A review of the effectiveness of Smokebusters: community-based smoking prevention for young people

Julie Bruce and Edwin van Teijlingen

Abstract
Smokebusters is a community-based smoking prevention initiative for young children which aims to prevent them from starting to smoke. Despite the increase of Smokebusters clubs throughout the UK and Europe there is little published evidence of the effectiveness of this health promotion intervention. The aim of this study was to conduct a literature review of the effectiveness of established UK and Irish Smokebusters clubs. Over 60 clubs and agencies were contacted with a total of 36 reports received. Of those reviewed, most clubs have conducted process and impact evaluation to assess the popularity and quality of the programme. Attempts have been made to measure children’s knowledge, attitudes and behaviour in relation to smoking and the Smokebusters intervention. Only three clubs have conducted long-term outcome evaluations which have measured changes in knowledge, attitudes and smoking behaviour. There is some evidence that changes occur in knowledge and attitudes after the establishment of clubs. To date, there are no reports of sustained change in smoking behaviour following the establishment of Smokebusters clubs.

Introduction
Recent publications have highlighted the UK-wide failure to reduce smoking prevalence in young children (Diamond and Goddard, 1995; Turtle et al., 1997). This is despite national goals to reduce prevalence in 11–15 year olds at least 33% by the year 2000 (The Health of the Nation, 1992). Longitudinal studies suggest that whilst smoking prevalence in boys has fluctuated over the last decade, there has been a steady increase in the number of young girls who smoke (Currie et al., 1997; Turtle et al., 1997).

Stead et al. (1996) conducted an extensive review of adolescent smoking prevention strategies. Interventions were categorized into four groups: school- and community-based programmes, media campaigns, and environmental measures. The most widely implemented UK community-based initiative is Smokebusters. This is a club for young children which aims to promote non-smoking as a positive, adult choice. The first UK-based club, named Project Smoke Free, was formed in 1985 for children aged 10–14 years old in the North West of England (Berry, 1987). Information about smoking was provided using different media, which included activities, newsletters and competitions. A rapid enrolment ensued and club membership rose to 23,000 within 18 months (Berry, 1987). The number of Smokebusters clubs in the UK and Europe increased, and clubs were subsequently established in Belgium, Ireland, France, Greece, Italy, Luxembourg, Portugal and Spain (European Network Directory, 1996).

Philosophy of Smokebusters
Stevenson-Robb (1989) stated that the overall aims of Smokebusters were “to help children reject smoking; to increase the defences of non-smoking
children against the pressure to experiment with cigarettes; to make non-smoking fun and to promote healthy alliances”. The ideology of Smokebusters is the emphasis on the positive aspects of non-smoking rather than the negative and more long-term aspects of smoking. It is a fun club where non-smoking is portrayed as the norm and smokers as the minority. The development of a strong social peer group of non-smokers is thought to assist in self-empowerment and development of rejection skills. Club members can participate in role play to develop confidence to reject pressures to smoke from their peers and the tobacco industry. Smoke-free status is often rewarded by membership based on subscription. Thus youngsters make a financial commitment to the organization. Status is further reinforced through activities and merchandise exclusive to club members (Smokebusters Scotland, 1994). Ownership is encouraged via active involvement whereby children participate in the design and dissemination of Smokebusters newsletters and promotional material. As Smokebusters is community- rather than school-based, there is little association with authority or establishment rules and values. Mitchell (1994) suggested that school is perceived as separate and different from the social world of the adolescent. Children who mistrust authority or rebel at school may be more likely to participate in an out-of-school programme, particularly if peers join. Community-based interventions are, therefore, deemed important for those children who do not relate well to the school environment.

Evaluation is the rigorous and systematic collection of data to assess the effectiveness of a programme in achieving predetermined objectives (Bowling, 1997). Within health promotion, three levels of evaluation have been described: process, impact and outcome (Hawe et al., 1990). Process evaluation measures the activities of the programme, its quality and programme reach. Impact evaluation measures the immediate effects to identify whether the programme meets its objectives. Outcome evaluation measures whether or not a programme or activity has met its overall goals and examines long-term effects. Whilst the effectiveness of school-based programmes in reducing adolescent smoking has been widely reported, the effectiveness of Smokebusters as a community-based campaign has been poorly researched. To date, there has been no specific review of the effectiveness of Smokebusters clubs. The aim of this study, therefore, was to summarize evidence on the effectiveness of Smokebusters by conducting a review of published and unpublished assessments of UK clubs. Information from individual clubs and agencies was examined to obtain an overview of the process, impact and outcome of Smokebusters as a health promotion activity.

Methods

A computer search for English language articles published for the 10 year period from 1988 to 1997 was conducted using selected databases: Medline, Embase, Cumulative Index to Nursing and Allied Health Literature (CINAHL), Social Science Citation Index (SSCI), Applied Social Sciences Index and Abstracts (ASSIA), Cochrane Library, and Health Promotion Library for Scotland. A request for published and unpublished evaluation reports was sent to all known UK and Irish Smokebusters clubs and health promotion departments. An electronic mail request for information was circulated on the Health For All mailbase. Furthermore, education authorities, health boards, cancer societies, anti-smoking agencies, and the NHS Centre for Reviews and Dissemination (University of York) were also approached for information on Smokebusters campaigns.

Results

A total number of 64 Smokebusters clubs and health promotion agencies were identified and contacted with a total of 36 interim and final reports identified for review.

Methods of evaluation

Most evaluation reports obtained for review had conducted process and impact evaluation, e.g. assessment of activities, quality of promotional
material, programme reach and immediate impact of the Smokebusters club. Only three clubs measured outcome evaluation (Davidson, 1992; van Teijlingen and Friend, 1993; Morgan et al., 1994; van Teijlingen et al., 1996). Evaluation had been conducted using a combination of quantitative (questionnaire surveys) and qualitative (face-to-face interviews, focus groups) research methods which were used to assess change in knowledge, attitude and behaviour with respect to smoking.

**Aims and objectives of Smokebusters**

The Smokebusters clubs were found to have a variety of aims and objectives, e.g. to increase knowledge and awareness of smoking issues; to increase ownership of project; to explore innovative ways of delivering the non-smoking message (Tayside Smokebusters, 1994; Smith et al., 1996; Wade, 1996). Although a number of clubs specified that the overall aim was to prevent children from starting to smoke, few attempted to quantify this in their evaluation (Merchant and MacMorran, 1993; Taylor and Jewitt, 1995; Smith et al., 1996; Sterry and Potts, 1996). Other projects set aims specific to Smokebusters or in relation to knowledge, awareness and attitudes rather than actual behaviour (Wilson, 1992; McPartlan, 1993; Davidson, 1994; Wade, 1996). In 1994, Smokebusters Scotland compiled a range of collective aims as a guide for established clubs and those under development. These aims incorporated personal skills and self-empowerment, development of a cohesive peer group, promotion of tobacco control activities, creation of a smoke-free environment, and promotion of a healthy lifestyle (Tayside Smokebusters, 1994; Smith et al., 1996; Wade, 1996).

**Process and impact evaluation**

The aspects of process or impact evaluation conducted by Smokebusters clubs that did not measure change over time are presented in Table I. Any club which conducted some form of assessment has been included. An overview of the descriptive information and key aspects obtained from individual reports are described below.

**Funding and location**

Smokebusters clubs throughout the UK are mostly funded by health promotion departments via Health Boards or Health Authorities. Clubs may be newsletter based or operate within established youth clubs or organizations (e.g. girl guides, boy scouts). Although the movement is essentially community based and attempts to cultivate a non-establishment image, a number of clubs do operate on school premises outwith school hours. Authors have suggested that regular group meetings for members maintains a supportive non-smoking peer group more than clubs which are newsletter based only (van Teijlingen and Friend, 1993; Davidson, 1994).

**Age range**

Membership encompasses the 8–15 year age range, although the majority of Smokebusters members are between 9 and 13 years old. Many studies reported a split in perceptions of and attitudes towards Smokebusters between primary and secondary school children (Kirkman 1994b; Hughes and Eadie, 1995; Sterry and Potts, 1996). Smokebusters is generally very popular amongst younger children; however, perceptions seem to change on entry to secondary school. The Tayside club assessed the needs of ‘graduate’ members, i.e. those who had progressed to secondary school, and reported that although older children (14–15 years old) agreed with the concept of Smokebusters, they viewed it as inappropriate for their age group (Hughes and Eadie, 1995). These authors recommended a different initiative for this age group which should not be exclusive to smoking issues. South Lincolnshire and Grampian clubs offer different grades of membership for juniors and seniors, and provide promotional material according to age. The Wensleydale club elected male and female ‘Chief Smokebusters’ to act as role models for younger children (Davidson, 1992). In 1994, Ayrshire and Arran Smokebusters created a peer support network, the Youth Action of Smoking (Y-ASK), specifically for teenagers in secondary schools (Kirkman, 1994b). This was a conscious attempt to move towards age-specific targeting of young people in the region.
Table I. Process, impact and outcome evaluation of Smokebusters clubs without measurement of change over time

<table>
<thead>
<tr>
<th>Author (date published)</th>
<th>Awareness</th>
<th>Recruitment</th>
<th>Membership</th>
<th>Materials and newsletter</th>
<th>Activities and events</th>
<th>Levels of participation</th>
<th>Knowledge</th>
<th>Attitudes and beliefs</th>
<th>Current smoking behaviour</th>
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A 'bullet' indicates that the study included measurement of this particular item.
Recruitment and membership
Recruitment techniques include school presentations, posters, roadshows, media coverage and peer recommendation. Bulk recruitment of members can assist in building a non-smoking peer group (Wilson, 1992). The Durham club conducted an intensive recruitment drive and found that younger children, aged under 13 years, were very enthusiastic and would join regardless of whether their friends were members (Wilson, 1992). This does not apply to children over 13 years, who are more likely to join if peers do. In general, few children over the age of 14 years will join Smokebusters. McIntyre and McDonald (1996) explored recruitment methods by analysing the volume and nature of members’ participation with the club according to recruitment method. Correspondence and participation rate was similar between children recruited by mailshots and those from school visits. These authors recommended recruitment by mail, as this proved more cost-effective and that a school visit 6 months after the mailshot would boost interest and encourage participation.

Most, but not all, clubs charge a nominal membership fee as it is generally perceived that children attach greater value to something they have paid for. Some clubs discourage the use of membership fees as this could potentially exclude poorer children (Teer et al., 1992; Merchant and MacMorran, 1993). The Gateshead club reduced their membership fee from £2 to 50 p for children in selected deprived inner city areas and reported a subsequent increase in membership uptake (Sterry and Potts, 1996). Many clubs charge an annual renewal fee which helps maintain a register of active membership, but this can be costly and time consuming to maintain. The Northumberland club studied children who had not reinstated membership and found that the most common reason was that they ‘forgot’ (Merchant and MacMorran, 1993). Similarly, the Grampian club reported that children often ‘could not be bothered’ to rejoin (van Teijlingen and Friend, 1993).

Promotional items and newsletters
Each new Smokebusters member receives a starter pack, which differs from club to club. This generally contains a membership card, newsletter, selection of promotional items (e.g. stickers, posters, pen, badge, stationary) and educational/information leaflets. A number of clubs have evaluated the quality of these promotional items and found them to be especially popular amongst younger members. Discount schemes for local outlets are popular and can act as an incentive for children to join (Merchant and MacMorran, 1993). Newsletters are distributed in bulk to schools or individually by post between two and six times a year. Younger members especially are reported to enjoy receiving personal mail. Most clubs involve youngsters in the design and production of club newsletters. The Leeds club introduced a problem page which was found to be very popular amongst female members (McPartlan, 1993). Teer et al. (1992) recommended promotional material should be bright and bold for members aged 9–11 years, and more subtle and tasteful for members aged 12–13 years.

Activities and events
Organized activities included sports, discotheques, roller-raves, outings, workshops, fashion shows and parties. Many clubs have conducted questionnaire surveys after individual events to assess popularity and satisfaction. The Tayside club found that although children enjoyed the concept of Smokebusters events, few had actually attended regularly (Hughes and Eadie, 1995). In general, studies suggested that activities and events should be cheap, accessible and well advertised in order to attract members.

External consequences
Smokebusters members have participated in anti-smoking campaigns and there are many reports of attempts to discourage friends and family from smoking. Leeds club allocated ‘Action Awards’ where children collect points for various anti-smoking activities and receive bronze, silver or gold certificates for their efforts (Docherty and Smith, 1996). Kirkman (1993) reported about awards to local retailers for refusing to sell cigarettes to underage children. Members of the Grampian club played an active role in securing a smoking
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ban on local buses. In 1993, Smokebusters members from across the UK met MPs in Parliament to discuss tobacco policy (Merchant and MacMorran, 1993). There are many anecdotal reports of children helping family members to quit smoking. The Gateshead club conducted a survey of 50 parents, and reported that the majority of them (84%) felt that Smokebusters had benefited their child in some way and that the services offered by the club were good or excellent (Sterry and Potts, 1996). The range, therefore, of typical Smokebusters activities include the involvement of young people in both pro-health and anti-smoking campaigns.

Outcome evaluation

Outcome evaluation is the measurement of whether an activity has met its long-term goals (Hawe et al., 1990). Smokebusters programmes aim to change children’s knowledge, attitudes and behaviour relating to smoking. Only three clubs, Wensleydale, Dublin and Grampian, have attempted to measure change in children’s knowledge, attitudes and behaviour over time (Table II).

Wensleydale

Davidson (1992) conducted a before and after controlled evaluation of a Smokebusters club established in Wensleydale, North Yorkshire in 1991. The club was developed as a low-cost role model for rural communities with an emphasis on community-based activities and events. The club offered the ‘standard’ package of starter packs, merchandise, discount schemes, newsletter, competitions, discos and outdoor events. Prior to establishing the club, a questionnaire survey was administered to 866 primary and secondary school children in the district, only half of whom would be exposed to the intervention. This was repeated after 1 year, to the same group of children. The stability of the local population facilitated tracking of primary school children through their secondary school education. The questionnaire comprised of 39 questions relating to demographic information, general health, pocket money, relationships, smoking habits, hobbies and free time. The smoking section assessed knowledge, attitudes, current and intended smoking behaviour, and desire for membership of a Smokebusters club. Regular smoking was defined as smoking more than one cigarette a week as used by the Office of Population Censuses and Surveys (OPCS) (Dobbs and Marsh, 1983; Diamond and Goddard, 1995). Expired air carbon monoxide levels were measured, using a Smokerlyser, on a random sample of 200 school-children from both the study and control groups. This was repeated on the same children after the intervention.

There were differences between groups in smoking behaviour at baseline, with more regular smokers in the control group than the study group. An increase in regular smoking was demonstrated in both groups of children 1 year after implementation of the club although this increase was greater in the control group (11% increase in control group versus 3% increase in study group). Of the study group, significantly more girls smoked than boys following the intervention ($P < 0.05$). The most frequent source of cigarettes was from friends. There was a significant increase from baseline in the number of children in the control group who stated they would smoke in the future (Table II). There was a decrease in the number of children who wanted to join a club like Smokebusters over time in both groups. Authors reported increased expired air carbon monoxide levels in the study group over time and a decrease in levels from control group children. However, the manufacturers of the Smokerlyser monitor advised that reliability of use in children was negligible, partly because young people smoke less and tend not to inhale deeply.

Other than the presentation of three $\chi^2$ tests of smoking behaviour, statistical tests were not conducted, thus interpretation of results was limited because of the predominantly descriptive presentation. Most of the results were not analysed by age which may account for inter-group differences. Children in secondary school are more likely to be regular smokers than children in primary school (Diamond and Goddard, 1995). Authors stated that although analysis was conducted on the whole sample, those who reported regular smoking were
A review of the effectiveness of Smokebusters

**Table II. Outcome evaluation studies with measurement of change over time**

<table>
<thead>
<tr>
<th>Author</th>
<th>Study design</th>
<th>Sampling</th>
<th>Sample size</th>
<th>Methodology</th>
<th>Main outcome measures</th>
<th>Summary of results</th>
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<tbody>
<tr>
<td>Davidson (1992)</td>
<td>Controlled before and after study</td>
<td>Sampling process unclear</td>
<td>Study $n = 427$</td>
<td>Questionnaire survey</td>
<td>Knowledge, Attitudes, Current behaviour, Intended behaviour</td>
<td>Current smoking behaviour: - intervention group 3% increase from baseline - control group 11% increase from baseline Future intention to smoke: - intervention group 0.4% increase from baseline - control group 3% increase from baseline</td>
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<td>Control $n = 439$</td>
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<td>Morgan et al. (1994)</td>
<td>Controlled comparison study</td>
<td>Sampling not specified</td>
<td>Study $n = 100$</td>
<td>Questionnaire survey</td>
<td>Knowledge, Attitudes, Current behaviour, Intended behaviour</td>
<td>Change reported in knowledge, attitudes and beliefs of Smokebuster group No change in actual or intended smoking behaviour between groups</td>
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<td>Class 2, Class 5</td>
<td>Control $n = 200$</td>
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<td>van Teijlingen and Friend (1993)</td>
<td>Uncontrolled before and after study</td>
<td>10% random sample of year P7, S1 and S2 pupils in Grampian Region</td>
<td>$1987 n = 1785$</td>
<td>Questionnaire survey repeated at three stages</td>
<td>Knowledge, Attitudes, Current behaviour, Intended behaviour</td>
<td>Lower smoking prevalence at 2 years in Smokebuster group compared to Scotland No reduction in smoking prevalence at 4 years follow up</td>
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<td>van Teijlingen et al. (1996)</td>
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<td>Phase 1, Phase 2</td>
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<td>Phase 3</td>
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*P7 equivalent to primary year 7; S1, S2 equivalent to secondary years 1 and 2. Primary 7 in Scotland is the equivalent of grade 6 in the USA; secondary 1 and 2 are the equivalent grade 7 and 8, or Junior High School in the USA.*
‘senior’ schoolchildren. Limited information was provided about how the sample was selected and about the proportion of children followed up to the second round of the questionnaire survey. A total of 921 children completed the questionnaire on the second phase, 55 children more than in the baseline sample. This was a well-designed evaluation where authors gathered valuable baseline characteristics of schoolchildren in a rural area prior to establishing a Smokebusters club. Interpretation of final results was hampered by the lack of statistical testing and lack of sampling detail.

**Dublin**

This Irish study was included in the literature review because it was a Smokebusters intervention in an English speaking country. Although it was school based it included out-of-school activities and was developed from the Smokebusters model (Morgan et al., 1994). The programme was administered to children in class 2 and class 5, from two primary schools in a disadvantaged area of Dublin. This study consisted of an intensive smoking prevention programme that used the standard Smokebusters model of a fun non-smoking club with added involvement from parents and Health Board personnel. Aspects of the Smokebusters programme were integrated with mathematics, art and creative writing from the school curriculum. Approximately 100 children were directly exposed to the programme. Two hundred children who were not exposed to the programme were selected to act as controls, one group from the intervention school and one group from a comparable school. Control groups were matched for age, sex and social background. For the older children, programme evaluation comprised of a 19-item questionnaire that assessed knowledge, attitudes, beliefs and behaviour related to smoking. Past, current and intended smoking behaviour was explored. For the younger children, evaluation comprised of a 20-item questionnaire designed to measure knowledge, attitudes and future intentions in relation to smoking.

Children in the fifth year were significantly more knowledgeable of the effects of smoking, and held more negative attitudes and beliefs towards smoking than the control children. Control children from the same school had better scores than children from the outside school, implying diffusion and dissemination of the intervention. There were no differences in recent or intended smoking behaviour between groups. Similarly, children from class 2 had more negative attitudes and beliefs towards smoking than the control group of children. There were no differences in self-reported future intention to smoke. Both groups reported a low likelihood of smoking in the future. This finding is unsurprising given that young primary school children tend to hold strong anti-smoking beliefs. This was an unusual study in that researchers employed a multi-disciplinary approach to smoking prevention. Authors reported success in terms of increased knowledge, enhanced negative attitudes and beliefs towards smoking in children from a socially disadvantaged area. The strength of the study is weakened by the lack of baseline data that would have shown the magnitude of change before and after the intervention.

**Grampian**

In Grampian, Northeast Scotland, a Smokebusters club was launched for children aged 10–13 years in October 1987. This club, the first in Scotland, offered membership, newsletters, events, activities and discount opportunities for schoolchildren who pledged they were non-smokers. A questionnaire survey was conducted in the region, shortly after the launch of the club, to obtain baseline characteristics of 1785 schoolchildren aged 11–13 years. A 10% sample, representative by school size and geographical distribution, was selected from 273 primary schools and 40 secondary schools in the Grampian region (Table II). In 1990, the questionnaire survey was repeated to the same pupils, with 1307 (73.2%) of the original pupils traced (van Teijlingen and Friend, 1993). This study reported a lower smoking prevalence among secondary year 2 pupils (13 years old) in Grampian compared to Scotland as a whole. van Teijlingen and Friend (1993) suggested that the club was
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attractive to many children and was known to almost all.

In 1991, the questionnaire was administered a third time, almost 4 years after the launch of the Smokebusters club. Seventy-nine percent of the original primary school children who were now in secondary year 4 were included in this final survey. The same questionnaire, entitled the ‘Activities Survey’, was used throughout the 4 year study period, allowing longitudinal comparison of responses. Questions related to demographic details, hobbies, finances, musical tastes, spending habits, smoking habits and those questions specific to Smokebusters. The OPCS main question on smoking behaviour was used in the questionnaire with an additional check-up question (Dobbs and Marsh, 1983). van Teijlingen et al. (1996) reported high awareness and knowledge of Smokebusters amongst those children surveyed. For example, 97.7% of all respondents had heard of Smokebusters. Smoking prevalence was taken as one of the main outcome measures of the evaluation. Authors concluded that membership of Smokebusters did not seem to reduce the smoking prevalence among young people (van Teijlingen et al., 1996). Furthermore, analysis of future intentions to smoke found no differences between non-members and members/ex-members of Smokebusters. Therefore members of Smokebusters were as likely to state they would expect to smoke as adults as non-members.

Discussion

The main aim of Smokebusters, as a community-based health promotion activity, is to prevent young children from starting to smoke. The aim of this review was to summarize evidence on the effectiveness of such clubs. It became apparent at an early stage that a lack of in-built evaluation in many of these programmes made retrieval and comparison of such data difficult.

The Research and Evaluation Division (1996) argued that for interventions to be included in reviews of effectiveness they should have been evaluated and results disseminated. Of those reviewed, only Grampian and Ireland evaluations were published in peer-reviewed journals (van Teijlingen and Friend, 1993; Morgan et al., 1994; van Teijlingen et al., 1996). The remainder was obtained from individual clubs and agencies. A standard search using computerized medical, health promotion and ‘grey’ databases would not retrieve this information.

The lack of baseline data from the majority of studies prevents us from drawing any rigorous conclusions in relation to change in knowledge, attitude and behaviour, and therefore attainment of aims over time. Only Grampian and Wensleydale clubs conducted preliminary research and obtained baseline data prior to the establishment of Smokebusters (van Teijlingen et al., 1993, 1996; Davidson, 1992). This allowed comparisons to be made at a later stage. The issue of baseline data may be difficult to resolve, as funding for health promotion activities may not extend to data collection prior to programme implementation. However, if health promotion activities are to be subjected to scrutiny with regards to effectiveness, this issue should not be overlooked (Teijlingen et al., 1995a). It could be tackled by incorporating information on children and smoking (e.g. prevalence) into regional health surveys.

Studies used a range of methods to collect data: questionnaires, focus groups and face-to-face interviews. No standard method has been developed to measure the process and impact of such programmes or knowledge, attitude or behaviour within the target population. A number of different questionnaires have been designed and piloted by individual clubs over the last decade but these are not standardized and do not permit comparison of results between studies. The development of a standardized Smokebusters questionnaire would allow comparison both within and between different clubs. This would permit health promotion agencies to determine knowledge, attitude and behavioural characteristics of children on joining a Smokebusters club, and could be used in population studies prior to establishing clubs. Furthermore, the development of a questionnaire specific to smoking behaviour...
in children is recommended. As a minimum, the OPCS questions used in national prevalence studies should be employed as standard and for comparison (Dobbs and Marsh, 1983).

Another methodological issue is the recognition of differences in knowledge, attitudes and behaviour between younger and older children. Studies should, therefore, stratify responses according to age groups to allow this to be accounted for in analysis. It also became obvious that the heterogeneity of information collected in this review made it difficult to compare the reports obtained.

The majority of the reviewed studies examined programme process and impact. A range of organizational factors was examined, including recruitment techniques, promotional items and events. Overall, examination of satisfaction was very favourable, and children, particularly those in the younger age groups, enjoyed the Smokebusters programme and were keen participators. Although this does provide important information in relation to the implementation of individual clubs and communication with the target population, it does not address whether Smokebusters as a venture is achieving long-term goals, i.e. the prevention of young children from starting to smoke.

To date, few school-based programmes have demonstrated significant changes in smoking prevalence although some are thought to have delayed onset of smoking (Amos et al., 1992; Mitchell, 1994; Stead et al., 1996). This in itself may be beneficial in terms of morbidity and mortality. The evaluation studies identified in this literature review examined change in smoking behaviour as the main outcome measure. The evidence from the three outcome studies suggests that Smokebusters does improve childhood knowledge and awareness of the hazards of smoking but does not alter smoking prevalence in children. It is difficult to discern if these results are due to inadequate measurement of change, measurement of the wrong variables, confounding factors in the social environment or a genuine failure of this health promotion activity to meet its goals. Many health promotion agencies have invested both time and money to investigate the process of running a club and how to improve the product or service. However, to date, there is not enough evidence to suggest that the intervention is an effective one in terms of reducing smoking.

**Conclusion**

There has been widespread implementation of Smokebusters clubs throughout the UK as an initiative to prevent young children from taking up smoking. It is a very popular initiative which provides an enjoyable out-of-school club for many thousands of children. Despite the popularity of Smokebusters, smoking prevalence in young children is rising. The available data from evaluation studies suggests that the initiative is successful in changing knowledge and attitudes towards smoking but does not affect smoking behaviour. Although many clubs appear to have assessed the quality of the product they deliver they have not ascertained whether it achieves its ultimate aim—to prevent children from starting to smoke. Only one club, in Grampian, measured smoking behaviour over a long period of time. This study reported no differences between smoking habits of those who had been members of Smokebusters and those who had never joined. Smokebusters should be targeted at primary school children for whom the programme is particularly popular, and the challenge for organizers is to maintain membership and interest. The strong anti-smoking beliefs which primary school children generally hold become diluted on entry to secondary school (Gordon et al., 1997). For children of secondary school age, alternative smoking prevention strategies should be explored. There may be opportunities to move away from topic-specific organizations towards more general health information where smoking education is embedded within other relevant teenage health issues, such as drug, alcohol and sex education. Furthermore, political interventions such as the proposed ban on tobacco advertising may, in conjunction with school and community-
based interventions, have a greater impact on younger people’s smoking behaviour.

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