Commentary: Sex education interventions: increasing knowledge is only a first step

Anna Graham

The aim of sex education interventions should be to reduce the adverse outcomes of sexual intercourse. This includes unplanned pregnancies and sexually transmitted infection rates. The findings of the most recent systematic review of interventions to reduce unintended pregnancies amongst adolescents, using the results exclusively from randomized trials in developed countries, are disappointing. In the past, reviews of evidence have been critical of the methodologies employed to evaluate the impact of sex education interventions. The findings of observational studies in this area are more likely to have positive findings, and are undoubtedly biased, compared with randomized trials. More recently a significant number of such interventions have been evaluated using rigorous trial methodologies.

Division of Primary Health Care, University of Bristol, Cotham House, Cotham Hill, Bristol BS6 6JL, UK. E-mail: a.graham@bristol.ac.uk
The most recent trial to be published in the UK (‘SHARE’: Sexual Health And Relationships: Safe, Happy and Responsible) included over 8400 pupils aged 13–15 years in 25 secondary schools in east Scotland. Questionnaires were completed at baseline and at follow-up 2 years later. The intervention was a new 5-day teacher training programme plus a 20-session pack: 10 sessions were delivered in the third year (at 13–14 years) of secondary school and 10 in the fourth year (at 14–15 years). The primary outcome for the study was use of condoms at first intercourse. Similar proportions of both the intervention and control groups used condoms at first intercourse with less than 10% of pupils reporting first intercourse without a condom. For all other behavioural outcomes (condom use after first intercourse, oral contraceptive use, and unplanned pregnancy) there were no differences between the groups. However, as with Martiniuk’s study in Belize, published in this issue of the International Journal of Epidemiology, pupils in the intervention group were more knowledgeable than those in the control group.

The Belize study was well designed in allowing for the clustered nature of the sample both when calculating the sample size and analysing the data. Publishing the intra-cluster correlation coefficient calculated from their data will be useful for planning future research.

However, there were a number of weaknesses with the randomization procedures discussed by the authors in their paper. The imbalance between groups in the number of classrooms could have been overcome by using a block method rather than the simple coin toss employed here. There were considerable differences between groups at baseline in terms of gender and sexual experience. These data were not available to the researchers prior to the study starting. It may have been appropriate to allocate classes to intervention and control groups when the results from the pre-test questionnaire were available. At this time an alternative randomization procedure such as stratification or minimization may have reduced the chances of imbalance between groups in the study.

There is evidence, from cross-sectional surveys in the UK, that when school is the main source of information about sexual matters, early and unprotected sexual intercourse is less likely, compared with when other sources such as friends and the media dominate. School-based lessons are now the main source of information about sexual matters for young people in the UK.

Sex education has not been found to increase sexual activity, an accusation frequently made by some. However, it is only one way of addressing the issue of poor sexual health. So far the evidence for its effectiveness is limited. It is likely that other factors are far more important. A review of the European evidence suggested that where preventative interventions work in unison, for example when: contraception is easily accessible; sex education is augmented by open attitudes and a positive approach to the sexual health of young people; and law reforms facilitate good sexual health, the combined effects may be greater than the sum of their individual parts.

The factor with the strongest influence preventing teenage pregnancy is educational opportunity. It is well-educated women who tend to delay childbearing. For women aged 20–24 years the longer a woman remains in school the less likely she is to have a child before the age of 20. Adolescents with little schooling are often twice as likely as those with more education to have a baby before their 20th birthday. For example, 46% of young Colombian women with less than 7 years schooling have their first child by the age of 20, compared with 19% of those with more education. The contrast is even greater in Egypt, where 51% of less educated women have their first birth before the age of 20 compared with 9% of better educated women. The link between lack of education and early childbearing is also strong among adolescents in the US. Some 58% of young American women who receive less than a high school education give birth by their 20th birthday, compared with 13% of young women who complete at least 12 years of schooling. The report from the Alan Guttmacher Institute, from which these data came, suggested that a low level of education is not necessary a direct cause of early childbearing, however, the two factors are often characteristic of living in impoverished and rural environments.

The greatest impact to be made in reducing unplanned pregnancies, and sexually transmitted infections, is to increase the time spent in education by young women worldwide. This intervention is likely to change the role of women in society empowering them to avoid the adverse consequences of sexual activity.

References