. Smoking cessation and prevention campaigns are therefore likely to have differential effects, depending upon current smoking status. Content should be altered depending upon whether the aim of the intervention is to prevent uptake, delay uptake, or promote cessation (Effectiveness Evidence statement 1.3.1).
6. From the results obtained in this sample, male smokers may be most resistant to attempts to persuade them to change their smoking behaviours (Effectiveness Evidence statement 1.7.1).
7. If asked to express a preference, young people tend to value 'socially desirable' traditional intervention techniques (i.e. fear arousal/'shock tactics') rather than evidence based approaches. Some campaign elements should therefore proceed in opposition to young people's preferences (Effectiveness Evidence statement 1.3.1).
8. Young people would prefer campaigns to be delivered by well known individuals with personal smoking stories (Effectiveness Evidence statement 1.4.1).
9. Young people aged under 18 years old are able to obtain cigarettes from a wide variety of sources that circumvent legal controls. Proof of age schemes will not be effective for young people who obtain contraband or illegally imported cigarettes. Furthermore, young people are able to purchase cigarettes online with minimum information checking by retailers. Proof of age schemes need to be supported by test purchasing and enforcement (Effectiveness Evidence statement 2.3.1-2.8.1; Cost Effectiveness Evidence Statement 1).

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Q1 What is the name of your school? (Please write in the box below)

Q2 What are your initials? (Only first and last)

Q3 What is your date of Birth (day, month and year)

Q4 Are you male or female? (Please tick)

Male 1

Female 2

Q5 Which year are you in at school/college?

Year 7 1

Year 8 2

Year 9 3

Year 10 4

Year 11 5

Year 12 6

Lower Sixth Form/ Year 1 College 7

Upper Sixth Form/ Year 2 College 8

b) What class are you in? _____

Q6 How old are you now?

10 years old 1

11 years old 2

12 years old 3

13 years old 4

14 years old 5

15 years old 6

16 years old 7

17 years old 8

18 years old 9

Q7 What of the following best describes your ethnicity? (If you are unsure please put your hand up and ask for help)

White – British	1
White - Irish	2
White – Other background	3
Mixed – White and Black Caribbean	4
Mixed - White and Black African	5
Mixed – White and Asian	6
Mixed – Other background	7
Asian or Asian British – Indian	8
Asian or Asian British – Pakistani	9
Asian or Asian British – Bangladeshi	10
Asian or Asian British – Other background	11
Black or Black British – Caribbean	12
Black or Black British – African	13
Black or Black British – Other background	14
Chinese or other ethnic group – Chinese	15
Chinese or other ethnic group – Other ethnic group	16
Not stated	17

Q8 Please read the following statements carefully and tick the box next to the one which best describes you.

I have never smoked 1

I have only ever tried smoking once 2

I used to smoke sometimes but I never smoke a cigarette now 3

I sometimes smoke cigarettes now but I don't smoke as many as once a week 4

I usually smoke between one and six cigarettes a week 5

I usually smoke more than six cigarettes a week 6

Q9 Just to check, read the statements below carefully and tick the box next to the one which best describes you.

I have never tried smoking a cigarette, not even a puff or two 1 → you have finished.

See instructions in the grey box at the bottom of the page.

I did once have a puff or two of a cigarette, but I never smoke now 2 → you have finished.

See instructions in the grey box at the bottom of the page.

I sometimes smoke cigarettes 3 → Q10

Q10 If you have smoked in the last week, about how many cigarettes did you smoke in total? (Please put the number in the box below)

I have smoked about cigarettes in the last week

Thank you very much for completing this questionnaire, can you please place it in the envelope provided and hand it back to your teacher. Make sure no one, including your teacher, can see your answers.

Appendix B Letter to schools



The prevention of smoking uptake by children and young people

Dear Head Teacher/Principal,

Due to forthcoming change in legislation which will see the age at which it is legal to purchase cigarettes increase from 16 years to 18 years, the National Institute for Health and Clinical Excellence (NICE) has commissioned qualitative research with children and young people aged 11-17 years. Importantly, the change in legislation will create a new population of underage smokers, the 16-17 age groups that were previously not considered to be underage.

Liverpool John Moores University (LJMU) has been commissioned to conduct this research with children and young people in the areas of Liverpool, Sefton, Wirral and Knowsley. We will be conducting focus groups (with a maximum of 10 pupils in each group) during October 2007. This is important research which will inform the development of the national guidance produced by NICE on the prevention and uptake of smoking by children and young people.

We hope to get a representative sample of all areas across Liverpool, Sefton, Knowsley and Wirral therefore your participation is **very** important to us. **Individual schools or areas will not be identified in the research findings.**

Details of the study are enclosed. If you wish your school to participate please complete the participation request form enclosed and return it in the SAE provided. If you have any questions please contact Kerry on: 0151 231 4383 or email: K.Woolfall@livjm.ac.uk **Please return forms by the 12th September 2007.**

Yours Sincerely,

A handwritten signature in black ink, appearing to be 'Kerry Woolfall', written over a horizontal line.

Miss Kerry Woolfall
Senior Researcher
National Collaborating Centre for Drug Prevention (NCCDP)
Liverpool John Moores University

Details of the study

Areas of investigation

ii) Use of contemporary electronic media

We will explore social networking, entertainment, and information media accessed by young people. We will ask them to generate the names of popular websites and ascertain levels of use, expectations of sites, and purpose of visits. We shall also explore the impact of advertising on these sites, what makes young people 'click through' on adverts, and ask them to make comparisons with 'traditional' media. We will encourage them to describe characteristics (e.g. design) of web banners that they are most likely to click on, and what would encourage them to respond to electronic health promotion materials.

ii) Knowledge of smoking

Children and young people are generally knowledgeable about the adverse effects of smoking. Research demonstrates an association between awareness of and participation in anti-tobacco health promotion interventions and uptake of smoking behaviour. We will therefore seek quantitative information on young people's knowledge of the short and long term health effects of smoking, as well as mechanisms of toxicity (e.g. tobacco smoke and carcinogens) and individual financial costs.

iii) Attitudes to smoking

The importance of attitudes to the understanding and prediction of smoking behaviour is well documented in the research on smoking. They are learned constructs developed in early childhood via the mechanism of primary socialisation. Attitudes to smoking can be complex and there is some evidence to suggest that attitudes become increasingly more favourable in adolescence. We will investigate differences in attitudes and whether cognitive and affective responses to smoking are differentiated by demographic and smoking profiles.

v) Assessment of current health promotion campaigns

Groups will be asked to spontaneously recall the names and content of recent smoking prevention campaigns. They will subsequently be presented with a small selection of (age-appropriate) visual (e.g. TV adverts), aural (e.g. radio), printed (e.g. leaflet), and electronic (e.g. web page) materials, and asked to respond in a standardised way. Information will be sought on recognition, perceived content of message, and influences on behaviour. Specific questions will be asked on whether they believed the particular campaign was relevant to them, was something they would talk to friends about, and whether new information was presented. Finally, participants will be asked to suggest what an 'ideal' campaign targeted towards their age group and smoking history would look like.

v) Young Access Interventions

Limiting access to tobacco products through legislation is a well established intervention in the prevention of smoking uptake in young people. However, the effectiveness of such strategies is debatable. Whilst such legislation appears to impact upon retailer behaviour, it seems to have little impact on smoking behaviour itself. We will explore young people's knowledge of the forthcoming change in law

concerning purchasing age restrictions. We will also ask young people to describe the ways that their peers may circumvent legal restrictions in order to obtain tobacco.

Method

A maximum of four schools/colleges who express a wish to participate will be chosen. Selection will be based upon social class (with a special focus on those situated in areas of multiple deprivation as identified by the Indices of Multiple Deprivation 2004); ethnicity (mixed with a special focus on groups with known high levels of smoking) and region (both urban and non-urban areas will be represented).

We propose that participating schools will administer (with the assistance of LJMU researchers) a brief screening questionnaire to pupils in one or more of the age groups shown in table 1 below. The number of individual groups selected from each school will depend upon the number of participating schools, although it is anticipated that a minimum of four groups will be sampled from each school or college. Questionnaire data will then be analysed to identify young people suitable for each focus group based on smoking status, age and gender. A simple random sample of ten young people will then be selected for each of the eighteen school groups. However, if the research team decides that this recruitment methodology is not practical in the agreed time frame then direct recruitment will take place.

Questions and discussion schedules will be tailored to the age and abilities of participants, and each session will last about one hour. Times will be discussed with participating schools to ensure minimal disruption to school the school day.

We will use interactive electronic tools (Turning Point 2006⁴) to test knowledge and quantify opinions. This is similar to the system used in ITV's 'Who wants to be a Millionaire' game show and is an effective way of making the research fun for young people whilst assuring their anonymity.

Table 1 School sampling framework

Group	Urban		Group	Non-Urban	
	Age and Gender	Smoking status		Age and Gender	Smoking status
1	11-12 years M + F	Never tried and experimenters	10	11-12 years M + F	Never tried and experimenters
2	13-15 years M	Never tried and experimenters	11	13-15 years M	Never tried and experimenters
3	13-15 years M	Regular smokers	12	13-15 years M	Regular smokers
4	13-15 years F	Never tried and experimenters	13	13-15 years F	Never tried and experimenters
5	13-15 years F	Regular smokers	14	13-15 years F	Regular smokers
6	16-17 years M	Never tried and	15	16-17 years M	Never tried and

⁴ <http://www.turningtechnologies.co.uk/>

		experimenters			experimenters
7	16-17 years M	Regular smokers	16	16-17 years M	Regular smokers
8	16-17 years F	Never tried and experimenters	17	16-17 years F	Never tried and experimenters
9	16-17 years F	Regular smokers	18	16-17 years F	Regular smokers

Reward

Young people will be compensated with a £10 high street voucher for participation in focus groups.

Consent and ethics

Consent will be obtained from the parents or carers of each child using an ‘opt-out’ system prior to the survey commencing. This will take the form of a letter that will be distributed to parents and carers by JMU in collaboration with each school. Consent will also be obtained from each young person before the questionnaire is completed. Ethical approval for all elements of the project will be obtained from LJMU ethics prior to commencement of this work.

Participation request form

I wish for our school (**insert name below**)

..... to participate in the smoking prevention research, which is to be conducted by Liverpool John Moores University in 2007.

You can contact me to make arrangements on:

Tel

Email.....

Any comments or special requests please state in the box below

Appendix C Media campaigns shown to group during focus groups

1) TV: NHS Invisible Killer advertising ‘wedding’



2) Print advert: NHS Hook outdoor advertising



3) Radio advert: NHS Send off

http://www.gosmokefree.co.uk/downloads/SendOff_NRT_Craig_Cash.mp3

4) Go Smoke Free website <http://www.gosmokefree.co.uk>



Appendix D focus group questions

Glossary of terms/acronyms used in this document

FI= Facilitator Instruction

Method: The researcher method to be used in each section is outlined at the top of each new section

Prompt: suggestions are made for facilitators to encourage discussion

Introduction section for each focus group

Hello, we are researchers from Liverpool John Moores University and we are here to ask you some questions about smoking. We are not from a school or part of the government.

We have a 'who wants to be a Millionaire' style system to make it a bit more fun. We also have some TV and radio clips to show you. This wont take any longer than an hour and you will receive a £10 high street voucher for taking part

The purpose of this research is to help adults who work with children and young people by providing them with up to date information on the views and activities of children and young people on smoking. We will send a copy of the report to your school when it is finished for you to see.

Everything you say is completely confidential. Any information about you will not be disclosed to anyone unless we are worried about your safety and you agree to allow us to let someone know. It is expected that the results of this study will be published but your name, your schools name or individual details will not be mentioned at all. Your teacher or parents will not know what you have said.

We are interested in all types of answers. So please don't worry if you think of something to say and your not sure if it's relevant, just say it.

Is everyone happy to take part? **FI: Any no's send back to lesson**

We will be taping the session so I can look at the comments you have all made after the session- is everybody ok with that?

FI: Give out consent forms and collect back in. Give out stickers with names on for young people to wear to assist facilitation. All names will be removed from transcripts.

Icebreaker

Method: Introduction to Turning Point using a couple of example questions (as used in the screening questionnaire) to record:

Are you male or female?

How old are you?

In which of the following areas do you live?

Smoking status

Proportion of friends that smoke
Does your dad smoke?
Does your mum smoke?

1. Use of contemporary electronic media

Method: **Turning point and Questions administered to group**

Do you use the internet?

Never used/ Several times a year/ Several times a months/ Weekends only/ Several times a week/ Daily/ Several times a day

Do you watch the television?

Never used/ Several times a year/ Several times a months/ Weekends only/ Several times a week/ Daily/ Several times a day

What channels do you access most frequently? (Prompt: go through main sites stated and ask:

Do you listen to the radio?

Never used/ Several times a year/ Several times a months/ Weekends only/ Several times a week/ Daily/ Several times a day

What stations do you listen to?

Do you read magazines?

Never used/ Several times a year/ Several times a months/ Weekends only/ Several times a week/ Daily/ Several times a day

What magazines do you read?

What internet sites do you access most frequently? (Prompt: go through main sites stated and ask:

b) What do you use these sites for?

c) What sort of things do you expect to find on these sites? (Prompt: information, adverts?)

d) On average how long do you spend on the internet when you use it?

Do you see adverts when you access website?

Yes

No

Don't know

How often do you read the adverts?

Never

Sometimes

Often

Always

How often do you click on adverts to get more information?

Never

Sometimes

Often

Always

What would make you click on an advert?

What sort of design would make you more likely to read the advert or click on it?

Have you ever seen any cigarette advertisements on the internet?

Yes

No

Don't know

If yes, please tell me the name of these websites. (FI- probe to find out what sort of sites they are and what brands were being advertised)

What would encourage you to respond to adverts that are health related? (Prompt: like information on how to stop smoking?)

ii) Knowledge of smoking

.

Turning Point and ask the group

Do you know what the legal age limit is for buying smoking (today)?

13 years

14 years

16 years

17 years

18 years

19 years

20 years

Did you know that the legal age for smoking changed on the 1st of October?

Yes

No

(if any) for those of you who did know, how did you find out? (Prompt: news, poster)

Smoking can cause lung cancer

1. True

2. False

3. Don't know

If you're a teenage smoker, the changes in your body that lead to disease can start now

4. True

5. False

6. Don't know

Which of these following substances are found in cigarette smoke⁵?

a) Arsenic (found in rat poison)

b) Acetone (found in nail polish remover)

c) Ammonia (found in bathroom cleaners and dry cleaning fluid)

d) All of the above

How many people die in the UK every year as a result of heart and circulatory disease caused by smoking⁶?

a) 10,000

b) 25,000

c) 40,000

⁵ Bupa Smoking Quiz. www.bupa.co.uk/health_information/html/quizzes/smoking_quiz.html

⁶ CBBC Newsround smoking quiz. http://bbc.co.uk/cbbcnews/hi/quiz/newsid_1869000/18693000.stm

Which of the following is caused by smoking⁷?

- a) Premature baldness in men
- b) Chest hair on women
- c) Cough with Phelgm
- d) Autism

iii) Assessment of current health promotion campaigns

Method: Turning Point and questions to group

Can any of you tell me the names or describe to me any recent anti smoking prevention campaigns you have seen or heard on:

- a) **The television** (prompt- what was the message, what did you think of it? What age do you think it was aimed at?)
- b) **Websites** (prompt have you seen any messages on websites like face book or my space? If so, what did they look like? What did they say? Do you think that websites are a good means of spreading the message not to smoke to young people?)
- c) **Printed- magazines, newspapers, billboards and leaflets?** (Can you describe them? Do you see more in newspapers or newspapers or billboards or leaflets? Which magazines? What newspapers? Where are the billboards? Where did you get the leaflets? What did you think of them? What was the message? What age group do you think it was aimed at?)
- d) **The radio?** What was the message? Was it a celebrity voice? What radio station was it? What age group do you think it was aimed at?

Can you tell me any of the names/brands of any recent cigarette advertisements you have seen? (Prompt: sports events? Magazines?)

b) Where did you see them?

I am about to show you a series of recent smoking prevention campaigns, then I will ask you some questions about each of them after I have shown you each individual one.

a) This is a recent TV advertisement.

Have you ever seen/ heard this before?

Yes

No

Tell me what you think is the message that this clip is trying to get across?

What age group do you think this message is aimed at?

Under 16's

16-18's

18- 30's

Over 30's

All ages

so why do you think it is aimed at this group?

⁷ The scoop on smoking from ASCH: what every teen should know about tobacco.
<http://thescoopnsmoking.org>

Is this the sort of message which would change your attitude towards smoking?

Yes
No

Why (FI: explore reasons)

Do you think that this advert would prevent people your age from smoking?

Yes
No

Would you talk to your friends about it?

Yes
No

b) Show website

This is the smoke free website



Have you ever seen this before?

Yes
No

Tell me what your thoughts are about the format (colour, use of pictures)

Is it somewhere you would go for information on smoking?

Yes
No

What would make it more appealing to people your age?

c) Play radio SendOff_NRT_Craig_Cash.mp3

Have you ever heard this before?

Yes
No

Tell me what you think is the message that this clip is trying to get across?

What age group do you think this message is aimed at?

Under 16's
16-18's
18- 30's
Over 30's
All ages

so why do you think it is aimed at this group?

Is this the sort of message which would change your attitude towards smoking?

Yes
No

Why (FI: explore reasons)

Do you think that this advert would prevent people your age from smoking?

Yes
No

Would you talk to your friends about it?

Yes
No



Have you ever seen these adverts before?

Yes
No

Tell me what you think is the message that these adverts are trying to get across?

What age group do you think this message is aimed at?

Under 16's
16-18's
18- 30's
Over 30's
All ages

so why do you think it is aimed at this group?

Is this the sort of message which would change your attitude towards smoking?

Yes
No

Why (FI: explore reasons)

Do you think that this advert would prevent people your age from smoking?

Yes
No

Would you talk to your friends about it?

Yes

No

Q4. What would an 'ideal' campaign targeted towards your age group look like?

- a) What form of media would you use? (TV, websites etc)
- b) What would be your main message?
- c) What sort of people (if any would you have in it?) **FI. Pick up on and explore and points which they say are important in a good advert (i.e. shock tactics) why they think this is important and what would be the best way of including this idea in an advert)**

So now you have your ideal anti smoking advert:

- a) How often should it be shown?
- b) What would stop you from listening to it?
- c) What would keep you listening to it?

iv) Attitudes to smoking

Turning Point

FI: Now I am going to ask you a few questions on your attitude towards smoking. Please use your handsets to select how much you agree with the following statements⁸:

Smoking is addictive (disagree a lot/disagree/neither agree nor disagree/ agree/agree a lot)

Smoking is poor value for money

Smokers die younger

Most smokers would like to give up but they cannot

Smoking makes you look more grown up

Smokers are less attractive to the opposite sex

Seeing actors/actresses smoke in films (movies) encourages young people to smoke

Smoking can help calm you down

Smoking can help you make friends more easily

Smoking is enjoyable and satisfying

Smoking can help you stay slim

Smokers tend to be very sociable and outgoing people

Smokers tend to lack confidence

Smokers tend to be fashionable and style conscious

Smokers should be able to smoke when and where they want

Smoking is good value for money

v) Young Access Interventions

Method: Turning point and questions administered to group

For smokers groups only:

How have you normally obtained your cigarettes in the past? (Prompt: friends, newsagent, machine in a pub?)

Have you ever done anything illegal to get money to buy cigarettes? Examples: sold cannabis, stolen from a shop or person? (That includes family members)

Yes

No

⁸ Questions taken from the Office of Tobacco Control (2006) Children, Youth and Tobacco: behaviours, perception and Public Attitudes. Naas, Co.Kildare

In what way has the change in legislation changed the way you obtain cigarettes?

Will you try to stop smoking because of the age limit increase?

Yes
No
Don't know

How do you get your money to buy cigarettes?

(FI: If anybody says through their parents/carers/family members) Does this person know that you spend the money they give you on cigarettes?

What would make you smoke less?

Have you ever smoked (illegal/black market) cigarettes?

Yes
No
Don't know

Would you consider smoking contraband (illegal/black market) cigarettes if could not get hold of legal cigarettes?

Yes
No

Do you think that a proof of age scheme, similar to the one used by shops for buying alcohol, would prevent under 18's from obtaining cigarettes from shops?

Yes
No
Don't know

For non smoking and experimenters groups

Do you have any friends that smoke?

Yes
No

How do people your age get hold of cigarettes? (Prompt: friends, newsagent and machine in a pub?)

Do you think that people under the age of 18 will try to stop smoking because of the age limit increase?

Yes
No
Don't know

Do you think that increasing the age limit will make it difficult for them to get cigarettes?

Yes
No
Don't know

Do you think that smokers under the age of 18 will consider smoking contraband (illegal/black market) cigarettes if could not get hold of legal cigarettes?

Yes
No
Don't know

Do you think that a proof of age scheme, similar to the one used by shops for buying alcohol, would prevent under 18's from obtaining cigarettes from shops?

Yes

No
Don't know

What has prevented you from smoking or stopped you from smoking? (Prompt: cost, health concerns, access issues? FI: explore issues raised by group)

Closing the session

Thanks

Voucher forms

Hand out vouchers and debrief sheets

Appendix E: Screening questionnaire data

852 screening questionnaires were returned and analysed, none were spoiled. There were 437 (51.3%) males and 414 (48.6%) females. The modal age was 16 (21.8%) followed by 14 (20.2%) (see Figure 1). 808 (95.8%) participants identified themselves as White British, with the majority of the remainder being White from other backgrounds.

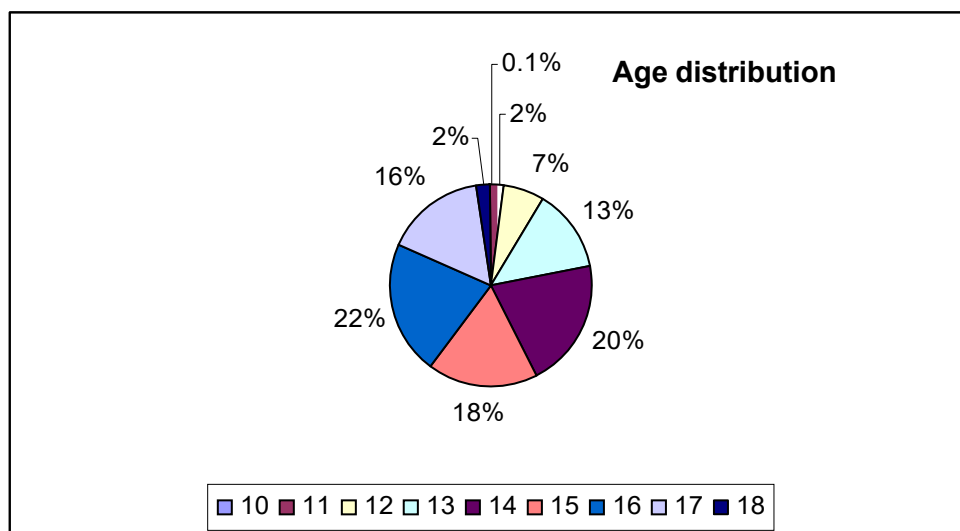


Figure 1 Age distribution of respondents

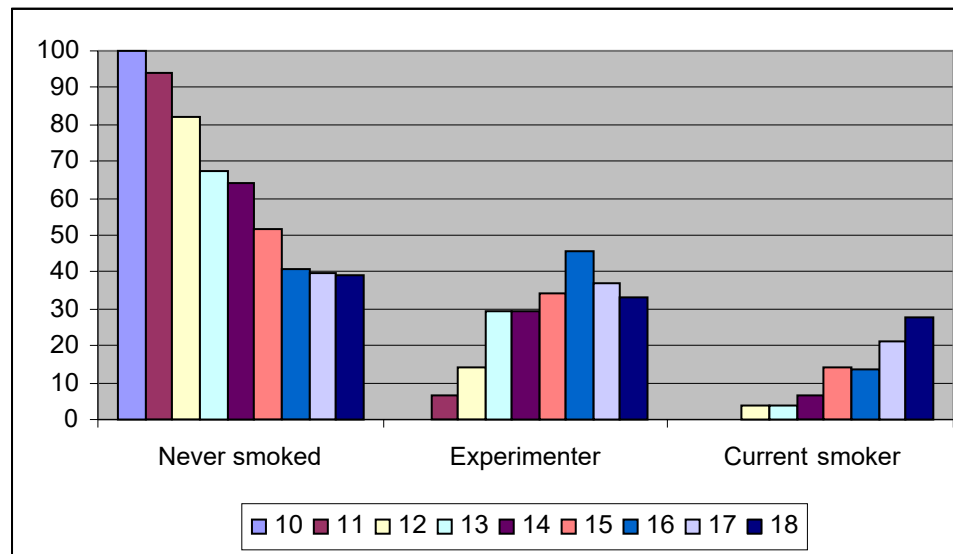
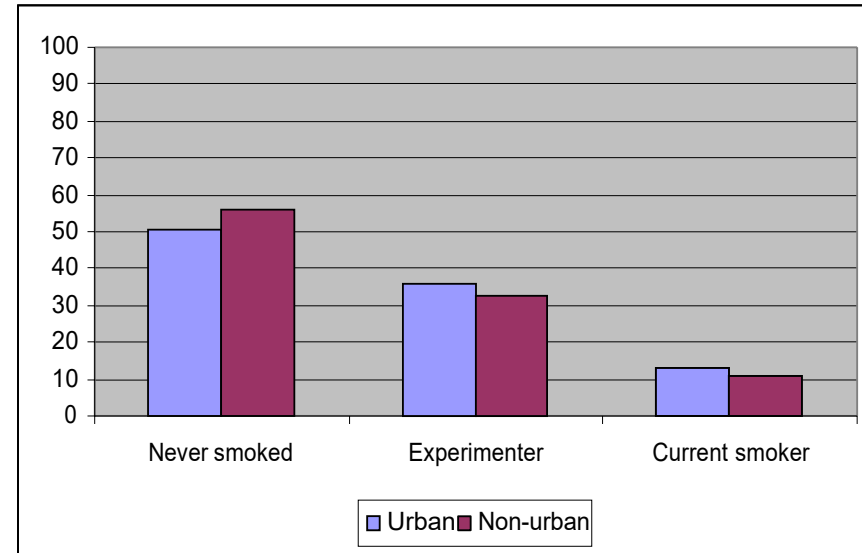
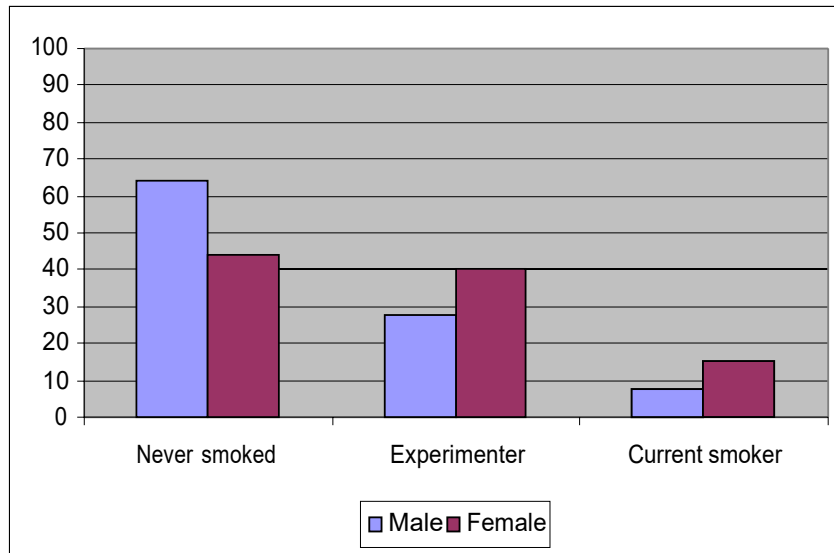
Overall, 449 subjects (54.6%) reported never having smoked a cigarette, 277 reported being experimenters (33.7%) and 94 reported being current smokers (11.4%) (Tables 1 and 2). Panels 1 and 2 present this data by age, sex, and urbanicity. Males were more likely than females to report never having smoked ($\chi^2 = 8.05$, $p < 0.01$), but the sexes were equally likely to be experimenters ($\chi^2 = 2.407$) or current smokers ($\chi^2 = 3.383$). There was no difference in the numbers reporting each smoking status between individuals attending school in different urban environments ($\chi^2 = 0.723$; 0.199; 0.189).

	Never smoked	Experimenter	Current smoker
Sex			
Male	273 (64.1)	117 (27.5)	33 (7.7)
Female	175 (44.2)	160 (40.4)	61 (15.4)
Urbanicity			
Urban	114 (50.4)	81 (35.8)	29 (12.8)
Non urban	335 (56.2)	195 (32.7)	65 (10.9)
Age			
10	1 (100)	0	0
11	15 (93.8)	1 (6.3)	0
12	46 (82.1)	8 (14.3)	2 (3.6)
13	74 (67.3)	32 (29.1)	4 (3.6)
14	106 (63.9)	49 (29.5)	11 (6.6)
15	74 (51.7)	49 (34.3)	20 (14.0)
16	73 (40.8)	82 (45.8)	24 (13.4)
17	53 (39.8)	49 (36.8)	28 (21.1)
18	7 (38.9)	69 (33.3)	5 (27.8)

Table 1 Current smoking status

Panel 1 (overleaf) Current smoking status; **Figure 2** (top left) sex; **Figure 3** (top right) urbanicity; **Figure 4** (bottom) age

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	Never smoked	Tried once	Ex user	< 1/week	Between 1 and 6 cigarettes/week	>6 cigarettes/week
<i>Sex</i>						
Male	283 (65.4)	73 (16.9)	41 (9.5)	7 (1.6)	6 (1.4)	23 (5.3)
Female	184 (44.6)	116 (28.1)	57 (13.8)	17 (4.1)	11 (2.7)	28 (6.8)
<i>Urbanicity</i>						
Urban	122 (52.4)	49 (21.0)	35 (15.0)	4 (1.7)	3 (1.3)	20 (8.6)
Non urban	346 (56.4)	139 (22.7)	63 (10.3)	20 (3.3)	14 (2.3)	31 (5.1)
<i>Age</i>						
10	1 (100)	-	-	-	-	-
11	16 (94.1)	-	1 (5.9)	-	-	-
12	46 (80.7)	8 (14.0)	1 (1.8)	1 (1.8)	-	1 (1.8)
13	77 (69.4)	20 (18.0)	11 (9.9)	-	1 (0.9)	2 (1.8)
14	109 (63.4)	36 (20.9)	16 (9.3)	1 (0.6)	2 (1.2)	8 (4.7)
15	76 (51.7)	33 (22.4)	15 (10.2)	5 (3.4)	4 (2.7)	14 (9.5)
16	78 (42.2)	55 (29.7)	31 (16.8)	5 (2.7)	7 (3.8)	9 (4.9)
17	56 (41.2)	31 (22.8)	21 (15.4)	11 (8.1)	2 (1.5)	15 (11.0)
18	7 (36.8)	6 (31.6)	2 (10.5)	1 (5.3)	1 (5.3)	2 (10.5)
<i>Current Smokers only</i>	-	-	-	22 (27.5)	15 (18.8)	43 (53.8)

Table 2 Population cigarette smoking frequency (n(%))

Panel 2 (overleaf) Frequency of smoking; **Figure 6** (top left) sex; **Figure 7** (top right) urbanicity; **Figure 8** (bottom left) age; **Figure 9** (bottom right) within current smokers

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