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▶ Bridging the gap between evidence and practice: a multi-perspective examination of real-world drug education.

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An audit of school drug education in Scotland in the early 2000s found that in key respects lessons departed from what research had shown was effective prevention and that despite national guidelines, there was no consistent national or even local approach.

Summary Conducted in the early and mid-2000s, this study sought to establish the degree to which national guidance and drug education in Scottish schools reflected what research suggests is good and effective practice. To this end research reviews were analysed and the findings compared with national guidance. To find out what was happening in schools, in 2003–2004 a postal questionnaire was sent to 1290 primary, secondary and special schools, which 73% of the eligible schools returned after completion mainly by head teachers or deputy heads. The survey was supplemented by direct on-site observation of 100 lessons in 40 schools of the 140 asked to participate in this strand of the research. After lessons, 78 teachers were able to be interviewed.

Main findings

National guidance at the time (latest published in 2004) reflected the evidence base by, for example, supporting interactive teaching methods, a 'whole school' approach involving parents, teaching at primary as well as secondary levels, and lessons based on pupils' needs and abilities. However, more explicit reference could have been made to some findings, including the effectiveness of social influence and normative education and the relative ineffectiveness of approaches based on imparting information or fostering personal development by (among other attributes) improving decision-making skills, clarifying values and enhancing self-esteem.

According to the school survey, almost all primary, secondary and special schools in Scotland taught drug education, in primary schools generally by all teachers, in

secondary schools by a team of teachers specialising in personal, social and/or health education. A third of secondary schools used a variety of teachers including form tutors and teachers of subjects other than personal, social and/or health education. Most teachers completing the survey reported having received some staff development or training in drug education in the past three years, but just a third had been trained in teaching methods and just over a half teaching skills.

In just over 40% of both primary and secondary schools, drug education was also taught by external visitors or agencies, usually community police officers or officers from the Scottish Drug Enforcement Agency. Peer educators were rarely used.

Generally a wide range of legal and illegal substances were taught about, almost universally by providing information, for example, about their effects. Over 8 in 10 schools also reported covering issues like refusal and decision-making skills, and almost as many why drugs are used and opinions about drugs. In contrast, social-influence topics such as the acceptability drug use and how 'normal' drug use is were covered in fewer than half the schools. Whole-class discussion was a virtually universal teaching method. Also very common were small group work, pupil worksheets, and videos/DVDs.

These findings from the survey were partly confirmed by observations of lessons which most commonly featured structured whole-class discussion. Next most common were activities sharing and checking information, presenting information to others, open-ended discussion, and teacher-led inputs. Only in a minority of classes were pupils essentially passive recipients of information. In most there was some degree of interactive learning, though often in the service of acquiring information rather than developing skills or exploring attitudes and values. Teachers trained in personal, social and/or health education were more likely than others to be interactive in their teaching.

Somewhat in contrast to survey findings, the observed lessons rarely employed approaches found most effective by research. Most focused mainly on giving factual information about drugs and their effects. Few introduced harm reduction approaches, understanding of how various social influences impact on behaviour and attitudes towards drugs, or approaches designed to develop decision making and resistance and assertiveness skills. Despite its research backing, there were no examples of 'normative education' contrasting beliefs about how many young people use drugs with survey findings. Around a third of the observed lessons were exclusively based on a published education package based, but 27 lessons mixed resources whose origins were not always clear to observers, and in 23 teachers drew on a bank of activities, resources and packages developed or compiled in-house. In some cases teachers were observed using resources inappropriate for the age group they were teaching.

Two thirds of observed lessons were judged 'definitely clear' in their messages, but only in just over half (54%) did pupil understanding appear to have definitely been enhanced. In 60%, almost all the class were rated as engaged in the lesson, though in secondary schools this fell to 51%, and was lower when teachers rather than external agents delivered the lessons, seemingly (from pupil comments) due to their novelty value and because their greater proximity to drugs made them seem more credible.

Over half (55%) the observed lessons made no reference to reviewing previous work and the school survey too found that fewer than half the schools indicated that strong links were made to drug education taught earlier in the school, In only seven observed lessons

did the teacher explain the expected learning outcomes. Content was sometimes duplicated across school years.

The authors' conclusions

The study confirms that the vast majority of schools in Scotland provide drug education covering a wide range of substances and across the age range. However, education is not as evidence-based as it could be in terms of methods, modes of delivery and learning approaches, and there is room for improvement in the continuity of drug education between school years and in the selection and use of resources. There is also scope for greater specificity in the guidance provided to schools and for better training and dissemination of evidence-based concepts and programmes.

In particular, although evidence indicates that information-based approaches are among the least effective, many of the observed teachers appeared to favour this approach, while social influences featured in only a minority of lessons, and normative education approaches hardly at all. It may be that giving information provides a safer approach for teachers who lack the confidence or knowledge to approach drug education in other ways. If so, this would highlightthe importance of training teachers not only in drug awareness but also in the evidence-based approaches that underpin good drug education teaching.

A key feature of the study was that teachers tended to describe their practice as less narrowly focused on information acquisition than the observations showed it to be, suggesting a lack of understanding of what different approaches mean in practice. Encouragingly, most observed lessons were least partly interactive in delivery style. However, there was room for greater use of interactivity. The fact that teachers trained in personal, social and/or health education seemed more likely to conduct interactive teaching again underlines the importance of training.

It was encouraging that drug education was provided across all years, though the study found considerable duplication.

Widespread reliance on visitors for delivering drug education is not necessarily inappropriate, and often they were seen to generate positive responses from pupils in terms of message clarity, engagement and understanding of drugs. It is however important to ensure that their inputs are evidence-based in terms of methods and approaches, and coherent with the school's own curriculum and teaching ethos.

Finally, the study confirmed other research suggesting that teachers vary in their use of drug education packages, even where a particular resource is encouraged across a local authority area. Worryingly, some teachers used materials of doubtful provenance without a clear apparent rationale for their selection, and some resources were inappropriate for the age, abilities and experiences of the class.

Arising from these findings were the following recommendations for closing the gap between evidence and practice:
1. Guidance should emphasise more strongly the weight of evidence behind proven effective approaches to drug education, particularly social influences and normative education approaches.
2. In-service training and resources for teachers should encourage the adoption of approaches proven to be effective, build confidence to use these methods, and explain

the rationale for them so teachers understand not only what is involved in teaching a particular approach, but why it is important to do so and how it is assumed to impact on young people. Training programmes need to recognise that teachers may find it hard to 'unlearn' or transfer allegiance from previous approaches.
3. Greater continuity needs to be encouraged between primary and secondary school drug education. This may be achieved through strengthened liaison processes, joint training, and curriculum guidance stating more explicitly the principles underpinning progression and continuity of learning. This guidance needs also to take into account variations in young people's experiences as well as their cognitive development.
4. The resources used for Scottish drug education need reviewing to ensure they are evidence based, current, appealing, and appropriate to pupils' ages, abilities and experiences.
5. Finally, schools need help in making best use of the support provided by external visitors. There is a need for more specific guidance on how to use visitors best, covering understanding of visitors' particular strengths and expertise, what areas of drug education are more appropriately covered by teachers, and ensuring that visitors' inputs support and are integrated better with school provision. Developing mechanisms that bring schools and agencies together to plan a consistent approach may be particularly helpful.

A research report on the study is freely available on the Scottish government's web site.

Methodologically, the main weakness of the study as an indicator of national practice is the fact that lesson observations – the securest way to find out what actually is happening rather than what schools believe or claim is happening – were conducted in just 40 schools out of 140 approached, largely due to the fact that just 60 of these schools were willing to be observed. This procedure was adopted after the intended more structured selection procedure for schools proved impractical. How representative the 40 schools were of Scotland in general is impossible to say.

From the perspective of evidence on school-based substance use prevention of the time, the study and its verdicts on what was good and less good about teaching in Scottish schools in the early 2000s make detailed sense. From today's perspective, they can be questioned on at least two broad grounds.

First, the implicit assumption that drug education should be judged against prevention rather than educational criteria, though still widely accepted, has been contested by some British specialists (1 2). Much of the research also shares the assumption that prevention (generally of substance use as such) is the objective. Derived from this research, the yardsticks used by the study to assess drug education in Scotland partly reflect this assumption. Nevertheless, much of its critique of teaching planning and methods would apply also to drug education judged purely on educational grounds.

Second, even accepting that prevention is the appropriate yardstick, today the prevention credentials of approaches such as interactive teaching focused on social influences on drugtaking, and correcting beliefs about how 'normal' this is among one's peers, seem far less clear cut. In turn, it now seems less decisive to compare Scottish drug education against these best-practice yardsticks. More below.

The key analysis supporting the superiority of interactive teaching has been shown to depend on which method is used to analyse the results of relevant studies, while normative education, which once seemed the great hope for school- and college-based prevention, now seems a tactic of limited application and with inconsistent impacts. Important recent implementations of school-based drug education incorporating all these elements include the seven-nation EU-Dap European drug education trial and the English Blueprint trial. The former's results were patchy, the latter's, if anything, in the wrong direction.

This draft entry is currently subject to consultation and correction by study authors and other experts.

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