Sex and HIV/AIDS education in schools

Have a modest but important impact on sexual behaviour

See p 414, 417

As British and American societies have become increasingly concerned about sexual risk-taking behaviour among adolescents, they have increasingly looked towards schools to address and possibly limit such behaviour. Schools are the one institution that young people regularly attend; they are geared towards increasing students' knowledge and improving their skills; and they are especially well fitted to educate young people about subjects such as sexuality, in which different concepts should be taught at different developmental stages. On the other hand, conditions in schools may not be ideal: class time is limited, teachers are often not trained in handling sensitive subjects, and considerable controversy surrounds the teaching of some subjects. What light can be thrown on these issues by the evidence on sex education in schools?

When studies such as the two articles in this week's issue (pp 414, 417)[1,2] evaluate the effectiveness of sex education programmes by measuring their impact on behaviour they apply standards that are not applied to most other school subjects. Most school teaching is evaluated by assessing its impact on knowledge and not on behaviour outside the classroom. Thus when research on sex education programmes uses outcomes such as delay in starting intercourse or use of contraception it is using criteria that are far more demanding than those for most school programmes.

When examining the impact of sex education programmes on behaviour we should have modest expectations. Changing people's behaviour is difficult in general, especially adolescent sexual behaviour. That behaviour is strongly affected by hormones and physical desire; the need for aceeptance; family, peer, and personal values; the media; and a myriad of other factors. Thus, we should not expect brief periods of instruction, however well designed, to have a dramatic impact on adolescent sexual behaviour.

The two studies in this week's issue are nicely complementary. That by Wellings *et al* analyses a cross section of English young people exposed to a cross section of sex education programmes; because of the nature of cross sectional data that study has greater difficulty establishing causality.[2] The second study uses a stronger quasi-experimental design to examine the impact of a single sex education programme. The findings of both studies are consistent with those of many studies from the United States. Both suggest that the education programmes did not hasten the onset of intercourse. Indeed, that by Mellanby *et al* suggested that the programme delayed its onset, while that by Wellings *et al* suggested that having the school as the primary source of sex education might have increased the use of condoms at first intercourse.

In North America 33 studies have examined the impact on sexual behaviour of sex edueation or HIV education programmes in school and non-school settings.[3] Together they suggest that (*a*) such programmes do not hasten the onset of intercourse or increase its frequency, and (*b*) some may delay its onset and frequency.[3,4] Eight of these studies were based on national samples of young people, and together they indicate that sex and HIV/AIDS education programmes do not hasten intercourse.[3] Twenty five studies used experimental or quasi-experimental designs: none found that the programmes significantly hastened the onset of sexual intercourse, and six found that specific programmes may have delayed its onset. Fifteeen also found that educational programmes did not increase the frequency of intercourse, while six suggested that they reduced it. Similarly, seven studies found that programmes did not increase the number of sexual partners, while five suggested that they might reduce the number.

The weight of evidence also suggests that sex education programmes in general, and especially some specific programmes, can increase the use of condoms and other forms of contraception when young people do have sex.[3,4] Not surprisingly, those programmes that emphasise delaying intercourse are more effective in achieving that end, while HIV education programmes, which emphasise reducing unprotected sex, are more effective in achieving protected sex. The evidence is much weaker on programmes advocating total abstinence from intercourse. Some studies seem to suggest that such programmes have no effect in delaying the onset of intercourse, but they are methodologically weak.

Programmes taught by youth agencies other than schools may be even more effective than those taught in the classroom.[5-7] This may be due, in part, to the use of small group exercises, to the ability of these agencies to tailor their programmes specially to their target populations, or to the fact that in many cases teenagers participate voluntarily.

Effective educational programmes share nine characteristics. These comprise: (*a*) a narrow focus on reducing specific risky behaviour, (*b*) a theoretical grounding in social learning theory, social influence theories, or theories of reasoned action, (*c*) at least 14 hours of instruction or, if less, instruction in small groups, (*d*) variety of interactive teaching methods designed to encourage the participants to personalise the information, (*e*) activities to convey the risks of unprotected sex and how to avoid them, (*f*) instruction on social pressures, (*g*) clear reinforcement of individual values and group norms appropriate to the age and experience of the pupils, (*h*) opportunities to practise communication and negotiation skills to increase confidence, and (*i*) effective training for individuals implementing the programme.

There is not enough direct evidence to determine whether any of these educational programmes significantly decreases rates of pregnancy, sexually transmitted diseases, or HIV infection.[4] But if some do delay the onset of intercourse, reduce the number of sexual partners, or increase the use of protection, then logically they should also have an effect on these end points. What these studies do show is that, while not all sex and AIDS education programmes are effective, some probably are. If effective programmes were implemented more broadly, they could have a modest but significant impact on reducing sexual risk-taking behaviour.

DOUGLAS KIRBY
Director of research

ETR Associates,
PO Box 1830,
Santa Cruz, CA 95061 1830, USA

1 Wellings K, Wadsworth J, Johnson AM, Field J, Whitaker L, B Field. Provision of sex education and early sexual experience: the relation examined. *BMJ* 1995;311:417-20.
2 Mellanby AR, Phelps FR, Crichton NJ, Tripp JH. School sex education: an experimental programme with education and medical staff. *BMJ* 1995;311:414-7.
3 Kirby DB. *A review of educational programs designed to reduce sexual risk-taking behaviors among school-aged youth in the United States.* Washington DC: National Technical Information Service (in press).
4 Kirby DB, Short L, Collins J, Rugg D, Kolbe L, Howard M, *et al.* School-based programs to reduce sexual risk behaviors: a review of effectiveness. *Public Health Reports* 1994;109:339-60.
5 St Lawrence JS, Jefferson KW, Alleyne E, Brasfield TL. Comparison of education versus behavioral skills training interventions in lowering sexual HIV risk behavior of substance dependent adolescents. *J Consult Clin Psychol* (in press).
6 Jemmott III JB, Jemmott LS, Fong GT. Reductions in HIV risk-associated sexual behaviors among black male adolescents: effects of an AIDS prevention intervention. *Am J Public Health* 1992;82:372-7.
7 Rotheram-Borus MJ, Koopman C, Haigners C, Davies M. Reducing HIV sexual risk behaviors among runaway adolescents. *JAMA* 1991;266:1237-41.