Drug education: a review of British Government policy and evidence on effectiveness

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Abstract

British Government policy on drugs primary prevention is outlined and principal recommendations are identified. The review is organized under the four main providers: police, teachers, peers and parents. Current methods are reviewed within a British policy framework with a focus on British programmes which have been evaluated. Most programmes use a combination of information, resistance or life skills training and normative education. Evaluative research suggests these methods are generally most effective. The police have achieved a community-wide approach, teachers have managed to integrate drug education into the National Curriculum, peer approaches have considered the needs of their target audience and parent approaches have recruited influential educators. However, more evaluative research is required before we can identify which particular programmes are most effective in reducing drug use.

Introduction

Although drug use amongst young people in Britain is thought to be stabilizing (Ramsay and Spiller, 1997) and possibly even falling (Balding, 1998), levels of drug use still give great cause for concern. More than 50% of 16 year olds have now tried an illicit substance (Parker et al., 1995) and just under a quarter of 14–15 year olds have used cannabis (Balding, 1998). This is not exclusively an urban phenomenon, as similar figures have been recorded in rural districts such as Lincolnshire and Northumberland (NHA, 1994; Galt, 1997). Indeed, very recent evidence suggests that drug use is higher in rural than in urban or affluent areas (Balding, 1998).

Previously, levels of drug use have been higher amongst boys than girls, but the last decade has seen the gap between boys’ and girls’ risk-taking behaviour diminish (Measham et al., 1993; HEA/BMRB, 1997). This further shows that drug use is not only increasing in prevalence, but is undergoing qualitative changes.

Some have proposed that the changing patterns of drug use described above indicate its ‘normalization’ in British society (Coffield and Gofton, 1994; Parker et al., 1995; Galt, 1997). Others contest this view, claiming that the supporting evidence is not generalizable across Britain and that the methods have neglected to include attitudinal surveys (Shiner and Newburn, 1996; Ramsay and Spiller, 1997). One national survey, which included attitudinal measures, concluded that experimentation with drugs is becoming ‘an unexceptional part of social life by increasing numbers of young people’ [(HEA/BMRB, 1997), p. 43]. More research is needed to confirm whether drug use is becoming normalized or not.

British Government policy

Current requirements for mainstream drug education in British schools were set by the statutory order for National Curriculum Science (England and Wales) (1991) and its equivalent for other
parts of Britain. This obliged schools to deliver particular elements of education about drugs in key stages 1 (5–7 years) through to 4 (14–16 years), with an emphasis on drugs and how they affect the body’s organs. In addition, Curriculum Guidance 5: Health Education (NCC, 1990) provided advice on extending drug education beyond the statutory requirements by focussing on drugs, society and behaviour.

In response to the changing patterns of drug use outlined above, the British Government issued several reports on primary prevention. The Advisory Council on the Misuse of Drugs (ACMD) published two reports on drug education (ACMD, 1984, 1993). The most recent provided a comprehensive list of recommendations for prevention policy and practice in schools. Following this was the interdepartmental White Paper, Tackling Drugs Together: A Strategy for England (HMSO, 1995), and its equivalents for other parts of Britain. This outlined the previous Government’s strategy for tackling drug use, proposing a new emphasis on education and prevention. As part of this new emphasis, the Department for Education and Employment issued several publications aimed at teachers (DfE, 1995a; DfEE/SCAA, 1995; DfEE, 1997). They aimed to provide support to teachers, whilst restating the statutory position on drug education in schools.

The present Government has attached equal importance to reducing the scale of drug use. In addition to appointing an anti-drugs co-ordinator, a White Paper has been published outlining a 10 year strategy for tackling drug use (HMSO, 1998). This reinforces the previous administration’s emphasis on education and prevention. It differs from the previous White Paper (HMSO, 1995) by broadening the meaning of drugs to include alcohol and tobacco, and applying the strategy to the whole of Britain rather than England alone.

The recommendations made within all of these publications fall into three categories. The first (dealing with providers) refers to the agencies providing drug education. Government policy points towards a multiagency approach, encouraging schools to establish effective links with police, specialist drug prevention workers, and other agencies (DfE, 1995a; HMSO, 1998). The appointment of the anti-drugs co-ordinator is further evidence of the present Government’s commitment to a coordinated multiagency approach. Alongside this emphasis on collaboration, the present Government, in keeping with previous recommendations (DfE, 1995a), has stressed the importance of involving teachers at every stage of a drug education programme (HMSO, 1998).

The Government has found most difficulty in its second category of recommendations; specific methods for providing drug education. This has in part been due to the lack of quality research evaluating the effectiveness of different approaches (Dorn and Murji, 1992; ACMD, 1993; Donaldson et al., 1996; HMSO, 1998). Nonetheless, it has managed to provide recommendations on the content and methods of delivery necessary to provide effective drug education. These comprise three areas addressing content: needs based, information and life skills; and a further three addressing methods of delivery: interactive, integrated (into the curriculum) and maintained (across the pupil’s school career) (ACMD, 1993; DfE, 1995a; DfEE/SCAA, 1995; HMSO, 1998; NCC, 1990).

Finally, the most recent White Paper recommends a strong emphasis on research and evaluation to determine what works, and to disseminate information as widely as possible (HMSO, 1998). This reflects recommendations made by the previous administration. Research should be used to plan, inform and review programmes at all levels, national, local and school (ACMD, 1993). Evaluation should enable schools to establish the effect of drug education on pupils’ knowledge about drugs, their skill development and their attitude change (DfEE/SCAA, 1995). Findings reported in a recent OFSTED report suggested that schools have not taken evaluation of drug education programmes sufficiently seriously (OFSTED, 1997).

In summary, against a background of continuing high levels of drug misuse and experimentation amongst young people, the Government has issued several publications emphasizing the role of schools in providing drug prevention. The principal
recommendations contained within these publications are:

Providers
- Education should be led by teachers.
- There should be multiagency support.

Methods
- Needs based.
- Providing information.
- Teaching decision-making skills.
- Interactive teaching methods.
- Integrated into the curriculum.
- Maintained across the lifespan.

Research and evaluation
- Drug education should be evidence based.
- Programme effectiveness should be evaluated.

The purpose of this review is to evaluate the effectiveness of drug education interventions by identifying those programmes which are most effective within a British Government policy framework. Because of the wide range of interventions that exist, the review is structured by providers and focuses on those programmes which have been evaluated. This is in keeping with the Government’s emphasis on collaborative and evidence-based practice.

The review is organized under the four main providers: police officers, teachers, peers and parents. Each section outlines some of the methods used in Britain, again, selecting examples that have been evaluated. Evidence on their effectiveness is summarized, paying particular attention to British evaluations. Finally, each provider is assessed as to their compatibility with the Government recommendations referred to in the introduction.

Police

Methods
In Britain, police-led drug education appears dominated by interventions which aim to provide information on the appearance and harmful effects of illicit substances. This assumes a common sense causal link between knowledge, attitudes and behaviour. This is consistent with the K–A–B model of drug prevention (Goodstadt, 1978; Stoker, 1992). It is hoped that providing pupils with knowledge about the consequences of drug use will promote a negative attitude towards drugs and result in behaviour change (reduced consumption). Research findings do not support this supposition and this will be returned to later.

In the 1970s there were developments in psychological theory and research that moved beyond the K–A–B model of behaviour [e.g. (Fishbein and Ajzen, 1974; Evans, 1978)]. In this context, Project DARE (Drug Abuse Resistance Education) was developed in the US as a police–education collaboration. It was based on Evans’ (Evans, 1976) social influence model. In contrast to the knowledge-based methods, this programme emphasized the use of resistance skills training and normative education. It consisted of 45–60 min modules, delivered by uniformed police officers over a 17 week period. In addition to providing information, police officers assisted in pupils’ personal development, particularly focussing on resistance skills.

In the 10 years from its inception in 1983, DARE was adopted by more than 50% of US schools and delivered to 1.5 million young people annually (Ennett et al., 1994b; Ray and Ksir, 1993). This did not necessarily reflect the willingness of schools to deliver the programme nor the programme’s effectiveness in reducing drug use. A major factor contributing to its widespread dissemination was the US Government’s Drug-Free Schools and Communities Reauthorization bill of 1991, stipulating that at least 10% of each state’s share of the governors’ funds be used to support DARE.

Following the British Government’s expressed wish that agencies collaborate in providing school-based drug education (HMSO, 1995, 1998), DARE was implemented throughout Nottinghamshire and Kirklees LEA areas in the mid-1990s. Nottinghamshire was the first and DARE has been delivered to more than 37 000 pupils there (Harris, 1997). Both projects have been subject to independent evaluations (Whelan and Moody, 1994; DfEE, 1997; Noble, 1997; Whelan and Culver, 1997).

The two approaches outlined so far (information
based and DARE) have been led by police officers. A programme involving a collaboration between police officers and teachers in the classroom is ‘The Police Box—Learning for Life’ (Gibbons, 1995). Originally an American resource, it was developed for use in Britain in the Grampian region by the police and the education authority. The programme is a resource pack addressing five subject areas: bullying, vandalism, drug use, safety, and law and order. The programme resembles DARE in that uniformed police officers play a role in delivering the resource. However, it differs in a number of important respects. Firstly, the police officer supports the teacher, on request. Secondly, the resource is intended to be integrated into the National Curriculum and thus can be delivered across the whole school year. Thirdly, the programme does not deal exclusively with drug education, nor does it clearly belong to one theoretical perspective. It would best be described as a life skills approach. Some authors have highlighted the need for a comprehensive programme integrating other areas of personal and social education [e.g. (Dukes et al., 1996; Stoker, 1993)]. Learning for Life certainly achieves this aim. At present, the programme is being delivered in the Grampian and Northumberland areas. Unlike DARE, there have been few evaluations of Learning for Life.

**Evaluation**

Several evaluations of information-based drug prevention programmes have been undertaken, although few have focussed on police providers. Findings suggest that providing young people with knowledge alone can actually increase drug use and promote positive attitudes towards drugs (Dorn and Murji, 1992). Furthermore, it appears that in many cases young people find the amount of information they receive overwhelming. Some have suggested that this leads to a misplaced confidence in the individual’s knowledge (De Haes, 1986). Overall, therefore, the attractively simple K–A–B model has little empirical support.

Research evaluating DARE has produced conflicting results. Initial evaluations, focussing on the programme’s short-term effectiveness, tended to be positive. The findings suggested that DARE pupils had an increased knowledge of drugs, more positive attitude towards police officers and were more able to resist peer pressure (De Jong, 1987; Clayton et al., 1991a). However, a meta-analysis of eight previous DARE evaluations found that the only significant outcome was an increased knowledge of drugs (Ennett et al., 1994b). Furthermore, they found that prevention programmes which ‘emphasize interpersonal factors by focussing on social competencies and by using interactive teaching strategies’ (p. 1396) were more effective across all outcome measures.

Research examining the long-term effects of DARE has been even less favourable. Ennett et al. (Ennett et al., 1994a) undertook a 2 year follow-up study of pupils within the DARE programme, from their last year at elementary school, through to middle school. Their outcome measures included: social skills, psychological variables and self-reported drug use. They used three sub-populations; urban, suburban and rural. No significant differences between the outcome measures of the experimental and control groups were found. However, pupils exposed to DARE reported higher self-esteem than those from the control groups. This effect was observed immediately after the intervention, but was not maintained across the 3 years. Furthermore, significant interactions between metropolitan status and outcomes were observed. Individuals from rural areas were half as likely to increase alcohol use following the intervention. Dukes et al. (Dukes et al., 1996) reported a long-term evaluation of DARE, comparing 21 schools that received DARE, with 17 that did not. As with other evaluations (Clayton et al., 1991b; Wysong et al., 1994), the authors found no significant differences between the two populations.

The above evaluations were undertaken in America. Similar results have been recorded in Britain. Benett et al. (unpublished) employed a before and after design to evaluate the effects of DARE on pupils’ (9–10 years old) attitudes, knowledge, social skills and behavioural intentions. Pupils exposed to DARE were more likely than controls to express a positive attitude towards the police
and had a significantly greater knowledge of drugs (Noble, 1997). However, there was no significant difference between the two groups’ determination to abstain from drugs. Similarly, Whelan and Culver (Whelan and Culver, 1997) found that pupils exposed to DARE were more likely to regard alcohol and tobacco as drugs, and had an increased awareness of most other drugs. In addition, pupils were more likely to express negative attitudes towards drugs after the intervention, but often did not possess the appropriate skills to resist drug offers.

Unfortunately, only one comprehensive evaluation of Learning for Life has been attempted so far and is unpublished (Ridley, 1997). The evaluation was carried out in Northumberland, England, and focussed upon the process of delivering the resource rather than the impact or effect it had upon its recipients. Ridley (Ridley, 1997) assumed that, ‘if the package met with the teacher’s needs first then it would be far more effective as an educational initiative in terms of meeting the needs of the children’ (p. 3). The study employed semi-structured interviews to elicit the opinions of teachers and police officers involved in using it. The bullying section of Learning for Life was best received and those who had delivered the resource felt pupils found this section most beneficial. However, comments regarding the drugs module were more negative. Ridley (Ridley, 1997) reported that, ‘teachers felt ill equipped to deal with some of the many and diverse issues to do with modern drug consumption patterns’ (p. 19). Furthermore, police officers felt the drugs section lacked important facts such as drugs and the law. Learning for Life, while providing teachers with a valuable resource for delivering topics within personal and social education, appears ineffective as a programme of drug education.

Dukes et al. (Dukes et al., 1996) discussed certain methodological issues, in relation to DARE, which are relevant to all outcome evaluations of drug education programmes and will be returned to in later sections. These authors identified three main areas of controversy: choice of outcome measures, appropriate controls and excessive attrition.

Because drug education programmes differ in aims as well as content, different outcome measures are appropriate for different programmes. This requires researchers to employ different outcome measures when evaluating different programmes. Ennett et al. (Ennett et al., 1994b) compared the effect size means of several short-term outcomes for DARE and other drug prevention programmes. They concluded that ‘interactive’ programmes were more effective at reducing ‘drug use’ than DARE. These conclusions have been criticized by Gorman (Gorman, 1995), who pointed out that few of the programmes they used for comparison aimed to prevent alcohol and cannabis use. This demonstrates the difficulty of comparing programme evaluations that have different aims and thus different outcome measures.

The need for appropriate controls is also vital. None of the above evaluation studies documented levels of drug education received by their control groups. Dukes et al. (Dukes et al., 1996) highlighted the difficulty of selecting control groups which have not received drug education. This is especially the case in Britain, where Government policy requires that all schools provide drug education as part of the National Curriculum Science Order (DfE, 1995a). Researchers should be aware of, and document, the levels and types of drug education delivered in schools selected as control groups.

Several authors have reported attrition rates of between 26 and 48% (Ennett et al., 1994a). Some have suggested that attrition can conceal high levels of drug use and thus distort evaluation findings (Ennett et al., 1994a). Furthermore, programme exposure has been linked with effectiveness (Rohrbach et al., 1993). Clearly, attendance is an important factor both from a research point of view and for a programme’s overall effectiveness.

**Compatibility with Government policy**

DARE and Learning for Life are consistent with some of the Government recommendations outlined in our Introduction. Both contain elements
of interagency co-ordination and partnership. Community members have been involved in funding and development of the programmes has been led by teachers. In addition, police officers and teachers deliver Learning for Life in partnership. However, DARE and information-based programmes are delivered by police officers in isolation. This is inconsistent with the Government’s recommendation that teachers lead drug education. Furthermore, none of the methods discussed involved parents in their delivery of drug education.

Interactive teaching, decision-making skills and providing knowledge are all central themes of DARE and Learning for Life. However, DARE is a self-contained curriculum delivered over 17 weeks. As such, the programme is difficult to integrate into the National Curriculum and over the pupil’s life span. Learning for Life achieves both these aims. Information-based programmes neither teach decision-making skills nor use interactive teaching methods generally. They do of course provide information.

Particularly worrying is research evaluating police-led programmes. Although DARE has been extensively evaluated, few studies exist examining information-based approaches or Learning for Life. Evidence supporting the overall effectiveness of DARE is scarce. Its main effects have been to develop relations between the police and young people, and to provide pupils with knowledge of different drugs. As previously mentioned, the link between knowledge and behaviour is complicated. Furthermore, drug education should not be seen as the only means by which the police can improve their relations with young people (Keene and Williams, 1996).

Curricular programmes
Several curricular programmes have been developed in the US. Like DARE, most programmes were developed in the 1980s following the emergence of psychosocial theories such as Evans’ (Evans, 1978) social influence theory and the Jessors’ (Jessor, 1977) theory of problem behaviour. Hansen (Hansen, 1992), identified six categories of educational programmes: information/values clarification, affective, alternatives, incomplete, social influence and comprehensive. Comprehensive programmes now dominate the field (Durlak, 1997). Some examples are: Students Taught Awareness and Resistance (STAR) (Pentz et al., 1986), Life Skills Training (LST) (Botvin et al., 1990) and Project Alert (Ellickson and Bell, 1990). Typically, these programmes are delivered by trained teachers, who use both didactic and interactive techniques to provide information, resistance or life skills training and normative education, which provides pupils with information about the behavioural norms of their peers and other individuals around them.

Comprehensive programmes that have been delivered in Britain include: Drug Education in Primary Schools: DIPSI (Watson, 1997) and the Northumberland Drug Education Project (Paxton et al., 1998). A further example is Project Charlie (Chemical Abuse Lies in Education) developed in the US during the late 1970s (McGurk and Hurry, 1995). Between 1991 and 1993, Project Charlie was piloted in three schools in Hackney, East London, targeting 5–11 year olds. The programme is taught over several years, with a minimum of one 20–30 min lesson per week. The programme is comprehensive but differs from others in its emphasis on building self-esteem. It is delivered by teachers who have attended a Project Charlie training course.

THE
Theatre has been used in British health education to raise schoolchildren’s awareness of HIV/AIDS and sexual health (Schroeder, 1994), and has been adopted to provide drug education (Ives, 1995). THE has been employed in various forms. In some,
professional actors deliver performances, whereas others encourage pupils to develop their own plays, which they then perform to audiences comprising other pupils and sometimes parents. Performances are followed by discussions, led by teachers, actors or a mixture.

THE contains cognitive, affective and skills components (Ball, 1994). In addition to providing knowledge (cognitive component), it encourages exploration of attitudes, values and feelings (affective component), and provides a forum for practising and developing skills such as problem solving and decision making (skills component). In this respect, THE is therefore similar to the comprehensive curricular programmes discussed so far.

**Teaching resource packs**

Many drug-specific resource packs for teachers exist and have been listed elsewhere (DfE, 1995b). Most contain information about drugs, techniques for providing drug education and materials to assist with its delivery. Often, techniques described in resource packs resemble those used by comprehensive curricular programmes, but are essentially different in that training is not provided. The Drug Studies Pack, developed by the Lambeth Drug Prevention Team (1993), is an example of the resources available to British teachers. It was piloted in 19 schools in London, Birmingham, Liverpool and Swansea in 1993–1994. The pack contains several sections: projects, materials, starters (discussion points), resources (general information on drugs) and quick reference (contact points). It is intended to be integrated into the National Curriculum, and contains projects and materials appropriate for a wide range of lessons.

**Evaluation**

Much research has been undertaken on the effectiveness of curricular programmes. Several reviews of such research have been published (Logan, 1991; Hansen, 1992; Tobler, 1992; Durlak, 1997; Hall and Zigler, 1997; Hermann and McWhirter, 1997). Overwhelmingly, social influence and comprehensive approaches were found to be most successful in preventing the onset of substance use.

Nevertheless, some authors have questioned the effectiveness of curricular programmes. Hawthorne (Hawthorne, 1996) examined the social impact of Life Education, a comprehensive curricular programme used throughout Australia. His findings suggest that individuals exposed to Life Education were more likely to partake in social drug use than individuals who had not been exposed to the programme. These findings have been heavily criticized by proponents of Life Education (Wheller, 1996). In particular, the use of an inappropriate control group is alleged.

Few evaluations have examined the effectiveness of curricular programmes used in Britain, but McGurk and Hurry (McGurk and Hurry, 1995) evaluated the life skills drug education programme, Project Charlie. They used two sets of comparison groups to measure the programme’s effectiveness. The first consisted of two classes in the same school, one of which had received the intervention. The second compared two classes from different schools, one of which had not received the intervention. They monitored the second comparison group, from primary through to secondary school. McGurk and Hurry (McGurk and Hurry, 1995) found that pupils in the first comparison group exposed to Project Charlie had significantly higher levels of knowledge regarding drugs and were better able to resist peer pressure. However, the pupils exposed to Project Charlie in the second comparison group were no more knowledgeable and in fact demonstrated poorer peer resistance skills. A 4 year follow-up evaluation found that Project Charlie participants were significantly less likely to experiment with tobacco and illegal drugs in comparison to their schoolmates who had not participated (Hurry and Lloyd, 1997).

Little evaluative research on THE has yet been undertaken. However, THE has been shown to have a significant effect on pupils’ attitudes towards, and to a lesser extent, knowledge of HIV/AIDS (McEwan et al., 1991; Denman et al., 1995). Fine and Durrant (Fine and Durrant, 1996) undertook an evaluation of a THE drug education programme delivered in eight schools in Derbyshire and Nottinghamshire. The authors measured pupils’ know-
ledge of drugs using the ‘Draw and Write’ technique (Williams et al., 1989). Measurements were carried out 1 month before the intervention and 4 months afterwards. A school from each LEA that had not been exposed to the programme was selected as the control group. The evaluation indicated that pupils exposed to the THE programme had raised awareness of social drugs, and were better able to distinguish licit and illicit drugs. The most significant effect was the shift from what Fine and Durrant called imperative statements, such as ‘Drugs can kill’, before the intervention, toward conditional statements, such as ‘Drugs can hurt you when you take too many’, afterwards. Fine and Durrant suggest that this is evidence of THE’s effectiveness in developing young people’s decision making skills. This conclusion is rather strong, but the shift does suggest that children were able to make more considered judgments about drugs following the intervention. Similarly, McEwan et al. (McEwan et al., 1991) make the point that THE appears most effective in the area of attitude change rather than mere knowledge gains. Furthermore, support for THE comes from more general research into the psychology of learning. A recent text on teaching and training (Milne and Noone, 1996) advised that learners:

...must be able to involve themselves fully, openly and without bias in new experiences...reflect on their own experiences from many perspectives...create or use concepts that integrate their observations into logical, sound theories...[and] use these theories to solve problems and make decisions. (pp. 5–6)

THE certainly achieves all of these aims.

Blackman (Blackman, 1996) evaluated the Lambeth Drug Prevention Team’s Drug Studies resource pack. Interviews were carried out in 19 schools with 80 pupils (11–14 year olds), 50 teachers and 30 parents. The evaluation focussed upon the process of implementing the resource and its effect on pupils. The pack was extremely effective in raising awareness of drug issues amongst all three groups. However, pupils felt the drugs education they had received was too negative and did not correspond to their own experiences. Many criticized the implementation of the resource, rather than the resource itself.

None of the studies examined are free from the kind of methodological criticisms raised in connection with police-led methods. Many use inappropriate control groups. For instance, McGurk and Hurry’s (McGurk and Hurry, 1995) control groups attended schools in which over 50% of individuals had been exposed to Project Charlie. Furthermore, the follow-up carried out by Hurry and Lloyd (Hurry and Lloyd, 1997) used experimental and control groups containing just 20 and 14 pupils, respectively. Sample sizes such as this cannot reliably measure change.

None of the evaluations mentioned document the levels of drug education within the control groups. Of the 19 schools originally included in the Blackman (Blackman, 1996) study, only 10 participated in the evaluation. These self-selected and low participation rates reduce the generalizability of Blackman’s findings. The participating schools were obviously committed to delivering the resource, which is known to contribute to positive outcomes (Flannery and Torquati, 1993).

The effectiveness of prevention programmes differs between schools (Durlak, 1997). Several authors have shown how specific teacher characteristics can affect the outcome of drug education. Flannery and Torquati (Flannery and Torquati, 1993) cited various studies indicating that teachers’ attitudes, experience and self-efficacy are all mediating variables in the effective implementation of drug education programmes. Similarly, Jones et al. (Jones et al., 1990) found that teacher characteristics such as knowledge and staff–student relations can influence programme effectiveness. These findings have prompted some to investigate the effects of teacher training on specific competencies and programme outcomes. Several authors have demonstrated how training can raise teachers’ confidence and comfort levels (Dewitt et al., 1996; Paxton et al., 1998), two factors known to influence effectiveness.

**Compatibility with Government policy**

In all of the above approaches, teachers were central in terms of delivering drug education, but
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the curricular programmes and resource packs were often delivered in isolation, ignoring the community that the programmes were aimed at. Furthermore, Dewitt et al. (Dewitt et al., 1996) have suggested that a lack of support for teachers leads to poor programme implementation.

Decision making and life skills are emphasized in the teacher-led methods described here. Results previously outlined suggest these are most effective in reducing drug use and are in keeping with Government recommendations. All the programmes appear effective in providing young people with information concerning drugs, use interactive teaching methods and most maintain the education across the pupil’s life span.

Teaching resource packs are flexible enough to be integrated into the National Curriculum. However, consideration must be given to programme fidelity, i.e. the extent to which the resource pack is delivered in its intended form. Low fidelity can result in less effective drug education (Rohrbach et al., 1993). In contrast, THE and curricular programmes are more likely to retain their fidelity because both involve outside agencies providing training or support. However, their self-contained nature make them difficult to integrate into the National Curriculum.

Most of the programmes outlined so far have involved some form of resistance skills training. This provision assumes that individuals are influenced by their peers to use drugs. Evidence supporting this view has come from studies demonstrating a positive relationship between peer and pupil drug use (Gilvarry, 1996). However, several authors dispute this causal leap, instead suggesting that young people select peers according to their own drug taking behaviour (Coggans and McKellar, 1994). Little research exists on the relative strengths of these two processes, both of which are likely to occur.

Generally, studies investigating peer influence rely upon pupils’ reports of their friends’ drug-taking behaviour. Bauman and Ennett (Bauman and Ennett, 1996) suggest that findings supporting the existence of peer influence have been exaggerated by young peoples’ normative beliefs. They believe that young people estimate their friends’ drug taking behaviour based on their own levels of drug use.

Generally, school-based, peer-led programmes train individuals identified as credible and influential, who then educate their peers. Different programmes have used different criteria to select peer educators. Some programmes have used individuals of a similar age (Milburn, 1995), whereas others favoured the experience of drug use over age (Shiner and Newburn, 1996). More research is needed to identify the ideal characteristics of the peer educator and the benefits of different section processes.

An example of peer education in Britain, that has been evaluated, is the Youth Awareness Project (YAP) in Newham, East London (Shiner and Newburn, 1996). YAP employed young people aged between 20 and 28, with direct experience of drug use. These individuals educated pupils aged between 12 and 16 years. The programme was mainly carried out within schools. The role of the peer tutors was to provide information to individuals in a non-didactic manner. The tutors responded to questions and were sensitive to the needs of the groups they were working with.

Methods

As with THE, the use of peer-led methods has largely been within the field of sexual health, but has increased in recent years within drug prevention (Hendry et al., 1995; Ward et al., 1997). In addition to outlining peer-led methods, this section will discuss the surrounding debates.

There are many differences between the settings, perspectives, aims and methodologies of the various peer-led methods (Hendry et al., 1995). It is difficult to outline a typical programme, but all the methods share certain theoretical underpinnings. Peer education receives support from psychological theories that emphasize the role of credibility in mediating attitude change [e.g. (Petty and Cacioppo, 1986)].

Peers

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YAP volunteers provided between one and three workshops to each group.

**Evaluation**

Several studies assessing the effectiveness of peer education exist. With reference to sexual health, Milburn (Milburn, 1995) highlighted the promise of peer-led methods, but expressed concern over the quality of existing evaluation studies. Tobler (Tobler, 1992) found that peer-led methods were more effective than any other at reducing observed and self-reported drug use. Hermann and McWhirter (Hermann and McWhirter, 1997) concluded that peer leaders were more effective communicators in drug education than teachers. Similarly, Ward *et al.* (Ward *et al.*, 1997) found that peer-led methods were an effective means of disseminating information about drugs, but were unclear as to their overall effectiveness in comparison to other approaches. Dorn and Murji (Dorn and Murji, 1992) suggested that many successes of peer-led programmes were simply the result of using participative methods.

Shiner and Newburn (Shiner and Newburn, 1996) undertook a qualitative evaluation of the YAP programme outlined above. They interviewed 52 young people aged between 14 and 17 years. Fifty percent had attended one or more YAP workshops. Their findings demonstrated how peers were able to ground drug education within young people’s own experiences. This was effective in reinforcing non-drug users’ anti-drug attitudes, discouraging drug users from extending their drug repertoires and providing both groups with essential information to prevent drug misuse. The small participant numbers and the single setting reduce the generalizability of these findings.

**Compatibility with Government policy**

Peer-led programmes are many and diverse, but they share many aspects that are in keeping with Government recommendations. They often recruit educators from their target communities. Education is then delivered according to the expressed needs of the target audience.

Peer-led methods convey information successfully, help young people to make healthy choices and deliver drug education through participative methods. However, peer programmes are generally not integrated into the National Curriculum nor are they maintained across the pupils' life span.

Research examining the effectiveness of peer-led methods is mixed. Overall, research results appear to be positive and suggest that peer-led programmes are more effective than other approaches. However, their diverse nature makes it difficult to identify the components which contribute to their success.

**Parents**

**Methods**

Few of the programmes previously outlined involve parents in their interventions, despite their potential role in influencing the drug-related behaviours of their children. Two routes of influence exist. Firstly, a parent’s own drug-related behaviour can influence that of their child (Gilvarry, 1996; Jackson and Henriksen, 1997). Secondly, the way in which parents communicate about drugs can influence their child’s behaviour. Open communication with a parent is inversely related to young people’s reported drug use (Kafka and London, 1991). Furthermore, communication is particularly important because children are most likely to approach their parents when they are concerned about drugs (Finnigan *et al.*, 1997).

Ray and Ksir (Ray and Ksir, 1993) divided American parent-oriented programmes into four approaches: informational, parenting skills, parent support and family interaction. Most programmes in Britain have integrated several or all four approaches into one comprehensive programme (Daw and Joyce, 1996; Finnigan *et al.*, 1997). These programmes aimed to improve parent–child communication, give support to parents, and provide them with the necessary skills and knowledge needed to address drug issues with their children, with the overall aim of primary prevention.

Numerous parent-led drug education programmes have been developed in the US, but few
have been evaluated (Elmquist, 1995). The ‘Keep a clear mind program’ (Young et al., 1996) is an example of a programme that is both evidence-based and which has been evaluated. It employs a cognitive-behavioural approach to drug education, involving pupils and parents jointly completing tasks at home. The activities provide information about drugs, resistance skills training and aim to promote effective parent–child communication.

No evaluative research focussing on British parent-oriented programmes could be found in our literature search. One programme that has been implemented in Britain is Project PRIDE (parents’ role in drug and safety education). This is a multi-modal substance misuse prevention programme which aims to promote the safety of children by increasing their knowledge and understanding of the dangers of drugs and medicines (Manchester IAS, 1997). Its contents and methods are similar to those of ‘The keep a clear mind programme’ described above. Activities are undertaken at home and in the classroom. The programme is integrated into the National Curriculum and is usually delivered over a 6 week period. Emphasis is on participative learning and decision-making skills. In many ways, this programme is similar to the American programme outlined above.

Evaluation
Much research exists to confirm parents’ influence over their children’s drug-related behaviour. Jackson and Henriksen (Jackson and Henriksen, 1997) have shown how children’s observation of parents’ smoking behaviour can influence their propensity to smoke. In addition, Gilvarry (Gilvarry, 1996) cited several studies that provide further evidence of an association between parental and child drug use.

Few evaluations have been undertaken to examine the effectiveness of parent-centred drug education programmes. Elmquist (Elmquist, 1995) found that most parent-oriented programmes had been commercially produced and distributed, with little evidence of their effectiveness. However, Young et al. (Young et al., 1996) showed how the ‘Keep a clear mind program’ significantly increased children’s knowledge of their parents’ drug-related attitudes. The authors suggested that this was the result of enhanced parent–child communication. Furthermore, the programme had a significant effect on the pupils’ normative beliefs and intended drug-related behaviour.

Parent programmes have been plagued by low participation rates. This has given rise to programmes with low impact and evaluations that are not easily generalized. Several reasons for low participation have been suggested. Cohen and Linton (Cohen and Linton, 1995) found lower attendance amongst parents with higher rates of alcohol and tobacco use. They suggested that drug prevention programmes may stigmatize parents, discouraging high-risk families from attending. Spoth and Redmond (Spoth and Redmond, 1994) have shown how varying time commitments can affect levels of attendance, and suggest that other programme characteristics such as content and location can affect participation rates.

Compatibility with Government policy
Parent-oriented programmes are generally led by teachers, but place the parent centrally in terms of their child’s drug education. This achieves two main purposes set out in the Government’s recommendations. Firstly, teachers are not isolated in their delivery of drug education, but receive support from parents. Secondly, the education pupils receive at school is reinforced at home and is more likely to be maintained across the pupil’s lifespan. These are two aims which other providers appear not to have addressed.

Parent-oriented programmes use many of the methods outlined in previous sections. They emphasize the importance of parent–child communication, role modelling effects, decision-making skills and providing information. This is consistent with many Government recommendations. However, there has been little research evaluating the overall effectiveness of these programmes. Furthermore, that which has been undertaken has involved small self-selected groups. Therefore, for several reasons, it is difficult to generalize from the impact or outcomes of these
studies. Clearly, further research is needed before the effectiveness of parent-oriented programmes can be truly established.

Discussion and conclusions

The varied aims of drug education programmes have led to differences in programme content, evaluation methods and declared success, leading in turn to difficulties in drawing general conclusions about effectiveness. Here, we have established aims relevant to all British drug education programmes by referring to current Government policy and by so doing have identified some elements of best practice.

Several issues have arisen that are relevant to all providers. There appears to be a general dearth of evaluative research, particularly in Britain. That which exists tends to measure outcomes, but pays little attention to the implementation process. This criticism is echoed in other reviews (Dorn and Murji, 1992; Jansen et al., 1996). Demonstrating the success of a programme is only the first step towards evaluating its effectiveness. Volunteerism, selection and provider characteristics can all affect outcomes. It is vital that we understand how a programme has been delivered, before we can identify the most effective practice.

A second issue is the cultural applicability of some of the programmes whose effectiveness has been reviewed here. Often, the language used in American resources is inappropriate for young people in Britain (Blackman, 1996; McGurk and Hurry, 1995). Furthermore, factors shaping the development of programmes may differ, e.g. the increase in weapons and gang violence in American schools (Rohrbach et al., 1996). Gang violence is currently not endemic in Britain.

A third issue concerns the emphasis on resistance skills training throughout the programmes reviewed. This emphasis assumes (without justification) that individuals are persuaded by their peers to use drugs and that they might want to resist. Findings reported in this paper suggest that peer influence has been overstated. This might provide part explanation for the relative ineffectiveness of DARE. However, the current evidence base does not allow us to identify the effective components of multi-component programmes. There is a need to establish whether resistance skills training is a necessary part of successful drug education programmes.

In conclusion, this paper has sought to identify drug education methods used in Britain that are consistent with Government policy and effective in reducing drug use. No single method meets both of these requirements.

It is possible to draw general conclusions on the methods most effective in reducing drug use. Participative approaches, using techniques such as THE, are more effective at reducing drug use than non-participative ones. Community approaches appear more successful than single-focussed programmes, as are those that deliver a combination of information, resistance and life skills training, and normative education. These findings helpfully endorse some of the British Government’s current recommendations on methods of drug education.

All of the providers discussed (police, teachers, peers and parents) can contribute to achieving the objectives set out in the British Government’s drug strategy. A number of programmes are available for each of these groups, but no single group can achieve all of the objectives. Teacher-led programmes have successfully integrated drug education into the National Curriculum. Police-led programmes have involved a wide range of individuals, achieving the community-wide approach recommended by the Government. Peer approaches, by their nature, consider the needs of their target audience and parent-oriented programmes succeed in recruiting influential educators to teach young people about drugs. There is a need for a truly collaborative and co-ordinated programme of drug education, which is consistent with Government policy and effective in reducing drug use.

Acknowledgements

We are grateful to Pauline Ward for help with literature searching and to Northumberland Health
Authority for funding the Northumberland Drug Education Project, of which this work forms part, and to Keith Tonks and anonymous reviewers for helpful comments on an earlier draft.

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Received on January 12, 1998; accepted on August 18, 1998