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Evaluation of the Effectiveness of Drug Education in Scottish Schools

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Introduction

This research examines the effectiveness of drug education in Scottish Schools. The research consisted of a literature review, a survey of schools, classroom observations and qualitative research with young people and was commissioned in response to the School Drug Safety Team's recommendation for research into the outcomes and process of educating young people on drug related issues. Research was conducted between February 2004 and July 2005.

Main findings

- Evidence from the literature review suggests that school drug education in general can be effective. It also indicates that some types and features of drug education are more effective than others. In particular, drug education using highly interactive methods and social influences approaches, specifically including resistance skills and normative education elements, is consistently shown to be more effective.
- Scottish Drug Education guidance broadly echoes what the evidence suggests to be effective, although more explicit reference to the weight of evidence supporting particular recommendations could be made.
- The vast majority of schools in Scotland report providing drug education. All substances are covered at all ages, although to varying degrees. Schools report covering a range of drug education topics and using a range of teaching methods. Classroom observations, however, show that information provision tends to predominate, and that drug education lessons are not always as interactive as they could be. Social influences featured in a minority of lessons, and normative education approaches hardly at all.
- The classroom observations also found limited progression and continuity in drug education between different years, and duplication of content between primary and secondary schools. Resources did not always match the age and abilities of the pupils with whom they were used, and some were perceived by young people as old-fashioned.
- Substantial use is made by schools of external visitors as providers of drug education. Although external visitors often have high credibility, both with pupils and teachers, observations suggest that they do not always use methods shown to be effective.
- Young people generally find drug education interesting and memorable, despite the concerns above. However, they would like lessons to be more interactive and emotionally engaging, and to help them better link and apply the information provided to their own lives and future circumstances.
- Overall, it is clear that there is much good practice in Scotland in drug education, but more can be done to enhance its effectiveness, particularly through clearer guidance on evidence-based methods and approaches, and on continuity and progression; further training and support to boost teachers' knowledge, skills and confidence; and more attention to resources.

SCOTTISH EXECUTIVE

Introduction

This research was commissioned in response to the School Drug Safety Team's recommendation for research into the outcomes and process of educating young people on drug related issues (final report, 2001[1]).

Research Methods

Given the methodological challenges of evaluating the long-term impact of school drug education, it was decided that this study should focus on the extent to which current drug education practice reflects what is shown to be effective in the literature, and the perceived value that it has for young people.

The research consisted of four elements:

1. *A Literature Review* to identify and review published research evidence regarding the effectiveness of drug education in schools; formulate advice on what is likely to constitute effective drug education; examine the extent to which current guidance in Scotland reflects this evidence base; and to summarise indicators which could be used to evaluate the effectiveness of current drug education in schools.

2. A *Survey* of a representative sample of Scottish schools examining current drug education delivery and practice. In total 928 completed questionnaires were returned from a postal survey of 1290 primary, secondary and special schools. Adjusting for ineligible schools, the response rate overall was 73%.

3. *Classroom Observation* of 100 drug education lessons in a broad-based sample of Scottish schools to provide a detailed and rigorous assessment of drug education delivery in practice. Observations were conducted of 100 lessons delivered in 40 schools (primary, secondary and special) from seven local authorities across Scotland.

4. *Qualitative Research* with young people to explore their perceptions of the school drug education and its perceived value to them. Twenty friendship group discussions were conducted with respondents aged 8-20, including current pupils in primary, secondary and special schools, and young adults who had completed compulsory education. Respondents were selected from ten of the 40 schools which took part in the Classroom Observation.

1 http/ www.scotland.gov.uk/library3/health/sdst_final_report.pdf

Findings

Literature Review

Seventeen systematic reviews, reporting data from hundreds of studies, were examined in the literature review. These provided clear evidence that school drug education in general can be effective, although the evidence seems to be stronger for education on tobacco and illicit substances than alcohol. The review also showed that some types and features of drug education are more effective than others. In particular:

- Highly interactive methods are consistently more effective (in terms of changing behaviour) than non-interactive methods;
- Drug education curricula using a social influences approach, specifically including resistance skills and normative education elements, are consistently shown to be more effective than other approaches;
- Drug education which is part of multi-component and 'environmental' initiatives may be more effective than those delivered in isolation;
- Peers, teachers and other professionals can all be effective deliverers of drug education;
- There is no evidence to suggest that drug education is more effective at older or younger ages, although clearly the objectives and content should be age-specific.

The literature review also examined the extent to which drug education guidance n Scotland[2] reflected this evidence base. In several areas the guidance echoes what the evidence suggests is effective in drug education, although more explicit reference to the weight of evidence supporting particular recommendations could be made For example, there is limited recognition that different theoretical approaches to drug education exist, and that drug education using social influences and normative education has been consistently proven to be more effective than drug education not based on these approaches.

2 The guidance examined included the following:

How Good is our School? (The Scottish Office, 1996) - performance indicator 1.2 (quality of course or programme).

A Route to Health Promotion (Aberdeen City Council, HEBS, HMI, 1999).

HELP UP-DATE on drug and nutrition education (LT Scotland Curriculum File No 9).

5-14 national guidelines on health education.

Extent of drug education

The school survey found that almost all primary (97%) and secondary (99.7%) schools provided drug education in 2003-2004. The vast majority of special schools (41 out of 43 that responded) also provided drug education to either their primary or secondary pupils.

Who teaches drug education

Drug education was most likely to be taught by 'all teachers' (69%) in primary schools and by 'a team of teachers specialising in PSE' (70%) in secondary schools. In primary schools it was most likely to be taught within Health Education (93% of schools) or Personal and Social Development (75%). At secondary schools it was most likely to be taught within PSE (97%), but was also covered in a range of other lessons.

In more than two-fifths of primary (45%) and secondary schools (43%), drug education was also taught by external visitors or agencies. The most common of these were community police officers and officers from the Drug Enforcement Agency (66% primary, 69% secondary), followed by the school nurse (34% primary, 30% secondary) and drama groups (27% primary, 39% secondary).

The observation research found that lessons delivered by PSHE specialists tended to be more interactive, but noted little difference between PSHE specialists and other teachers in terms of the clarity of the main drug education messages. In contrast, pupils' engagement in lessons and their understanding of drugs appeared to be higher in classes taught by class teachers and registration tutors, that is, those teachers whom the pupils knew most closely. However, clarity of message, enhancement of pupils' understanding and pupil engagement appeared to be higher in lessons delivered by expert visitors. In interpreting these findings it should be kept in mind that the PSHE specialists had not necessarily received specific training in drug education.

Topics covered

All categories of substance (alcohol, controlled drugs, medicine, solvents and tobacco) were covered in all years, although to varying degrees. Medicines were mainly taught at primary, with more than 80% teaching them at P1-P3 and more than 70% at P4-P7. Some secondary schools also addressed medicines, but coverage declined from 69% at S2 to 25% at S6. Alcohol and controlled drugs were less likely to be covered in early primary, ranging from 10% to 42% (P1-P4) for alcohol and 11% to 37% (P1-P4) for controlled drugs. The majority addressed these substances with P5-S6. Coverage of solvents peaked during P6-S2, and of tobacco during P4-S3, with over 60% of schools addressing these substances.

Schools reported covering a range of drug education topics, although the majority of topics were concerned with information provision, such as the effects of drugs (93% primary, 95% secondary). A majority of schools also reported covering resistance and decision-making skills topics such as 'coping with pressure to use drugs' (81% primary, 87% secondary). 'Why people use drugs' and 'opinions about drugs' were covered by more than 70% of primary schools and at least 80% of secondary schools. Social influences topics, such as 'acceptability of using drugs' and 'how many people use drugs' were less popular, covered in less than half the schools.

Teaching methods

A range of drug education delivery methods were reported. 'Whole class discussion' was used in the vast majority of schools (96% primary, 97% secondary), as were methods such as small group work (75% primary, 88% secondary) and pupil worksheets (75% primary, 80% secondary). Many secondary schools (88%) also reported making use of videos/DVDs.

Teaching practice

The classroom observations allowed the research team to examine teaching in more depth. Most of the 100 observed lessons also exhibited a wide range of teaching and learning methods. In line with the survey findings, the method most commonly observed was structured discussion, often taking the form of whole-class and small-group brainstorming around headings and themes introduced by the teacher. The next most frequently employed group of methods involved the use of card sort activities, drawing up lists, and quizzes. Enquiry-based approaches were also used, but mainly in S1-S3 lessons. Another common method in upper primary and S1-S2 was to ask young people to use information they had acquired to design resources for other pupils. Problem solving, decision making, risk assessment and role-playing strategies for coping with peer-group pressure were much less commonly observed.

Previous research has shown that drug education teaching can range along a continuum from *non-interactive* at one end (where the pupil is essentially a passive listener to a presentation by a teacher or visitor, or a passive viewer of a video) to *interactive*, where lessons or learning activities involve a considerable amount of pupil-pupil interaction, with the teacher or visitor acting as a facilitator. Most of the observed lessons exhibited a mixture of interactive and non-interactive teaching, although interactivity was often used to acquire information rather than to develop skills or explore attitudes and values. Only 5% of primary lessons and 17% of secondary lessons could be described as mostly *non-interactive*. Some of the most didactic lessons were delivered by expert visitors such as community police officers.

Only a minority of observed lessons employed modes of learning (ie. approaches designed to achieve or facilitate changes in pupils' knowledge and understanding, attitudes and behaviour) that were identified in the Literature Review as being particularly effective. Over half the observed lessons focused mainly on giving factual information about drugs and their effects, and only a small number introduced harm reduction approaches, understanding of how various social influences impact on behaviour and attitudes towards drugs, or approaches designed to develop decision making, assertiveness and resistance skills. No examples of normative education (ie. addressing pupils' misconceptions about the prevalence of drug use amongst their age group) were observed. It is possible that these modes of learning were employed in lessons that were not observed, but interviews with teaching staff did not suggest this to be the case.

Responses from older pupils and young adults in the qualitative research suggested that many experienced their drug education lessons as largely passive in style, with a strong reliance on whole class inputs such as videos and talks. Primary school pupils, however, tended to describe more active methods, such as making anti-drugs posters and role play. Generally, respondents seemed to have found the more interactive methods both more memorable and more engaging than the more passive methods.

Very few of the lessons observed began with a link to previous lessons or explained the purpose and learning objectives, and few teachers finished their lessons with a review of what had been learned. In the survey, schools reported making only limited links to drug education taught earlier or later in pupils' school careers. Fewer than half (44%) indicated strong links were made to drug education taught earlier within their school and only a minority (13% primary, 8% secondary) that strong links were made between pupils' primary and secondary drug education.

The observations found that there was also duplication in content. Topics covered in P6-P7 were also addressed in S1-S2 in some schools, and even in some S3-S4 lessons. Several secondary teachers reported that they did not know what would have been covered in their pupils' primary school drug education, although most indicated that this information would be very helpful in planning lessons.

Composite classes

Eighteen of the observed lessons were delivered to composite classes in primary schools. The lessons tended to be undifferentiated in content and approach and did not reflect the different levels of pupil maturity, knowledge and experience.

Drug education resources

The most popular resources used in primary schools were Drugwise (64%), The Police Box (52%), TACADE (42%) and What's the Score (39%). In secondary schools, Drugwise was also the most popular (67%), followed by What's the Score (51%), packages developed by the school (45%) and TACADE (35%). Drugwise and TACADE were the most popular resources within special schools also (16 and 15 schools respectively).

Around one-third of the observed lessons were exclusively package-based. Most of the lessons drew selectively on resources from more than one package, with commercially-produced worksheets being the most commonly-used resource. In some cases it was apparent that teachers were using resources that had not been specifically developed for the age group they were teaching. Sometimes resources had been developed for older teenagers and adults, and pupils struggled with the language levels or did not have the personal experiences to enable them to see the relevance of the information being provided. In other instances the resources had been developed for younger pupils and were insufficiently challenging.

Observations of lessons in special schools indicated that there were limitations with some of the resources in use, for example relating to the print size, illustrations, the need for Braille equivalents, and so on. A number of the teachers who were observed felt there was a lack of suitable resources for working with young people with severe, complex and multiple learning needs, who were perceived to be particularly vulnerable in relation to drug use situations and offers.

Perceived credibility and impact of drug education

It was clear in the observed lessons that the perceived credibility of the person delivering drug education was a factor in determining their impact. Pupils often seemed to appreciate the presentations given by visitors because of their experiences and knowledge of drugs. This was even the case when those presentations were almost wholly didactic and pupils were assigned the role of passive listeners. Teachers also tended to evaluate the sessions delivered by visitors in terms of their superior knowledge of drugs and the drug scene, rather than on the basis of the methods which the visitors had employed.

The qualitative research with young people confirmed this to some extent. Community police officers, actors and local drugs workers tended to be regarded by young people as credible sources of drugs information, largely because their perceived expert status and novelty value commanded attention and because they were seen to be genuinely interested in the subject. In contrast, respondents had

varying views on the credibility of teachers in relation to drug education. Some felt that teachers' credibility as drug educators was hampered by what was seen as limited knowledge and a perceived lack of genuine interest in drugs and the welfare of pupils. However, others spoke favourably about specific teachers, and perceived them to be trustworthy and well-informed. To a large extent, perceptions of teachers' credibility were shaped by the quality of the existing pupil-teacher relationships.

The qualitative research also suggested that the credibility of school drug education was influenced by how young people rated its content, in particular the accuracy of information, the currency of resources and materials (many videos, for example, were seen as "old fashioned", which hampered engagement and learning), and the relevance of information to young people's own lives. It was to a lesser extent also mediated by perceptions of school polices on drugs and smoking, and the extent to which there were seen to be consistent or not with messages in the classroom.

What did young people learn from drug education?

Unsurprisingly, given the strong emphasis on information provision observed in drug education lessons, much of the learning and perceived impact of school drug education seemed to be in terms of knowledge. In the qualitative research respondents of all ages described finding information about drugs interesting and memorable, although information about the drugs they were most likely to use (eg. the alcoholic content of drinks) was felt to be more helpful than more abstract information, such as legal classifications. However, respondents in communities where drug-taking was common tended to find drug education at school somewhat redundant in the context of real life experiences. As respondents moved away from school and home, their experiences led them to reassess the information they had received at school. Some felt in hindsight that school drug education had painted an exaggerated picture of drug use, but others felt that, rather than over-stating the effects, it had not really prepared them for the reality.

To a lesser extent drug education also appeared to have the potential to influence young people's feelings and emotions about drugs. The qualitative research suggested that for those young people who claimed to be uninterested in illicit drugs, school drug education potentially helped reinforce this stance, although its impact on attitudes towards alcohol and tobacco was less clear. Real-life accounts that portrayed the negative consequences of drug use appeared to be particularly compelling and emotionally engaging for young people. Among older pupils and young adults, videos and drama productions which brought to life the social and emotional consequences of drug use were often recalled many years later, suggesting that they had resonated with young people and made them think about the consequences of drugs for their own lives and families.

Drug education's potential impact on skills and behaviour seemed to be limited by a failure to help respondents apply information to their own lives: to put it into practice. Respondents' accounts in the qualitative research suggested that they did not always feel they were encouraged to reflect actively on how they themselves could use or benefit from the information provided. Overall, there was a perception that drug education was insufficiently 'real', or that something was "missing" from it. This seemed to reflect not so much doubts about its accuracy or scope as a feeling among respondents that it was difficult to apply it to their own lives and circumstances. That they were nonetheless able to respond to videos and drama productions suggested that there was a desire and need for drug education to engage young people at an emotional level, encouraging them to project themselves into real life situations and personalise the possible consequences.

Conclusions

Classroom practice

Many of the teachers who were observed or interviewed appeared to favour the rational information acquisition model of learning. This is contrary to findings from the literature review, which indicate that, on its own, this is a much less effective drug education approach than other approaches, such as social influences. However, it may provide a 'safer' approach for teachers who lack the confidence to approach drug education in other ways because they feel they do not have the appropriate experience or are uncomfortable with more open-ended, participatory and activity-based learning. The lesson observations found that social influences featured in only a minority of lessons, and normative education approaches hardly at all.

More emphasis could be placed in drug education lessons on helping pupils make connections, firstly, between their drug education lessons and their everyday lives, and, secondly, between what they are learning and the underlying objectives and key messages of their drug education, whether these be about changing behaviour, assessing risks, coping with peer group pressure or making informed choices.

It was apparent from the lesson observations, the post-observation interviews with teachers and the focus group discussions with young people that credibility is critically important. Expert visitors often had particular credibility with pupils because of their insider's knowledge of the local drug culture. This does not necessarily mean that school-based

drug education should be carried out by visitors, but it may mean that in-service or other training and support packs should provide teachers with this contextual information about drugs and drug cultures, whilst at the same time encouraging them not to see their role as simply imparting this information to their classes.

The structure of provision

The research found considerable duplication of drug education content for different age groups. There is no reason why lessons to older pupils should not re-visit certain topics and content areas if the approach is appropriate to the age and experience of the pupils; indeed, this is one of the basic principles behind the idea of the spiral curriculum. However, this research indicated that, particularly for P6 through to S2/S3, content and approaches often tended to be very similar regardless of age or stage. More consideration needs therefore to be given to strengthening liaison processes between primary and secondary schools. This may be more difficult in secondaries with a large number of feeder primaries; however, stronger local and national guidance on progression and continuity within drug education could alleviate some of these difficulties.

Composite classes

Consideration should also be given to progression in the delivery of drugs education to composite classes in smaller primary schools, where pupils from several year groups may be studying the same topics, and to issues around differentiation of content or approach in these settings.

Taking pupils experiences into account

It may be that guidance to schools needs to be more specific about what to teach and when. It may also be necessary to provide teachers with an explicit exposition of the principles underpinning progression and continuity of learning in drug education. However, with drug education the principle of progression is not simply restricted to cognitive development; it also needs to take into account the different experiences of the young people and the communities in which they live. Consequently the guidance also needs to be flexible and responsive to different circumstances.

Guidance on effective methods

Guidance could be made more specific on which packages use methods and approaches found to be effective and how to use these packages. Consideration could also be given to developing a list of recommended effective programmes.

Delivery by outside agencies

The research found a strong reliance on outside agencies for drug education, coupled with evidence of variable practice by these agencies, particularly in terms of use of interactivity. Schools may benefit from more specific guidance on how to use outside visitors more effectively. This should cover understanding visitors' particular strengths and expertise; what areas of drug education should be more appropriately covered by teachers; and ensuring that visitors' inputs support and are integrated better with school provision.

Drug education research

In general, there is a continuing need for evaluation and monitoring of drug education practice in Scotland, both externally and through self-evaluation. There is further work required to examine whether packages and approaches found to be effective in other contexts work equally well in the Scottish context.

Advice to policy makers

1. Guidance to schools should:

- Encourage greater continuity between primary and secondary schools;
- Provide a more explicit account of principles underpinning progression and continuity of learning;
- Acknowledge that progression needs to take into account variations in young people's experiences and not just their cognitive development.
- Emphasise the importance of using evidence-based approaches in drug education, particularly so*cial influences* and *normative education* approaches.
- Demonstrate the weight of evidence behind proven effective approaches and explain the rationale for these approaches: how they are assumed to work.

2. In-service training, support and resources for teachers should:

- Encourage the adoption of approaches and methods proven to be effective;
- Build teachers' confidence to deliver drug education;
- Provide teachers with contextual information about drugs and drug cultures.

3. Give consideration to providing schools with an annotated list of recommended drug education programmes which are based on effective approaches and have been evaluated.

4. Review the resources being used for drug education to ensure that they are:

- Current, accurate and appealing to young people
- Age-appropriate and appropriate to the abilities of young people.

5. Guidance to schools, in-service training and resource packages for drug education should help young people make connections between:

- Their drug education lessons and their everyday lives.
- Their current actions and choices and the consequences, both short and longer term.
- What they are learning and the learning objectives and key messages which underpin their lessons

6. Use guidance and in-service training to further:

- Stress the importance of consistency of approach between school-based staff and outside agencies.
- Ensure that the drug education provided by outside agencies is appropriate to their areas of expertise.
- Ensure that the drug education provided by outside agencies is integrated into schools' overall programmes.

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