

Sexual Activity and Contraceptive Knowledge and Use Among In-School Adolescents in Nigeria

By Uche Amazigo, Nancy Silva, Joan Kaufman and Daniel S. Obikeze

Among 2,460 secondary school students surveyed in two southeastern Nigerian states, only 36% could correctly identify the most likely time for conception to occur. Female students were considerably more likely than males to understand the timing of conception (46% vs. 25%); less dramatic differences emerged by students' residence and grade in school. Among students who supplied information about their sexual activity, 40% had had intercourse; the proportion who were sexually experienced climbed from 26% of 14-year-olds to 54–55% of 18–19-year-olds. While 36% of the young women had had sexual partners who were roughly their age, 25% had been involved with older businessmen; the young women said they have intercourse more frequently and are less likely to restrict intercourse to the safe period of their cycle when they are involved with older partners than when they have boyfriends their own age. Only 17% of sexually active students had ever used a contraceptive method other than abstinence. In focus groups and in-depth discussions, students expressed a strong desire for better education about contraception and the consequences of sexual intercourse, and recommended that both schools and parents participate in educating young people about reproductive health.

(International Family Planning Perspectives, 23:28–33, 1997)

As morbidity and mortality among adolescents increasingly become a focus of research and policy initiatives in developing countries, the problems of teenagers' unprotected sexual activity, low contraceptive use, rising pregnancy rates and reliance on clandestine abortion become readily apparent. In Nigeria, where the National Policy on Population specifies the reduction of teenage pregnancy as a target to be met by the year 2000, the gravity of the problem is highlighted by results of the 1990 Demographic and Health Survey (DHS).¹ At the time of the survey, nearly 40% of all teenage women in Nigeria either had given birth or were expecting their first child.

Few statistics are available on adoles-

cent sexuality and pregnancy in Nigeria, but information on reproductive tract infections and clandestine induced abortion among young women confirms that a serious problem exists. For example, in a study of reproductive tract infections among adolescents in a rural community,² 80% of women aged 17–19 interviewed said they were sexually active, and 29% of those younger than 19 had had an induced abortion. Physical examinations revealed that 40% of women younger than 19 had a reproductive tract infection.

A ministerial inquiry on maternal health in Nigeria reported that an estimated 500,000 clandestine induced abortions occurred in 1980 and that such procedures were the main cause of death among unmarried women between the ages of 15 and 24.³ Several investigators have found that teenagers represent a large proportion of the women admitted to hospitals for complications following clandestine abortions. In an Ile-Ife study of 13 hospitalized women who died from complications of abortion, nine were aged 21 or younger.⁴

Similarly, in Benin City, Nigeria, among 140 women with gynecologic conditions, 59 had complications following clandestine abortions. Some 53% of those who had complications were aged 14–17, and 37% of these young women had had at least one

previous abortion.⁵ Interviews with 127 adolescents in the gynecology and maternity wards of three hospitals in Benin City revealed that 99% had been admitted for complications of induced abortions. Of these, 36% had been pregnant before.⁶

The evidence regarding abortion among adolescent women is consistent with reported increases in adolescent premarital sexual activity.⁷ Among young women participating in a study of factors associated with adolescent pregnancy in rural Nigeria,⁸ 70% did not know about contraception and only 10% could identify the monthly fertile period. Additionally, only 16% of adolescents in the sample were using contraceptives, and more than 80% of those who were pregnant had not intended to conceive.

In a study of female postsecondary students in Enugu State, Nigeria, 21% of respondents reported having had an unwanted pregnancy and 18% said they had had an induced abortion.⁹ In all, 51% had never used a contraceptive method, and 76% had not used a method the first time they had intercourse; 60% of those who had ever used a method had first done so between the ages of 20 and 24. Some of the students reported using rhythm and barrier methods, and some had fears resulting from their misperceptions about contraception.

A survey of secondary students, university students and nonstudent adolescents in Ibadan revealed that while more than 90% of young men and women considered themselves informed about reproductive health, 27% of those in secondary school could identify the monthly fertile period.¹⁰ Among young women in secondary school, 44% had been pregnant, and nearly all of these had had an induced abortion. Unfortunately, these women did not become more likely to use contraceptives after having an abortion. In fact, those who had had abortions were less likely to use a method than those who had not. The young women said a lack of family planning information was to blame for their nonuse of contraceptives.

Among one group of college students surveyed, substantial proportions of respondents were aware that having mul-

Uche Amazigo is senior lecturer, Department of Zoology, University of Nigeria, Nsukka; Nancy Silva is an independent consultant, Boston, Mass., USA; Joan Kaufman is senior associate, Abt Associates, Cambridge, Mass., USA, and lecturer on population, Harvard School of Public Health, Boston, Mass.; and Daniel S. Obikeze is professor, Department of Sociology / Anthropology, University of Nigeria, Nsukka. The funding for this study was provided by the John D. and Catherine T. MacArthur Foundation. The authors thank Joseph Okeibunor and Nkechi Onah, Department of Sociology / Anthropology, University of Nigeria, Nsukka, for their assistance in data collection, and Alice Ndu, director-general, Anambra State Ministry of Education, for making the ministry's resources available. They also thank the secondary schools and education ministries in Anambra and Enugu states for their cooperation.

multiple sexual partners could lead to sexually transmitted diseases (STDs—50–60%), infertility (30%) and abortion (50–56%).¹¹ The majority attributed such behavior, in part, to a lack of parental and teacher supervision. Focus-group discussions with adolescents in Zaria and Ibadan revealed that most students learned about reproductive biology in school, but that they wanted more relevant information on pregnancy prevention.¹² Young women from Ibadan reported many negative consequences associated with early childbearing and could name several methods of contraception, but the majority were not in favor of contraceptive use. Adolescents were often more informed about abortion and its consequences than about family planning methods.

Reproductive health information is not always readily available to adolescents in Nigeria.¹³ According to the DHS, 31% of Nigerian women aged 15–19 know of a modern method of contraception, and 23% of these are aware of a source of family planning services. It appears that reproductive education available to adolescents is based primarily on inadequate and inaccurate information from friends and peers. In an adolescent sexuality survey, respondents ranked parents low as a source of accurate information.¹⁴ Some attempts to disseminate information through filmed messages have been successful,¹⁵ but they have been restricted to adolescents in urban and semiurban areas who have access to television or can afford visits to movie houses.

The urgent need to address teenage pregnancy with locally developed, culturally appropriate, accurate educational materials on reproductive health, sex education and STDs is well recognized.¹⁶ Most of the studies cited above have echoed the recommendation for reproductive health education for adolescents.

In this article, we describe the levels of knowledge and behavior with regard to sexuality, conception and contraception among teenagers attending school in the southeastern Nigeria states of Anambra and Enugu. This information will serve as the basis for an intervention that will provide appropriate reproductive health messages to adolescents.

Methodology

Sample Design

We chose Anambra and Enugu because these two states (which until 1991 were one) are representative of southeastern Nigeria. They are inhabited mainly by people of Ibo ethnicity, and their popula-

tions have similar cultural, social, economic and religious characteristics.

Nigerian women aged 15–19 have a higher risk of unwanted pregnancy than women in any other age-group.¹⁷ In the southeastern states, 17% of teenagers had had a child or were pregnant with their first one at the time of the DHS.¹⁸ Therefore, it is imperative to address teenage pregnancy in the early years of senior secondary school. Consequently, this study was restricted to students in senior secondary school classes 1 and 2 (SSS1 and SSS2), which are equivalent to U.S. high school grades 10 and 11, respectively.

In 1993, there were 225 secondary schools with a total enrollment of about 114,000 in Anambra and 261 secondary schools with roughly 290,000 students in Enugu.¹⁹ To estimate an appropriate sample size, we assumed that 30% of students had an accurate understanding of reproductive health, but that an educational intervention would raise the level to 50%. The sample size within four percentage points of 50% with a 95% confidence interval for the cluster sampling technique is 612. For a cluster sampling technique, the design effect is estimated at 2.²⁰ Hence, to increase precision, we interviewed a total of 2,460 students.

The students in the sample were drawn from 23 high schools (14 in Anambra and nine in Enugu). Of the Anambra schools, six had an all-male student body, seven had an all-female enrollment and one was coeducational; the schools were evenly divided between urban and rural areas. In Enugu, four schools each were all-male and all-female, and one was coeducational; four were in rural areas and five were located in cities.

In addition, 18 members of the communities in which the schools were located participated in various aspects of the study: two midwives, two medical doctors and five patent dealers (unlicensed and untrained medicine providers), who were randomly selected; two male and two female high school students, chosen from among a group of volunteers on the basis of their age and their grade in school; and five female dropouts, identified through school records.

Data Collection

We used a variety of methods for collecting data: a questionnaire, in-depth interviews, focus groups and student essays. A sample questionnaire was developed and pilot-tested in one urban and one rural school in each state. The final questionnaire included 76 closed- and open-ended items

addressing adolescents' perceptions and practices concerning sexuality, pregnancy, contraceptive methods, abortion and STDs. Interviewers were trained during a two-day workshop. Male interviewers worked at all-male schools, and female interviewers worked at all-female schools; one male and one female interviewer were sent to coeducational schools.

In-depth interviews were conducted with the 18 community members. Ten of these interviews were in Anambra and eight in Enugu. Each in-depth interview lasted 60–90 minutes. Interviews with adolescents ascertained their contraceptive knowledge and use, their involvement in sexual relationships that might lead to pregnancy and their pregnancy experience. Interviews with midwives, doctors and patent dealers were aimed at collecting detailed information on teenage pregnancy, abortion and STDs.

Thirteen focus-group discussions were held—four with female and three with male students, four with patent dealers, and one each with midwives and doctors. Seven focus groups took place in Anambra and six in Enugu. Each focus group consisted of 6–8 participants. All of the adolescent groups and two of the patent groups permitted us to tape-record the discussions; the others allowed only note-taking. The contents of the discussions were transcribed daily.

SSS2 students in Anambra were also asked to participate in an essay-writing competition about the major causes and consequences of teenage pregnancy and abortion for Nigerian students. (The contest was restricted to SSS2 students because they are older and presumably more experienced. It was held only in Anambra because schools in Enugu were closed as a result of political unrest at the time of the study.) Of the 1,000 essays submitted, the best 100 were chosen, and these students were asked to write about ways to demonstrate the social and health consequences of pregnancy and abortion for in-school adolescents. The best three essay writers received a citation from the commissioner of education, and another 20 received honorable mention.

Data from the questionnaire were coded and then entered into a computer using EPI-INFO software. Results included simple percentages, descriptive measures and chi-square tests. Correlation analyses were undertaken to establish relationships among variables. Tape recordings and notes from focus groups and in-depth interviews were studied through content analyses.

Table 1. Percentage of students who know when conception is most likely to occur and percentage who are sexually active, by selected characteristics, Anambra and Enugu states, Nigeria, 1994

Characteristic	Understand conception		Sexually active	
	N	%	N	%
All	2,460	36.0	1,655	40.0
School location				
Urban	1,506	37.8**	1,102	39.2
Rural	954	32.6	553	41.6
Gender				
Female	1,278	46.1**	875	40.1
Male	1,182	24.7	780	39.9
Class				
SSS1	1,200	33.3**	772	37.0*
SSS2	1,260	38.2	883	42.6

*Difference is significant at $p < .05$. **Difference is significant at $p < .01$.

Results

Characteristics of the Sample

Of the 2,460 students in the sample, 52% were females and 48% were males. Some 39% attended schools in rural areas, and 61% went to urban schools. In all, 6% were 10–14 years old, 80% were 15–17, 12% were 18–25 and 2% did not disclose their age. Virtually all of the students were single and had no children (99% in each case). Sixteen students—13 single females, two married males and one separated female—had children. The teenagers were roughly evenly divided between SSS1 (49%) and SSS2 (51%). They were primarily Christian (59% Catholics and 34% Anglicans); 1% were Muslim and 6% adhered to traditional religions or no religion.

Knowledge of Conception

To assess adolescents' understanding of conception, the questionnaire asked students to identify when a woman was most likely to become pregnant if she had intercourse: during ovulation, during menses, after menses or before menses. Only 36% of these teenagers had an accurate understanding of the fertile period (Table 1). (About 60% gave an incorrect answer, while 5% did not respond.) The proportion who correctly identified the fertile period was significantly higher among urban than rural students (38% vs. 33%), among females than males (46% vs. 25%) and among students in grade SSS2 than those in SSS1 (38% vs. 33%).

Among female respondents, the proportion who understood when conception is most likely to occur was significantly higher in grade SSS2 than in SSS1 (53% vs. 40%), while among males, the proportion did not differ by grade (not shown). Age

was not a factor in the students' understanding of conception.

Prevalence of Sexual Activity

Of the 1,655 students who provided information regarding their sexual activity, 40% said that they had had intercourse (Table 1). There was no difference by school location or gender in the proportion of students who were sexually experienced. However, SSS2 students were significantly more likely than SSS1 students to be sexually active (43% vs. 37%). Students' religious affiliation did not appear to play a role in their level of sexual activity (not shown): Similar proportions of Catholic and Anglican students had had intercourse (42% and 37%, respectively).

The proportion of students who were sexually active rose steadily with age, from 26% among 14-year-olds to 54–55% of 18–19-year-olds (Figure 1). The relationship between age and sexual activity varied by gender, however. Whereas the level of sexual activity was fairly stable among males aged 14–19, rising noticeably only at age 18, it increased steadily with age among women. Thus, the proportions of 14- and 15-year-olds who were sexually active were lower among girls (21% and 31%, respectively) than among boys (37% and 34%, respectively). However, as age increased, the proportion of sexually active girls surpassed that of boys: At ages 17–19, 50–70% of young women were sexually active, compared with only 40–50% of young men.

Type of Partner

Students reported that relationships in which intercourse might occur may involve two types of partners: peers and older businesspersons. Focus-group participants described peer relationships as being "for love" and relationships with businesspersons as being "for money." Male students said that young women become involved with businessmen because girls "need money to buy makeup" and "to fashion up and show off," and that businessmen are "money providers." The young men did not consider such relation-

ships prostitution. Female students confirmed that girls have these relationships, beginning in about grade SSS1, because they need money when they start to feel like adults. Students did not discuss the relationship between male students and older businesswomen.

In all, 36% of young women and 32% of young men had ever been involved in a relationship with someone roughly their age. Some 25% of females and 2% of males had been involved in a relationship with an older businessperson. The prevalence of intercourse varied significantly according to the type of partner adolescents reported. Young women who had had relationships with older businessmen were more likely to be sexually experienced than were those whose only relationships with males involved peers (78% vs. 60%). For male students, by contrast, the difference was not as striking (58% vs. 62%).

Many students acknowledged sometimes having concurrent sexual relationships with more than one partner. Overall, 11% often or very often had multiple sexual relationships, and another 11% did so on rare occasion. Male students were more likely than their female counterparts to report multiple relationships (25% vs. 19%).

In focus groups, male students explained that young women need to have multiple sex partners—often an older businessperson and a peer—for "love and money."

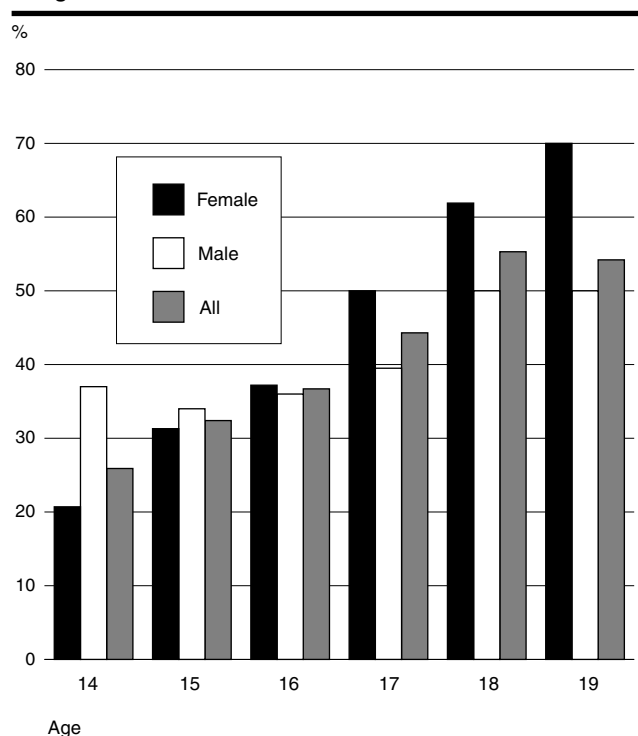
Figure 1. Percentage of students who are sexually active, by age and gender

Table 2. Percentage distribution of sexually active students, by frequency of intercourse, according to age and, for females, type of partner

Frequency of intercourse	All (N=653)	Age					Type of partner	
		14 (N=21)	15 (N=100)	16 (N=205)	17 (N=177)	18 (N=103)	Male peer (N=355)	Older male (N=148)
At every meeting	12.4	14.3	8.0	11.2	13.3	14.6	10.4	12.2
Once a week	10.5	14.3	14.0	11.2	7.8	9.7	9.0	14.2
2-3 times a week	4.7	9.5	4.0	4.9	3.9	4.8	4.5	4.1
Once a month	23.3	9.5	22.0	19.5	28.2	26.3	18.0	40.5
During safe period	32.6	38.1	32.0	36.1	31.6	28.1	38.9	20.2
During holidays	16.5	14.3	20.0	17.1	15.2	16.5	19.2	8.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: The total N excludes nine sexually active students who were younger than 14 or older than 18.

Furthermore, they said that a girl "can't stay with one man because one day he will disappoint her." Young men suggested that they themselves have multiple partners because it is more enjoyable. Female participants noted that girls sometimes befriend older male students to obtain help in passing their exams. Female students also confirmed that high school girls befriend businessmen "because of money."

Frequency of Intercourse

Sexually active students were asked how often they have intercourse when they are involved in a sexual relationship. Among those who responded to this question, 33% reported doing so "anytime during a safe period," 23% once a month, 17% during holidays and 11-12% once a week or every time they see their partner (Table 2). The frequency of intercourse increased from age 15 to 18. For example, the proportion who reported having intercourse every time they see their partner was only 8% among 15-year-olds but rose to 15% among 18-year-olds.

For female students, the frequency of sexual intercourse was also dependent on the type of partner involved (Table 2). Compared with young women who have had relationships with businessmen, those who have been involved with male peers were more likely to say they have intercourse during the safe period (39% vs. 20%) and during holidays (19% vs. 9%). On the other hand, female students who have had relationships with businessmen were more likely to report having intercourse monthly (41%) than were those with peer partners (18%).

During in-depth interviews, male students and patent dealers suggested that high school students are most likely to become pregnant in November and December, confirming that students' levels of sexual activity are relatively high during the holidays. According to the young men, this is because with young people returning home for the holidays, students

see old friends from whom they have been separated. Patent dealers added that condom sales are highest in December and requests for help for abortion are most frequent in January and February. The teenagers also identified Valentine's Day as, in one student's words, "a special day" to engage in intercourse.

Sex and Knowledge of Conception

Of the 662 students who reported being sexually active, 37% understood when conception is most likely to occur (Table 3). The proportion was considerably higher among females than among males (50% vs. 23%). Among young women who both understood conception and were sexually active, 63% were in SSS2 (not shown). Males who understood conception and were having sexual relationships were evenly distributed between SSS1 and SSS2.

It was also of interest to determine what proportion of students who were misinformed about conception were engaging in sexual activity. Our data suggest that of the 1,056 students who could not identify the fertile period and who provided information about their sexual activity, 40% were sexually experienced. The proportion was 37% among females and 41% among males.

Contraceptive Use

Asked to name one method of contraception they had ever used to avoid pregnancy, 15% of sexually active students reported having used condoms, 2% abstinence, 2% the pill and fewer than 1% the injectable; 10% said they had used no method. The remainder did not respond or could not specify their method.

The pattern of ever-use was roughly the

same regardless of students' characteristics. However, the proportion of SSS2 students who had used condoms was twice that among their SSS1 counterparts (19% vs. 10%). Smaller differences in condom use were found between urban and rural students (17% and 11%, respectively), and between young men and young women (17% and 13%, respectively).

The overall level of ever-use of a contraceptive was higher among students who engaged in relationships with multiple sexual partners (20%) than among those who had one partner (14%). Ever-use of condoms also was more prevalent among students who had multiple partners (19%) than among those with one partner (12%).

Rates of ever-use of condoms among teenagers who were sexually active and who knew when conception is most likely to occur are presented in Table 4 (page 32). Like sexual activity, the use of condoms increased with age: Whereas no sexually active 14-year-olds had used condoms, 9% of 15-year-olds did, and the proportion climbed to 27% among 19-year-olds. Similarly, the proportion of sexually active teenagers who both had used condoms and understood about the fertile period rose from 2% of 15-year-olds to 10% of 18-year-olds.

Focus groups and in-depth discussions about contraception yielded information concerning alternative methods of birth control used by adolescents. In interviews, teenagers mentioned commercial products such as liver salts, broad-spectrum antibiotics and a mixture of gin and *akawu* (sodium sesquicarbonate, which is used locally to tenderize breadfruit) as contraceptive methods. Students described the gin mixture as a drink taken after sexual inter-

Table 3. Percentage distribution of students, by sexual activity and understanding of when conception is likely to occur, according to gender

Sexual activity and understanding of conception	All	Females	Males
Sexually active	(N=662)	(N=351)	(N=311)
Understand	36.9	49.6	22.5
Do not understand	63.1	50.4	77.5
Not sexually active	(N=993)	(N=524)	(N=469)
Understand	35.8	43.5	27.1
Do not understand	64.3	56.5	72.9
Understand conception	(N=599)	(N=402)	(N=197)
Sexually active	40.7	43.3	35.5
Not sexually active	59.3	56.7	64.5
Do not understand	(N=1,056)	(N=473)	(N=583)
Sexually active	39.6	37.4	41.3
Not sexually active	60.4	62.6	58.7
Total	100.0	100.0	100.0

Table 4. Percentage of teenagers who are sexually active, have ever used condoms and know when conception is most likely to occur, by age

Age	N	Sexually active	Use condoms	Use condoms & understand conception
14	22	17.3	0.0	0.0
15	100	20.8	9.0	2.0
16	206	25.8	15.0	7.7
17	180	28.9	14.4	5.5
18	105	40.5	18.1	9.5
19	26	37.7	27.0	0.0

course to "wash everything away." They also mentioned that young women often take liver salts to terminate pregnancy.

Additionally, participants discussed why a large proportion of teenagers do not use condoms. Young women noted the common fear that condoms may break during intercourse and pose potential harm to them; patent dealers were also aware of this fear among teenagers. One female student claimed that a condom had broken, fallen into her stomach and caused her to have difficulty breathing.

Another common belief, expressed by young men and young women, was that "for a boy to wear a condom, it means he does not love the girl." Male students added that many young men do not like condoms because they make intercourse less pleasurable. They also assured interviewers that the cost of condoms was not a deterrent to use. Young men who used condoms said that they did so more to avoid contracting an STD than to prevent pregnancy.

Sources of Information

Students were asked about their sources of information about the consequences of sexual intercourse. The most frequent responses were radio (78%); newspapers or magazines (73%); TV, film or drama (68%); mothers (61%); clinic personnel (60%); peers (59%); and fathers (58%). Discussions specifically about the consequences of pregnancy most often were with mothers, teachers and school guidance counselors.

These results were consistent with the content of the essays submitted for competition. Of the 100 best essays, 56 suggested that sex education should be provided in schools; many suggested the use of drama or videos. In 44 essays, students stressed parents' role in educating adolescents about the consequences of teenage pregnancy and clandestine abortion. TV, films and drama were highly recommended as teaching tools.

Focus-group discussions revealed that students learn from their reproductive bi-

ology classes in school that sexual intercourse can lead to pregnancy. Students said that instruction should include more information on the consequences of sexual intercourse and methods of contraception. They suggested that instruction include the use of videos and, especially, drama, which they described as more realistic. In both focus groups and essays, students stressed that this information would lead to a decrease in adolescent pregnancy and, therefore, abortion.

Discussion

We have observed that in this population of Nigerian secondary school students, a discrepancy exists between students' understanding of conception and their sexual behavior. While students report having learned a lot about reproductive biology in classroom instruction, only 36% understand the timing of conception. Furthermore, 40% engage in sexual relationships, but just 17% of these have ever used a contraceptive method other than abstinence. Discussions with students about why teenagers do not use contraceptives revealed unrealistic fears and demonstrated an abundance of misinformation. These results are disheartening, but they are not unexpected. Similar findings were reported in Ibadan more than a decade ago.²¹ However, the teenagers in our study clearly want more information and believe that education would prevent unintended pregnancy and abortion.

In our sample, students from every age-group and as young as 14 were sexually active. Therefore, a program should be developed to address students by age 14. Our results also demonstrate that rural teenagers and males, who are somewhat less likely than urban students and females to understand the timing of conception, may need specific targeting. Similarly, sexually active rural teenagers and grade SSS1 students are less likely than their counterparts in urban schools and grade SSS2 to use contraceptives, and thus are a potential target group for messages specifically about pregnancy prevention.

Our investigation has identified some times of the year when teenagers are particularly likely to engage in sexual intercourse. Thus, efforts to remind teenagers about the consequences of sexual behavior and ways to prevent pregnancy might be appropriate before holidays and school vacations.

We have also found that female students who have relationships with older businessmen are less likely than those who have boyfriends their age to engage in sex-

ual intercourse chiefly at a safe time during the menstrual cycle. More important, many teenagers suggested that sexual relationships between female students and older males occur mainly for monetary reasons. This "sugar daddy" relationship is not new and has been described in the literature.²² Specific educational messages addressing this type of relationship would be appropriate. For example, the schools might help students find alternative sources of spending money, such as income-generating opportunities.

Students' misperceptions about contraception were enlightening. Clearly, many adolescents do not have an adequate understanding of contraception in general; even when students did know about contraceptive methods, they had unwarranted fears about them. In particular, many teenagers thought that condoms could harm women. They also suggested that using condoms reflects a lack of love between partners. In addition, several students mentioned that teenagers often seek to prevent pregnancy by using approaches that are not effective methods of contraception. Therefore, an education program must not just teach about contraception, but must address students' misconceptions about effective methods and about alternative methods. Furthermore, given students' view that condom use implies a lack of love, messages should be developed that portray this method more positively.

Finally, the teenagers' remarks suggest several mechanisms for carrying out reproductive health education. Students emphasized that the process should involve mothers, teachers and school guidance counselors. They proposed that sex education be provided in school and stressed that parents have an important role to play in educating adolescents about the consequences of teenage pregnancy and clandestine abortion. They also highly recommended the use of video and drama as teaching tools.

Information, education and communication can increase the acceptance of family planning methods, and promoting effective contraception can prevent abortions.²³ The results of our study clearly illustrate the need for a reproductive health education program for Nigerian in-school adolescents and provide information that can be utilized to develop effective programs.

References

1. Federal Office of Statistics and Institute for Resource Development/Macro International, *Nigeria Demographic and Health Survey 1990*, Columbia, Md., USA, 1992.

2. L. Brabin, "Reproductive Tract Infections and Abortion Among Adolescent Girls in Rural Nigeria," *Lancet*, **345**:300-304, 1995.
3. T. Odejide, "Offering an Alternative to Illegal Abortion in Nigeria," *New Era Nursing Image International*, **2**:39-42, 1986.
4. F. E. Okonofua, U. Onwudiegwu and O. A. Odunsi, "Illegal Induced Abortion: A Study of 74 Cases in Ile-Ife, Nigeria," *Tropical Doctor*, **22**:75-78, 1992.
5. S. E. Okojie, "Induced Illegal Abortions in Benin City, Nigeria," *International Journal of Gynecology and Obstetrics*, **14**:517-521, 1976.
6. A. U. Oronsaye, O. Ogbeide and E. Unuigbo, "Pregnancy Among Schoolgirls in Nigeria," *International Journal of Gynecology and Obstetrics*, **20**:409-412, 1982.
7. B. Feyisetan and A. R. Pebley, "Premature Sexuality in Urban Nigeria," *Studies in Family Planning*, **20**:343-354, 1989.
8. F. E. Okonofua, "Factors Associated with Adolescent Pregnancy in Rural Nigeria," *Journal of Youth and Adolescence*, **24**:419-438, 1995.
9. B. C. Ozumba and F. N. Amaechi, "Awareness and Practice of Contraception Among Female Students at the Institute of Management and Technology (IMT), Enugu," *Public Health*, **106**:457-463, 1992.
10. D. Nichols et al., "Sexual Behavior, Contraceptive Practice, and Reproductive Health Among Nigerian Adolescents," *Studies in Family Planning*, **17**:100-106, 1986.
11. R. D. Ebong, "Sexual Promiscuity: Knowledge of Dangers in Institutions of Higher Learning," *Journal of the Royal Society of Health*, **114**:137-139, 1994.
12. G. K. Barker and S. Rich, "Influences on Adolescent Sexuality in Nigeria and Kenya: Findings from Recent Focus-Group Discussions," *Studies in Family Planning*, **23**:199-209, 1992.
13. J. Kaufman, "Adolescent Sexuality and Pregnancy in the U.S.: Lessons from the Developing World," in R. E. Morgan, Jr., and B. Ray, eds., *Global Learning for Health*, National Council for International Health, Washington, D. C., 1993.
14. O. A. Ladipo, "Preventing and Managing Complications of Induced Abortion in Third World Countries," *International Journal of Gynecology and Obstetrics*, Supp. 3, 1989, pp. 21-28.
15. P. T. Piotrow et al., "Mass Media Family Planning Promotion in Three Nigerian Cities," *Studies in Family Planning*, **21**:265-274, 1990.
16. Center for Population Options, *Adolescent Fertility in Kenya and Nigeria: Final Report for a Study Tour*, Washington, D. C., 1990.
17. A. U. Oronsaye, O. Ogbeide and E. Unuigbo, 1982, op. cit. (see reference 6).
18. Federal Office of Statistics and Institute for Resource Development/Macro International, 1992, op. cit. (see reference 1).
19. State Education Commission, Zonal Office, Nsukka, Enugu State, 1993.
20. S. K. Lwanga and S. Lemeshow, *Sample Size Determination in Health Studies: A Practical Manual*, World Health Organization, Geneva, 1991.
21. D. Nichols et al., 1986, op. cit. (see reference 10).
22. G. K. Barker and S. Rich, 1992, op. cit. (see reference 12).
23. J. A. Ross et al., *Management Strategies for Family Planning Programs*, Center for Population and Family Health, School of Public Health, Columbia University, New York, 1989, pp. 45-49.

Resumen

Entre los 2.460 estudiantes de enseñanza secundaria encuestados en dos estados de la región sudoriental de Nigeria, solamente el 36% podía identificar correctamente el momento de mayor riesgo de embarazo. Las jóvenes eran considerablemente más propensas que los varones a conocer esta situación (46% contra 25%); se presentaron diferencias menos marcadas con respecto a los factores de lugar de residencia o nivel de grado de los estudiantes. Entre los estudiantes que aportaron información acerca de su actividad sexual, el 40% había tenido alguna vez relaciones sexuales; esta tasa pasó del 26% entre los jóvenes de 14 años de edad, al 54-55% entre los de 18 y 19 años. En tanto que el 36% de las jóvenes indicaron que sus parejas eran de su misma edad, el 25% mantenían relaciones con hombres de negocios mayores; según estas jóvenes, cuando se involucraban con personas mayores mantenían relaciones con más frecuencia y eran menos proclives a restringir su actividad sexual al período más seguro de su ciclo mens-

trual. Solamente el 17% de los estudiantes sexualmente activos habían utilizado alguna vez un método anticonceptivo que no fuera la abstinencia. En grupos focales y discusiones a fondo los estudiantes expresaron un firme deseo de conocer más sobre la anticoncepción y las consecuencias de las relaciones sexuales, y recomendaron que participaran en esta actividad educativa sobre la salud reproductiva, tanto las escuelas como los padres.

Résumé

Parmi 2.460 lycéens interviewés dans deux états du sud-est nigérian, 36% seulement ont pu identifier correctement le moment le plus probable de la conception. Les filles se sont montrées beaucoup plus susceptibles que les garçons de comprendre le calendrier de la conception (46% par rapport à 25%), de moindres écarts étant apparus en fonction du lieu de résidence et de l'année de scolarisation des participants. Des élèves ayant documenté leur activité sexuelle, 40% avaient eu des rapports sexuels, ce taux passant de 26% parmi ceux âgés de 14 ans à 54-55% dans la tranche de 18 et 19 ans. Tandis que 36% des jeunes femmes avaient eu des partenaires sexuels de leur propre âge, 25% avaient eu des rapports avec des hommes d'affaires plus âgés. Les jeunes femmes ont déclaré avoir des rapports sexuels plus fréquents et généralement moins limités à la période sûre de leur cycle menstruel avec leurs partenaires plus âgés qu'avec ceux de leur propre âge. Seuls 17% des lycéens sexuellement actifs avaient jamais eu recours à une méthode contraceptive autre que l'abstinence. Dans les groupes de discussion et les discussions en profondeur, les lycéens ont exprimé un désir net d'une meilleure information au sujet de la contraception de des conséquences à attendre de l'activité sexuelle. Ils ont également recommandé la participation des écoles aussi bien que des parents à l'instruction des jeunes en matière d'hygiène de la reproduction.