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Provision of sex education and early sexual experience: the relation examined

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Abstract

Objectives—To explore the relation between receipt of sex education and experience of first intercourse.

Subjects and design—The national survey of sexual attitudes and lifestyles is based on a sample of 18 876 respondents aged 16-59, randomly selected from the Post Office's small-user postcode address file. Data were collected between May 1990 and November 1991 by personal interviews combining a self administered questionnaire with a face to face interview.

Main outcome measures—Age at first intercourse, use of contraception at first intercourse, actual and preferred source of sex education (including school based lessons).

Results—Median age at first intercourse fell by four years for women and three years for men over the past four decades, to 17 for both men and women aged 16-19 at the time of interview. Of those respondents for whom school was the main source of information about sexual matters, men were less likely, and women no more likely, to have had intercourse before the age of 16 than were those citing other main sources, such as friends and the media. Both men and women were more likely to have used some method of contraception. In multivariate analysis, these effects remained after controlling for the effect of current age, educational attainment, and religious affiliation.

Conclusions—These data provide no evidence to support the concern that provision of school sex education might hasten the onset of sexual experience. These findings have important implications for the provision of sexual health education and highlight the need to carry out prospective and randomised studies of the impact of sex education.

Introduction

One of the most dramatic findings from the national survey of sexual attitudes and lifestyles was the sharp

fall in the age at which people become sexually active. The past few decades have seen a progressive reduction in the age at which sexual intercourse first takes place and an increase in the proportion of young people who had sexual intercourse before the age of sexual consent. Young people at the start of the 1990s were becoming sexually active some four years earlier than those making their sexual debut in the early 1950s.

The fall in the age at first intercourse is a major social trend and has clear policy relevance for the provision of sexual health services. Early experience of sexual intercourse is more likely to be accompanied by feelings of regret; it is associated with larger numbers of sexual partners, both in the recent past and over a lifetime; and—of greatest importance in terms of health consequences—it is less likely to be protected from unplanned pregnancy.^{1,2} The *Health of the Nation* white paper acknowledges the role of schools in helping to reach one of the targets set for sexual health—a reduction of at least 50% in the rate of conceptions in under 16 year olds by the year 2000.³ The suggestion is made by some that provision of school based sex education might encourage early sexual experimentation and promiscuity^{4,5}; others are at pains to point out that more sex education does not mean more sex and may contribute to a reduction in rates of sexually transmitted diseases and teenage pregnancy.⁷ The relation between experience of sex education and onset of sexual activity is pivotal to such discussions and is explored here by using data from the British national survey of sexual attitudes and lifestyles.^{1,2}

Method

The national survey of sexual attitudes and lifestyles is a random survey of 18 876 respondents aged 16-59 resident in Britain. The sampling frame was the Post Office's small-user postcode address file. Data were collected between May 1990 and November 1991 by means of personal interviews using a format combining self administered questionnaire with face to face

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interview. A response rate of 65% was achieved. Details of the methodology are reported elsewhere.¹²⁸⁻¹⁰ The research instrument included questions about age at first intercourse (Q19: How old were you when you first had sexual intercourse with someone of the opposite sex or hasn't this yet happened?) and probed the source of information about sex education (Q17a: When you were growing up, in which of the ways listed on this card did you learn about sexual matters? Q17b: From which of these did you learn the most?) together with several questions on the experience of learning about sexual matters. Responses to these questions are analysed here to help illuminate the relation between the provision of sex education in school and the onset of sexual activity. (Questions on sex education were included only in the longer version of the questionnaire administered to one quarter of the sample (4548 respondents)).

Bivariate analysis was carried out in the first instance, and logistic regression models were used to assess the simultaneous effects of possible confounding variables. Results are expressed as adjusted odds ratios and their 95% confidence intervals. Since a small number of respondents were not sexually active, the median age at first intercourse was calculated with a life table method.

Results

The median age at first sexual intercourse for women aged 16-19 in 1990 was 17, compared with 21 for those aged 55-59, who were born four decades earlier. This striking trend also occurs in men: the median age at first intercourse for men aged 16-19 in 1990 was 17, three years earlier than for those aged 55-59 at the time of interview (table I). The decline in the median age at first intercourse is associated with a concurrent rise in the proportion of young people who are sexually active before the age of sexual consent. Of women aged 16-19, 18.7% had had sexual intercourse before the age of 16, compared with fewer than 1% of those aged 55-59; for men the equivalent proportions are 27.6% of men in the youngest age group compared with 5.8% of men aged 55-59.

Responses to the question asking respondents from which source they learned most about sexual matters

TABLE I—Age at first sexual intercourse by age at interview

Age at interview	Women		Men	
	Median age at first intercourse	% (No) reporting first intercourse before age 16	Median age at first intercourse	% (No) reporting first intercourse before age 16
16-19	17	18.7 (182/971)	17	27.6 (228/827)
20-24	17	14.7(184/1251)	17	23.8(271/1137)
25-29	18	10.0(152/1519)	17	23.8(268/1126)
30-34	18	8.6(116/1349)	17	23.2(235/1012)
35-39	18	5.8 (73/1261)	18	18.4 (181/982)
40-44	19	4.3 (55/1277)	18	14.5(150/1042)
45-49	20	3.4 (37/1071)	18	13.9 (115/827)
50-54	20	1.4 (13/933)	18	8.9 (61/684)
55-59	21	0.8 (6/716)	20	5.8 (35/603)

Analysis was based on weighted data.

TABLE II—Adequacy of information about sex at first sexual experience. Values are percentages (numbers)

Age group	Men				Women			
	No of subjects	Needed more	Knew enough	Not yet ready	No of subjects	Needed more	Knew enough	Not yet ready
16-24	508	68.8 (350)	25.2 (128)	6.0 (30)	535	66.3 (355)	27.2 (146)	6.5 (35)
25-34	546	73.0 (398)	26.6 (145)	0.4 (2)	721	69.4 (500)	29.3 (211)	1.3 (10)
35-44	537	76.6 (411)	22.3 (119)	1.2 (6)	633	75.4 (477)	24.0 (152)	0.6 (4)
45-59	494	74.0 (366)	25.6 (127)	0.4 (2)	682	77.2 (527)	21.7 (148)	1.1 (8)
All ages	2085	73.1 (1525)	24.9 (519)	2.0 (41)	2571	72.3 (1859)	25.5 (656)	2.2 (56)

Analysis was based on weighted data.

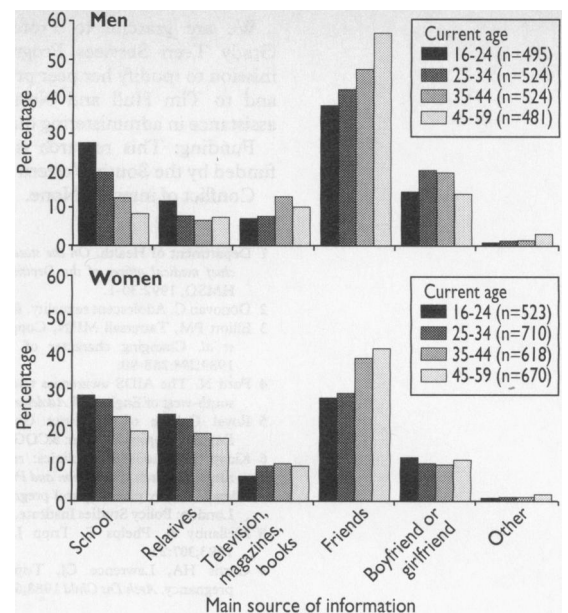


FIG 1—Main source of information on sexual matters

were analysed to identify the sources that had made an important contribution to people's knowledge about sex. School based sex education lessons are not the main source of information for most people (fig 1). Analysis of the responses to questions on sex education showed that the majority still gain their sexual knowledge from friends, though this pattern is becoming less strong among younger respondents. In all age groups the most commonly reported "main" source of information was friends, although the proportion has fallen with successive generations. Friends were the main source of information on sexual matters for 37.4% of men and 27.4% of women in the 16-24 age range, compared with 56.9% of men and 40.5% of women in the age group 45-59. Adding the proportion of respondents citing boyfriend or girlfriend brings the proportion of men aged 16-24 who learnt about sexual matters mainly from their peers to more than half (51.4%) of those in the younger age group and more than a third (39.0%) of women in this age group.

Nevertheless, the school has been playing an increasingly important role in the sexual education of the young, particularly for men. The proportion of men citing school lessons as their main source of sexual information increased from 7.9% among the oldest age group to 27.2% of those in the youngest, aged 16-24. For women the increase was less, but nearly 30% (28.8%) of women aged 16-24 cited school based lessons as their main source of information, compared with fewer than one in five (19.0%) of those aged 45-59. An increase in the proportion of respondents citing parents as the main source of information indicates an increased willingness on the part of parents to talk to their children about sex, but even so the overall proportion is still low. Only 5.0% of 16-24 year old men and 17.0% of women of the same age cited their mother as the main source of information on sexual matters, compared with 1.8% of men and 9.9% of women aged 45-59. Fathers were less likely to be cited as important sources of information. No other source of information, including the print and broadcasting media, was cited as the main one by more than 5% of respondents.

Despite the assumed sexual sophistication of the young, more than two thirds of the total sample saw themselves as inadequately prepared in terms of information on sexual matters at the time of first intercourse (table II). The proportion of respondents claiming that they "knew enough" has not increased among younger age groups, as might have been

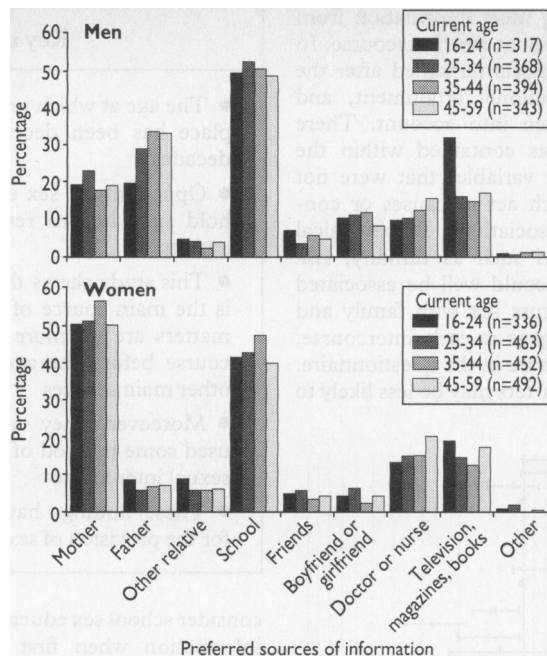


FIG 2—Preferred sources of information about sexual matters of respondents claiming inadequate information at first experience

expected. Those who claimed not to have sufficient information at the time of their first sexual experience were asked what they would have liked to know more about and from whom they would have liked to learn it. Of these, more than a third of the women (35.2%) and more than half of the men (51.0%) said they would have liked more information from school; the proportions varied little with age group (fig 2). Generally speaking, the preferred agencies tended to be more authoritative sources such as school or parents. Friends featured less prominently as preferred sources than they did as actual sources, while the converse was true for health professionals.

Of central interest in this context is how age at first intercourse varies with the source of information about sexual matters. Bivariate analysis of reported age at first intercourse by responses to questions on the main source of sex education showed that men who reported having learnt most from school based lessons were less likely to have had intercourse before the age of 16 than were those citing boyfriends or girlfriends, friends, or an "other" source (table III). This relation was weaker for women. Furthermore, men who cited school lessons were less likely to have had early sex than were those whose main source of information was relatives, though this effect was not found for women.

The relation between the experience of receiving most information about sexual matters from school and the use of contraception at first intercourse showed similar effects. Those citing school lessons as their main source of information were more likely to have used some form of contraception, notably a condom, at first intercourse.

Multivariate models were used to control for some of the possible confounding influences on the relation between source of sex education and first intercourse

TABLE III—Percentage (number) of respondents reporting sexual intercourse before age 16 by main source of information

Source of information	Men	Women
School	10.7 (37/344)	7.6 (46/605)
Relatives	24.7 (41/164)	6.9 (35/502)
Television, magazines, books	9.6 (18/192)	5.2 (14/240)
Boyfriend or girlfriend	32.8 (112/342)	19.9 (53/266)
Friends	19.0 (177/932)	7.7 (65/856)
Other	35.9 (9/25)	16.8 (5/27)

Analysis was based on weighted data.

before the age of 16. Age and educational attainment, particularly graduate status, had been shown to be strongly associated with the likelihood of intercourse before the age of 16 for both men and women, though the effect of current age was stronger for women than men.^{1,2} Current age was an obvious confounding factor since the likelihood of having early sex and of citing school as the main source of information on sexual matters increased with decreasing age of respondent. Educational level can also confound the relation since respondents of higher educational status were less likely to have sex under 16 and also more likely to cite school lessons as their source of information on sexual matters. Logistic models were constructed to assess the simultaneous effects of age, source of sex education, educational level, and religion on the likelihood of sexual intercourse occurring before the age of 16, as well as on the likelihood of using any contraceptive method and condom use at first intercourse.

As figure 3 shows, the association between main source of sex education and intercourse before age 16 was sustained. After age, educational level, and religion were controlled for, the men whose main source was school based lessons were significantly more likely to be virgins at the age of 16 than were those who gleaned information mainly from their friends. Women were no more nor less likely to be virgins at the age of 16 if their sex education was gained at school rather than from friends.

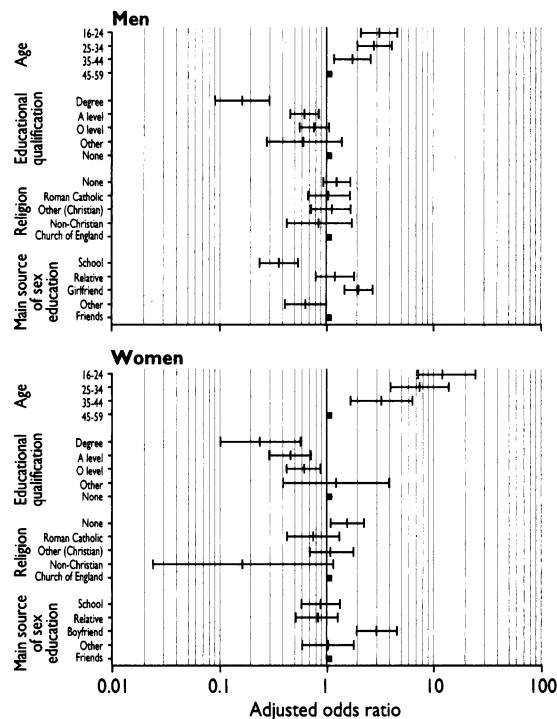


FIG 3—Adjusted odds ratios for first intercourse before age 16. Bars represent 95% confidence intervals

The same variables were also used to assess the relation with condom use and no contraceptive protection at first intercourse (figures 4 and 5). Again, after these variables were controlled for, those men and women who stated their main source of sex education as school were less likely to have had sexual intercourse for the first time without using contraception; women were also more likely to have used a condom.

Discussion

These data show an increase in the proportion of young people sexually active before the age of 16, and no strong association between this and experience of sex education at school. They also show a positive

association between receiving most information from school and use of contraception at first intercourse. In multivariate analysis, these effects remained after the effect of current age, educational attainment, and religious affiliation were taken into account. There may be unidentified variables contained within the research instrument or other variables that were not measured in the survey which act as causes or confounding factors in these associations. Psychological variables, for example—traits such as timidity, risk aversion, and reservedness—could well be associated with both willingness to discuss sex with family and friends and propensity to engage in early intercourse, and these variables do not feature in the questionnaire. It is also possible that early starters may be less likely to

Key messages

- The age at which sexual intercourse first takes place has been decreasing over the past few decades
- Opponents of sex education in schools often hold such lessons responsible for early sexual activity
- This study shows that those for whom school is the main source of information about sexual matters are no more likely to have had intercourse before the age of 16 than those citing other main sources
- Moreover, they are more likely to have used some method of contraception during first sexual intercourse
- These findings have important implications for the provision of sexual health education

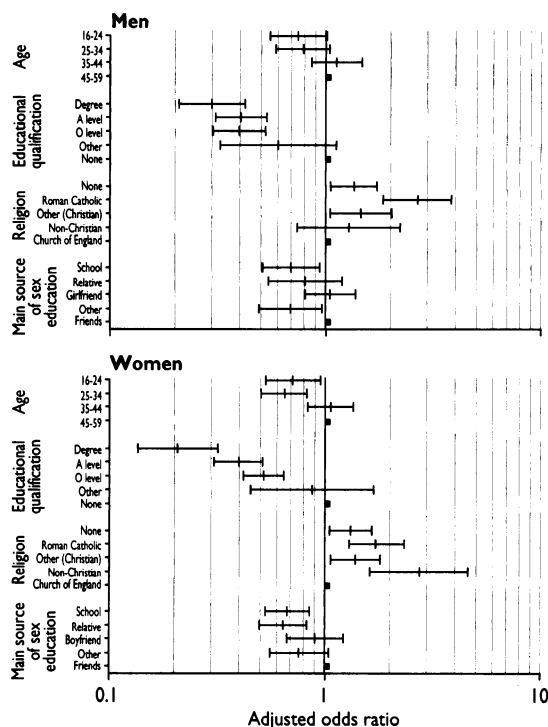


FIG 4—Adjusted odds ratios for no contraceptive use at first intercourse. Bars represent 95% confidence intervals

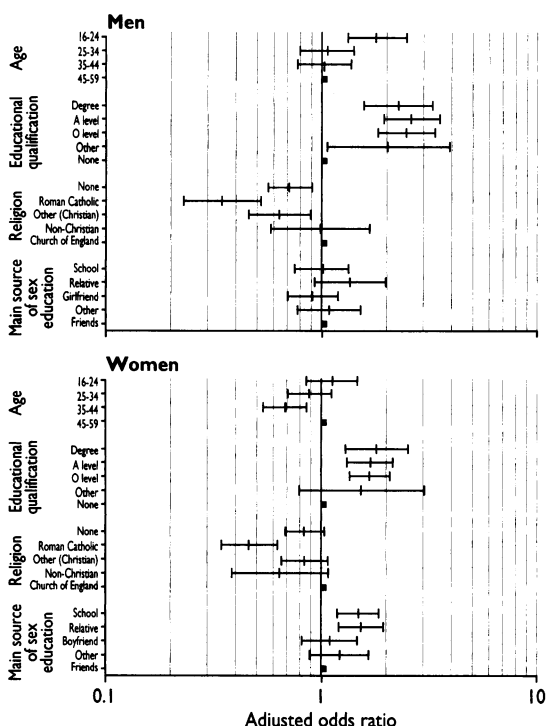


FIG 5—Adjusted odds ratios for condom use at first intercourse. Bars represent 95% confidence intervals

consider school sex education as an important source of information when first experience of sex predates school sex education lessons.

Nevertheless, there are significant associations here. We can confidently say that our survey does not support the oft stated claim that provision of sex education hastens the onset of sexual activity. Data from other sources reinforce these conclusions. A review of 35 studies carried out by the World Health Organisation's Global Programme on AIDS found no evidence that exposure to sex education lead to earlier or increased sexual activity in young people, though in six studies sex education seemed to be associated with either a delay in the onset of sexual activity or a decrease in sexual activity overall (M Baldo *et al*, IXth international conference on AIDS, 1993). Other studies also support the findings relating to increased likelihood of contraceptive use after school sex education, but this evidence is largely circumstantial.¹¹ There is a dearth of data linking individuals' reports of sex education with their sexual behaviour.

These findings have clear implications for the provision of sexual health education and its nature and content. They are important to the presentation of a case for school based sex education. The limitations of this analysis are those inherent in the analysis of retrospective data. A prospective study using an experimental design would now be ideal to evaluate comprehensively the effects of school sex education.

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