

Factors Affecting British Teenagers' Contraceptive Use at First Intercourse: The Importance of Partner Communication

CONTEXT: *Despite the growing body of knowledge about teenager's sexual and contraceptive behavior in the United Kingdom, much quantitative work has failed to consider the broader social contexts in which this behavior occurs.*

METHODS: *A 1999 survey of 963 full-time students aged 16–18 gathered information on individual, contextual and background factors. Logistic regression analyses were conducted to investigate how these factors determine use of a modern method at first sex and whether such use is discussed beforehand.*

RESULTS: *Three factors were significantly associated with the odds of contraceptive use at first sex among young men—discussing contraception beforehand (odds ratios, 5.7–13.8), giving an intimate reason for having sex the first time (6.4) and having parents who portrayed sexuality positively during childhood and the early teenage years (1.2). For young women, five factors significantly predicted use—communication (odds ratios, 6.2–15.0), age at first sex (1.8), not having visited a service provider (5.0), feeling comfortable interacting with teenage males (1.2) and “sort of” or not expecting to have sex (0.2 and 0.4, respectively). Among young men, the factors significantly associated with the odds of having discussed contraception were the level of social deprivation, the length of the relationship and parents' openness to talking about sex; among young women, the factors were the number of intimate reasons given for having sex and the warmth and availability of parents.*

CONCLUSIONS: *Efforts to increase young people's ability to negotiate sexual and contraceptive decision-making should be multifaceted. It is essential that parents provide a supportive climate throughout childhood and adolescence, where discussions of sexual issues are acceptable and where families feel comfortable talking openly.*

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The teenage birthrate in the United Kingdom is the highest in western Europe—it is twice that in Germany, three times that in France and six times that in the Netherlands,¹ and shows few signs of experiencing any sustained declines. In 1999, some 42,000 women younger than 18 in England and Wales became pregnant (yielding a rate of 45 pregnancies per 1,000 women aged 15–17), and 43% of these young women decided to terminate their pregnancy.² In the United States, by comparison, the pregnancy rate for 15–17-year-olds that year was 58 per 1,000, and 35% of pregnancies ended in abortion.³

Although early pregnancy and motherhood can be a positive experience for some British young women,⁴ childbearing during the early teenage years often results from social exclusion, causes social exclusion or both. In Britain, as in the United States, low socioeconomic status, poor educational achievement and being in foster care or in a group home are risk factors for teenage parenthood.⁵ Furthermore, teenage parents and their children face greater risks of adverse medical, educational and socioeconomic consequences (including having poorer housing, fewer employment opportunities and less-adequate nutrition) than do older parents and their children.⁶ In response, the current British government has targeted young people's sexual health as a key area for improvements. Using the 1998

pregnancy rate as a baseline, the government aims to reduce the rate among 15–17-year-olds by 15% by the year 2004, and to halve it by the year 2010.⁷

The last decade has seen a growing body of knowledge about teenagers' sexual behavior and relationships in the United Kingdom. Although much is now known about how teenagers view sexual activity and sex roles, gender dynamics, communication strategies and risk-limitation practices, the complex natures of young people's sexual lives and the diversities of their practices are only just beginning to be understood. Failing to take into consideration these complexities can lead to a narrow view of both the explanatory factors behind early sexual activity and the efforts needed to reduce the incidence of unintended conceptions.

Research needs to move beyond simple models of health behavior to explore more fully the dynamics associated with the timing of early sexual activity, as well as the factors associated with effective contraceptive use.⁸ In this article, we focus on the predictors of effective contraceptive use at first intercourse among British young people.

EARLY SEXUAL ACTIVITY

Large-scale quantitative surveys in the United Kingdom—the 1990 and 2000 National Survey of Sexual Attitudes and Lifestyles (Natsal)⁹—that have investigated contraceptive

use among young people show that the proportion who had unprotected first coitus declined over the past decade. Possible reasons for the decline include extensive safer-sex campaigns, the growth in young people's sexual health services and more focused sexuality and relationship education in school settings. According to the 2000 Natsal, 7% of 16–19-year-old males and 10% of 20–24-year-old males did not use a contraceptive at first sex; the proportions among females were 10% of 16–19-year-olds and 12% of 20–24-year-olds.¹⁰ Nonetheless, some small-scale surveys have shown relatively high levels of unprotected sexual activity; for example, among young clinic users, 22% in one study had used no method at first intercourse,¹¹ and 17% in a second analysis reported using no method the first time they had sex with their most recent partner.¹² Further, consistent subsequent contraceptive use after sexual debut remains a problem for some young people.

The data on nonuse demand explanation, both to enable improved theoretical understanding and to help in the development of more effective policy responses. Explanations based on simple concepts such as lack of knowledge or irresponsibility miss the complex nature of early sexual activity. Many situational and contextual factors play a significant role in determining when and how it occurs. Obviously, lacking knowledge about contraception plays a role in nonuse, but many other issues also have a part to play. According to research conducted in Australia, the United Kingdom and the United States, those other issues include the availability of contraception;¹³ pressure from a partner to not use a method;¹⁴ the need to feel wanted; the desire to have a child; the ability to communicate effectively;¹⁵ the influence of alcohol or drugs;¹⁶ and the influence of passion, trust, love and commitment.¹⁷

Moreover, young people's sexual and contraceptive behavior does not occur in isolation from wider social and structural influences. For example, 1990 Natsal data indicate that children of divorced parents first have sex at a significantly younger age than those whose parents are still married.¹⁸ Models of social development and problem behavior have further identified factors that predict young people's behaviors, such as sexual risk-taking;¹⁹ these models suggest that young people who show commitment to social attachments and to conventional values, activities and institutions are less likely than others to engage in antisocial behavior and activities, including sexual risk-taking. Several studies have shown the impact on teenagers' future sexual behavior of family relationships and bonds, including supportiveness of the family environment, the extent of parental monitoring and intergenerational communication.²⁰

Several qualitative studies have provided further evidence of the influence of external factors on young people's sexual behavior. For example, Holland and colleagues have studied the social construction of sexuality and how men's and women's unequal power relations manifest themselves

in young people's sexual lives through, for example, making it difficult for young women to insist on condom use should they wish to do so.²¹ Ingham and Van Zessen have highlighted the role that gatekeepers, particularly parents, play in reinforcing young people's sexual decision-making through sanctioning or penalizing behavior.²²

Ingham and Van Zessen further found that Dutch young adults were more likely than their British counterparts to have considered contraceptive use before first having sex, to have discussed the matter with their partner and to have used a modern method when the occasion arose.²³ The authors interpreted these differences as reflecting Dutch teenagers' greater sexual competence (the ability to think about and use contraceptives) and relationship competence (the ability to discuss contraception with a partner). These more positive outcomes among the Dutch result, in part, from greater parental openness, more relationship-oriented sexuality education at school, greater societal acceptance of teenage sexuality and more egalitarian gender norms. On the basis of these findings, Ingham and colleagues further developed a heuristic framework model that placed relationship competence at the core and was bounded by factors believed to influence levels of competence, such as background characteristics, relationships with parents and friends, gender norms, attitudes and knowledge.

There are, however, problems in simply extrapolating the differences found between countries to a single-country context. The United Kingdom and the Netherlands clearly differ in many respects, and it can be dangerous to assume that a simple relationship exists between variables. Further, the time and resources required to conduct, transcribe and analyze detailed interviews with young people often prevent more extensive exploration of such dynamic and contextual factors with large samples.

In this article, we report on a study designed to explore two key issues related to the Ingham framework. First, we explored whether some of the associations in the framework could be assessed through a questionnaire. Second, we gauged the extent to which the issues identified through cross-national research would be relevant within a single country.

METHODOLOGY

The Sample

In 1999, Pillarbox Productions and Channel Four Television commissioned a survey to investigate teenagers' attitudes, knowledge and conduct in sexual matters in Britain. The research was carried out through qualitative in-depth interviews with 40 teenagers, followed by a quantitative self-administered questionnaire to be distributed among a targeted sample of 1,000 full-time students aged 16–18.

The sample of young people was purposively selected from the 105 health authority districts* in England and Wales in 1999. We divided these districts into quintiles on the basis of the 1994–1996 pregnancy rates among women aged 15 and younger, and then randomly selected two districts each from the top, middle and lowest quintiles for

*Health authority districts are the administrative units of the British National Health Service.

participation in the study. The research team contacted all schools (including single- and mixed-sex secondary schools) and sixth-form colleges* in the six selected districts and invited them to participate.

Those schools that agreed to take part were issued questionnaires to distribute among pupils in the target age-group. Random sampling of pupils was not logistically possible. Instead, the questionnaire was distributed either among all students enrolled in a single grade or among a random selection of classes from one or more grades.

In total, 1,025 questionnaires were distributed in 13 schools. Students filled out the questionnaires under the supervision of a teacher or researcher in exam conditions. Respondents were given an envelope in which to seal their answers and were asked to place the completed questionnaire in a box to maintain confidentiality and anonymity.

The Questionnaire

The design of the questionnaire was governed by two seemingly contradictory requirements—to cover as much relevant material as possible, while keeping the questionnaire to a reasonable length. The final version incorporated questions developed from responses to in-depth interviews and from previous qualitative research on the contextual and structural issues thought to influence young people's sexual behavior.

Section 1 covered basic demographic items, such as age, sex, family composition, nationality, ethnicity and level of socioeconomic deprivation (derived from respondents' postal codes, which were matched to census wards). Sections 2 and 3 asked respondents the extent to which they agreed (using a seven-point scale, from strongly disagree to strongly agree) with statements about their relationships with their parents and friends during their primary school years (ages 5–11) and their early secondary school years (ages 11–15). These included statements about having a warm relationship with one's parents; having parents who are trusting, are available, are open to discussing sexual matters and have portrayed sexual matters in a positive light; finding it easy to make friends; and being at ease and comfortable with members of the opposite sex.

Section 4 of the questionnaire assessed respondents' knowledge of and attitudes toward sexual health matters. In section 5, sexually experienced respondents were asked about their first sexual partner, about their feelings before and after their first coitus, whether they had expected to have intercourse on that occasion, and the amount of discussion about contraceptive use they had had with their partner before sex. They were also asked whether they had visited a provider (i.e., a general practice, family planning clinic or young people's advisory service) for contraceptive counseling or services and the timing of that visit relative to first sex, whether they used a modern method[†] the first time and their reasons for deciding to have sex.

For this last variable, respondents were asked to check all reasons that applied from a list of possible answers; they could write in additional reasons, if necessary. We categor-

ized the responses as intimate reasons (e.g., they loved their partner, desired intimacy or viewed sex as part of the natural progression of the relationship) or other reasons (e.g., peer or partner pressure, intoxication, curiosity or the desire to lose one's virginity). We then tallied the number of reasons respondents gave in each category to create two scores reflecting reasons for deciding to have sex the first time (i.e., intimate or other).

Finally, although there were two additional sections of the questionnaire, one focusing on respondents who had never had intercourse and the other on respondents' sexual experiences short of intercourse, we do not present results from these sections in this article.

Analytic Techniques

We analyzed the questionnaire data using an adaptation of the framework for heterosexual risk developed by Ingham and colleagues.²⁴ Binary logistic regressions, one for males and one for females, were fitted to the data to identify predictors of modern contraceptive use at first intercourse and of discussion of contraceptive use before first coitus. The models were built using both forward and backward conditional stepwise selection procedures; we initially entered factors that were significant at $p \leq .05$ into the models and removed them once they become only marginally significant.

We used the responses to sections 1–5 of the questionnaire to categorize the data into antecedent (background) factors, intermediate (referring to social and cultural contexts) factors and immediate (individual- and relationship-specific) factors.[‡] The first model incorporated immediate factors only, the second model added the intermediate factors and the third model also considered antecedent factors; the findings discussed in the results section refer to those from the third, fully adjusted model. We also tested for interactions between the variables; none were significant. All statistical analyses were performed using SPSS software (version 10.0).

*In the British educational system, sixth-form colleges are institutions that specialize in the highest two grades of secondary school and in providing vocational training. (Most sixth-form college students are aged 16–18.)

[†]We defined modern methods as the IUD and all barrier and hormonal methods.

[‡]The antecedent factors were level of social deprivation, ethnicity, nationality, availability of parents, warmth of parental relationship, a composite score measuring parental contact (incorporating responses to items on availability and warmth), parental trust, closeness of friendships with members of the same sex, closeness of friendships with members of the opposite sex and ability to make friends. The intermediate factors were the amount of school-based sexuality education, the respondent's knowledge of and attitudes toward sexual matters, their use of sexual health services, parental openness to discussing sexual issues, portrayal of sex by parents, a composite score measuring parental openness and portrayal of sex, and the degree of comfort and ease in interacting with members of the opposite sex. The antecedent and intermediate factors that asked about the respondent's attitudes and relationships referred to both primary and secondary school years—with the exception of comfort and ease with members of the opposite sex, which referred only to the respondent's secondary school years. Finally, the immediate factors were age at first sex, age of first sexual partner, age difference between partners, prior knowledge of partner, length of relationship before first sex, reasons for engaging in intercourse (intimate and other), expectedness of first sex, feelings before first sex (positive and negative) and degree of communication about contraceptive use at first sex.

TABLE 1. Percentage distribution of 16–18-year-old students in 13 schools, by selected characteristics, United Kingdom, 1999

Characteristic	% (N=963)
Sex	
Male	40.2
Female	59.8
Age	
16	54.4
17	28.9
18	16.7
Race/ethnicity	
White	92.1
Black	3.6
Asian	4.3
Social deprivation level	
Low	35.7
Medium	31.0
High	33.3
Ever had sex	
Yes	43.7
No	56.2
Total	100.0

Note: Ns are reduced for the following variables because of missing observations: gender (two), ethnicity (19) and social deprivation level (185).

RESULTS

Sample Characteristics

We received 963 usable questionnaires, for a 94% completion rate. Sixty percent of usable questionnaires were returned by young women, and 40% by young men* (Table 1). More than one-half of respondents were aged 16 (54%). The vast majority were white (92%), and the sample was evenly distributed in terms of socioeconomic status (i.e., roughly one-third lived in census wards corresponding to each of the three levels of social deprivation).

Forty-four percent of the sample reported having had penetrative vaginal intercourse at least once, including 47% of males and 43% of females (not shown). Roughly one-half of young people who had ever had sex had their first experience before their 16th birthday—47% of males and 51% of females (Table 2). Eighty-eight percent of females and 83% of males reported using a modern method of contraception the first time they had sex. However, 42% of men and 27% of women reported not discussing at all the possibility of contraceptive use before having sex.

Mean scores on the composite measure of parental warmth and availability (based on responses to four statements) were significantly lower among sexually experienced than inexperienced respondents during both their primary school years (means of 22.6 vs. 23.8, out of a possible 28.0) and their early teenage years (22.1 vs. 23.3). However, social interaction composite scores (based on responses to two statements on friendship patterns) were significantly higher among sexually ex-

*We obtained this skewed sample because although both single-sex and mixed-schools were sampled, more girls' than boys' schools elected to participate.

perienced than inexperienced respondents in their primary school years (means of 11.3 vs. 10.9, out of a possible 14.0), as well as in their early teenage years (8.8 vs. 8.0). There was no significant difference by sexual experience, however, in the score that measured parental openness to discussing sexual matters.

Determinants of Contraceptive Use

• *Young men.* Age at first intercourse had only a marginally significant impact on the odds of using a modern method at first intercourse. A young man's ability to communicate about contraception significantly increased those odds, however (Table 3). Although the amount of communication that took place can be subjective (i.e., one man's "a little" can be another's "a lot"), the results of the logistic regression emphasize the positive impact that communicating about contraceptive use before sex has on actual use. For example, once all other factors had been accounted for, young men who discussed contraception "a little" before first having sex had significantly elevated odds of using a method the first time, compared with those who did not discuss the prospect of use at all (odds ratio, 13.8). Discussing contraception "a lot" was only marginally significant in predicting whether males practiced contraception that first time, although the numbers in this group were small.

We included scores tallying both intimate and other reasons young people gave for having sex in the regression analysis; the results were significant only for the intimate reasons score. Young men who gave one intimate reason for having sex had significantly higher odds of using a

TABLE 2. Percentage distribution of sexually experienced students, by selected characteristics, according to gender

Characteristic	Males (N=178)	Females (N=243)
Age at first sex		
<16	46.6	51.4
≥16	53.4	48.6
Duration of relationship before first sex		
≤1 day	27.3	10.9
2 days–4 weeks	26.8	16.4
5–12 weeks	15.1	21.8
13–26 weeks	18.0	32.8
≥27 weeks	12.8	18.1
Used modern method at first sex		
Yes	82.8	88.0
No	17.2	12.0
Discussed contraceptive use before first sex		
Not at all	42.3	27.0
Sort of	15.4	14.1
A little	26.9	28.2
A lot	15.4	30.7
Visited service provider		
Before first sex	12.0	22.5
After first sex	12.0	51.7
Not at all	76.0	25.8
Total	100.0	100.0

Note: Ns are reduced for the duration of relationship variable by six for males and five for females.

method at first intercourse than young men who gave no intimate reason (6.4).

The final significant predictor of contraceptive use at first coitus among males was having parents who portrayed sex positively during their primary school and early teenage years. Scoring higher on the measure indicating greater agreement with the statement “I got the impression from my parents that sex was nice/pleasurable” significantly increased the odds of having used a method (1.2).

• *Young women.* The results of the logistic regressions for young women differed considerably from those for young men. Only one variable emerged as a significant independent predictor for both sexes—the degree of discussion about contraception preceding first intercourse—and its impact appears to be stronger and more consistent among females than it was among males. Compared with young women who reported no communication, those who discussed contraception with their partner “a little” before first sex had six times the odds of using a method the first time, and those who discussed it “a lot” had 15 times the odds (Table 3).

Moreover, while age at first intercourse was only marginally significant among young men, it emerged as a significant predictor of use among young women. The odds of method use increased by 76% with each year older a young woman was when she first had intercourse.

Three additional variables were significant for females: whether they expected to have sex the first time, their score on the scale measuring comfort and ease of interacting with boys during early adolescence, and whether they visited a provider and the timing of that visit relative to first sex. For example, after all other factors were controlled for, young women who had “sort of” or not at all expected to have sex had significantly lower odds of contraceptive use than those who expected it to happen (odds ratios, 0.2 and 0.4). Moreover, the composite scale measuring the young woman’s skills in interacting with male friends was positively associated with the likelihood of contraceptive use (1.2).

Finally, once all other factors were accounted for, young women who had not visited a sexual health care provider had, unexpectedly, significantly higher odds of using a contraceptive than those who saw a provider after they first had sex (5.0). During the early stages of the analyses, our findings on this measure were consistent with those of previous research²⁵—namely, young women who visited a provider before engaging in first sex had higher odds of contraceptive use than those who made their first visit after the event or who never visited a provider. The contradictory result in the final model, however, suggests that young women who had never seen a provider had particularly elevated odds of using a method at first sex.

Analysis by the specific method used revealed that condom use varied significantly by visit status; women who had never been to a provider were more likely to have used a condom than were those who had made such a visit, regardless of the timing relative to sexual debut (95% vs. 81–83%, $\chi^2=6.6$, $p=.04$). Given the general availability of condoms from commercial outlets in the United Kingdom,

TABLE 3. Odds ratios from logistic regression analyses predicting the effects of various characteristics on the likelihood of contraceptive use at first intercourse, by gender

Characteristic	Odds ratio
Males (N=170)	
Age at first sex	1.36†
Discussed contraceptive use before first sex	
Not at all (ref)	1.00
Sort of	5.65*
A little	13.80*
A lot	6.13†
No. of intimate reasons for having sex	
0 (ref)	1.00
1	6.35*
2	1.89
Sex positively portrayed by parents	1.16*
Constant	0.06
-2 log likelihood	105.9
df	7
Females (N=235)	
Age at first sex	1.76*
Visited service provider	
Before first sex	2.34
After first sex (ref)	1.00
Not at all	4.98*
Expected to have sex at the time	
Yes (ref)	1.00
Sort of	0.16*
No	0.37*
Discussed contraceptive use before first sex	
Not at all (ref)	1.00
Sort of	1.88
A little	6.24**
A lot	14.96**
Ability to interact with the opposite sex	1.19*
Constant	0.00
-2 log likelihood	118.1
df	9

* $p<.05$. ** $p<.01$. † $p<.10$. Note: ref=reference category.

this result requires fuller exploration of the opportunities and obstacles young people face in accessing both barrier and clinical methods.

Determinants of Discussion

The single determinant of use that remained significant throughout the analyses for both sexes was the degree of communication about contraception. The finding that a young person’s ability to discuss contraception was so highly predictive of actual use led us to hypothesize that antecedent and intermediate factors affected contraceptive behavior by influencing young people’s ability to communicate about using a method. To test this hypothesis, we ran two additional logistic regression models (one for males and one for females), with discussion about contraception as the dependent variable.

Unfortunately, once we disaggregated the sample by degree of communication, the small numbers in each category prevented us from running ordinal logistic regression models. We thus reclassified the categories to enable binary logistic models to be fitted; these categories were no discussion versus discussion. The analyses of the determinants of discussion controlled for nearly all the antecedent, intermediate and immediate variables; we excluded, however, the timing of a visit to a service provider and the ex-

TABLE 4. Odds ratios from logistic regression analyses predicting the effects of various characteristics on the likelihood of discussing contraceptive use before first intercourse, by gender

Characteristic	Odds ratio
Males (N=161)	
Social deprivation level	
Low (ref)	1.00
Medium	0.70
High	0.12**
Missing values†	0.37*
Duration of relationship before first sex	
≤1 day (ref)	1.00
2 days–4 weeks	4.09**
5–12 weeks	8.08**
13–26 weeks	8.69**
≥27 weeks	60.99**
Missing values†	4.14
Parents' openness to discussing sex	1.14**
Constant	1.68
–2 log likelihood	183.7
df	9
Females (N=237)	
No. of intimate reasons for having sex	
0 (ref)	1.00
1	4.16**
2	8.76**
Parental contact score‡	1.04**
Constant	1.08
–2 log likelihood	272.9
df	3

*p<.05. **p<.01. †Refers to individuals who did not provide a valid response, who were nonetheless kept in the analysis to maintain the original sample size. ‡Composite score based on measures of parental availability and warmth during primary school years and early adolescence. Note: ref=reference category.

pectedness of first intercourse because of multicollinearity.

- *Young men.* Males' ability to communicate with their partner about contraception before first sex appears to be associated with their level of social deprivation: Young men with the highest level of social deprivation had significantly lower odds of talking about contraceptive use than those who lived in the least socially deprived neighborhoods (odds ratio, 0.1–Table 4). Furthermore, as might be expected, the longer a couple had been in a relationship before having sex, the greater the odds that they discussed contraception beforehand. For example, the odds of discussing contraception were eight times as high among young men who had been in a relationship for 5–12 weeks as among those who knew their partner for only one day. Finally, a young man's capacity to communicate about contraceptive use before he first had sex was associated with having parents who were very open to talking about sexual matters during the primary school and early teenage years.

- *Young women.* Reporting intimate reasons for having sex significantly increased the odds that a young woman would discuss contraception before her first coitus. For example, young women who cited one intimate reason had 4.2 times the odds of discussing contraception, and those who cited two such reasons had 8.8 times the odds, of women who cited none. Furthermore, young women who reported having a warmer relationship with more available parents also had significantly elevated odds of discussing contraceptive use with a partner before first having sex.

DISCUSSION

Although quantitative analyses of survey data have deepened our understanding by successfully identifying many demographic, socioeconomic and background factors associated with young people's sexual behavior, much of this research has failed to consider the broader social contexts in which young people have sex, as identified through in-depth qualitative research. One of the aims of our study was to try to redress this imbalance and capture through a survey format some of these wider processes that appear to have an impact on young people's sexual behavior.

Even though we recognize that our analyses are based on a relatively small sample that was not nationally representative (i.e., students were not randomly selected, and we did not sample those who were not enrolled in school full-time), the results highlight several key issues that merit further attention and that have a direct bearing on health promotion activities for young people. Indeed, although we recommend that future research address the points raised in our study across a more representative sample, we believe that the relationships we found in our sample can be accepted with confidence.

The results from our study clearly show that young people's ability to communicate is central to their use of a modern method. Young men who report feelings of love, fondness and intimacy as reasons for having sex the first time, and who thus do not fit stereotypes of masculinity, have significantly elevated odds of using a method at their sexual debut. Similarly, young women who say that they expected to have sex the first time, who appear to have taken control in discussing contraception and who feel comfortable (and presumably sufficiently empowered) in the company of young men, also have elevated odds of using a method at their sexual debut.

Our study also reveals the importance of parents in equipping their children with the skills to communicate and interact effectively with future sexual partners. Parents' willingness and ability to discuss sexuality openly and portray it in a positive light throughout their children's lives appear to impart both competence and confidence. In contrast, reluctance to talk about sexual matters and embarrassment in doing so reinforce negative messages of unacceptability and prohibition.

We also found that parents' openness and warmth and availability during their children's primary school years and early teenage years is key to young people's future contraceptive behavior. This finding is particularly pertinent for young men living in especially deprived neighborhoods, who appear to be less skilled and less willing than their more affluent counterparts to communicate with a first sexual partner. For these young men, engaging in this type of dialogue may threaten and challenge the gender stereotypes that their social environment reinforces.

In light of these findings, efforts to increase young people's competence to insist on contraceptive use, and thus reduce unintended pregnancies and sexually transmitted infections, should be multifaceted. Our different results by

gender suggest that efforts need to be directed to challenging gender stereotypes and assumptions through gender-sensitizing activities and skills-based training in communication among young men as well as young women. Adults should also endeavor to provide a supportive climate where talking about sexual issues is acceptable, and where both parents and children feel comfortable talking openly about sex.

In the United Kingdom, as in many other countries, gatekeepers in the home, schools and elsewhere often are reluctant to acknowledge teenage sexuality and to foster a more open environment for discussing related issues. Indeed, as the British government increases its efforts to introduce more effective school-based relationship education, to encourage parents to discuss issues more with their children and to develop more youth-friendly services, a backlash has opposed these developments. For example, abstinence proponents have challenged government policies, arguing that more openness leads to earlier sexual experimentation. Our results will inform this debate by presenting evidence rather than rhetoric and by pointing to future policy directions.

REFERENCES

1. Kane R and Wellings K, *Reducing the Rate of Teenage Conceptions: Data from Europe*, London: Health Education Authority, 1999.
2. Office for National Statistics, *Population Trends*, London: Her Majesty's Stationery Office (HMSO), Spring 2001, No. 103.
3. Henshaw S, U.S. teenage pregnancy statistics, with comparative statistics for women aged 20–24, New York: The Alan Guttmacher Institute (AGI), 2001.
4. Phoenix A, *Young Mothers?* Cambridge, UK: Polity Press, 1991.
5. Botting B, Rosato M and Wood R, Teenage mothers and the health of their children, *Population Trends*, London: HMSO, Autumn 1998, No. 93; Kiernan KE, Becoming a young parent: a longitudinal study of associated factors, *British Journal of Sociology*, 1997, 48(3):406–428; Biehal N et al., *Prepared for Living? A Survey of Young People Leaving the Care of Local Authorities*, London: National Children's Bureau, 1992; and Kiernan KE, Transition to parenthood: young mothers, young fathers—associated factors and later life experiences, Welfare State Programme Discussion Paper, London: London School of Economics, 1995, No. 115.
6. Hobcraft JN and Kiernan KE, Childhood poverty, early motherhood and adult social exclusion, Case Paper, London: Centre for Analysis of Social Exclusion, London School of Economics, 1999, No. 28; Allen I and Bourke Dowling S, *Teenage Mothers: Decisions and Outcomes*, London: Policy Studies Institute, 1998; and National Health Service (NHS) Centre for Reviews and Dissemination, Preventing and reducing the adverse effects of unintended teenage pregnancies, *Effective Health Care Bulletin*, 1997, 3(1):1–12.
7. Social Exclusion Unit, *Teenage Pregnancy*, London: HMSO, 1999.
8. Ingham R and Van Zessen G, Towards an alternative model of sexual behaviour; from individual properties to interactional processes, in: Van Campenhoudt L et al., eds., *Sexual Interactions and HIV Risk: New Conceptual Perspective in European Research*, London: Taylor and Francis, 1997; and Ingham R, Some speculations on the concept of rationality, in: Albrecht G, ed., *Advances in Medical Sociology, Vol. IV: A Reconsideration of Health Behavior Change Models*, Greenwich, CT: JAI Press, 1994.
9. Johnson AM et al., *Sexual Attitudes and Lifestyles*, Oxford, UK: Blackwell Scientific, 1994; and Wellings K et al., Sexual behaviour in Britain: early heterosexual experience, *Lancet*, 2001, 358(9296):1843–1850.
10. Wellings K et al., 2001, op. cit. (see reference 9).

11. Stone N and Ingham R, *Young People's Sex Advice Services: Delays, Triggers and Contraceptive Use*, London: Brook Publications, 2000.

12. Coleman L and Ingham R, Attenders at young people's clinics in Southampton: variations in contraceptive use, *British Journal of Family Planning*, 1998, 24(3):101–104.

13. Stone N and Ingham R, 2000, op. cit. (see reference 11).

14. Dickson N et al., First sexual intercourse: age, coercion, and later regrets reported by a birth cohort, *British Medical Journal*, 1998, 316(7124):29–33.

15. Coleman L and Ingham R, 1998, op. cit. (see reference 12); Donald M et al., Determinants of condom use by Australian secondary school students, *Journal of Adolescent Health*, 1994, 15(6):503–510; Hillier L, Harrison L and Warr D, "When you carry condoms all the boys think you want it": negotiating competing discourses about safe sex, *Journal of Adolescence*, 1998, 21(1):15–29; Shoop DM and Davidson PM, AIDS and adolescents: the relation of parent and partner communication to adolescent condom use, *Journal of Adolescence*, 1994, 17(2):137–148; and Lear D, Sexual communication in the age of AIDS: the construction of risk and trust among young adults, *Social Science and Medicine*, 1995, 41(9):1311–1323.

16. Whitbeck LB et al., Early adolescent sexual activity: a development study, *Journal of Marriage and the Family*, 1999, 61(4):934–946; and MacDonald TK et al., Alcohol, sexual arousal, and intentions to use condoms in young men: applying alcohol myopia theory to risky sexual behavior, *Health Psychology*, 2000, 19(3):290–298.

17. Aggleton P, Oliver C and Rivers K, *Reducing the Rate of Teenage Conceptions: the Implications of Research into Young People, Sex, Sexuality and Relationships*, London: Health Education Authority, 1998.

18. Kiernan KE and Hobcraft JN, Parental divorce during childhood: age at first intercourse, partnership and parenthood, *Population Studies*, 1997, 51(1):41–55.

19. Rutter M et al., Heterogeneity of antisocial behavior: causes, continuities, and consequences, in: Osgood W, ed., *Nebraska Symposium on Motivation*, vol. 44, Lincoln, NE: University of Nebraska Press, 1997, pp. 45–118; and Maughan B and McCarthy G, Childhood adversities and psychosocial disorders, *British Medical Bulletin*, 1997, 53(1):156–169.

20. Shoop DM and Davidson PM, 1994, op. cit. (see reference 15); and Rogers Gillmore M et al., Substance use and other factors associated with risky sexual behavior among pregnant adolescents, *Family Planning Perspectives*, 1992, 24(6):255–261 & 268.

21. Holland J et al., *The Male in the Head: Young People, Heterosexuality and Power*, London: Tufnell Press, 1998.

22. Ingham R and Van Zessen G, From cultural contexts to interactional competences, paper presented at the AIDS in Europe: Social and Behavioural Dimensions conference, Paris, Jan. 12–16, 1998.

23. Ingham R, Interactional competence as a cultural phenomenon: the case of the UK and the Netherlands, paper presented at the annual meeting of the Population Association of America, Los Angeles, Mar. 23–25, 2000.

24. Ibid.

25. Stone N and Ingham R, 2000, op. cit. (see reference 11).

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