

# Trends in Sexual Activity Among Adolescent American Women: 1982–1995

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**Context:** *The formulation of policies and development of programs regarding adolescent sexual and reproductive health requires up-to-date information on levels of and trends in teenage sexual activity.*

**Methods:** *Analysis of three NSFG surveys, carried out in 1982, 1988 and 1995, allows examination of the sexual behavior of teenage women over a 13-year time period, using comparable data for the entire time period.*

**Results:** *The proportion of adolescent women who ever had sexual intercourse increased somewhat during the 1980s, but this upward trend stabilized between the late 1980s and the mid-1990s. Throughout the period, there has been little change in the proportion currently sexually active: In each of the surveys, about 40% of all 15–19-year-olds had had sexual intercourse in the last three months. The average number of months in the past year in which sexually experienced teenagers had had intercourse declined during the 1980s, with no change in the continuity of sexual intercourse taking place between 1988 and 1995, when the mean remained at 8.6 months. Differences in teenage sexual behavior across poverty and racial and ethnic subgroups were large in the early 1980s, but narrowed over the 13-year period.*

**Conclusions:** *Only continued monitoring will tell whether the patterns observed during 1988–1995 signify a temporary leveling off in the trend toward increasing adolescent sexual activity, stability in behavior or the beginnings of a decline. Nevertheless, the sustained level of initiation of sexual activity during adolescence is by now a recognized pattern of behavior, and is an important characteristic of the transition to adulthood in the United States.*

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A series of national surveys conducted by researchers at the Johns Hopkins University charted a steady rise during the 1970s in the proportion of U.S. women aged 15–19 who had ever had sexual intercourse before marriage.<sup>1</sup> In 1982, the federal government fully incorporated young women aged 15–19 into its National Survey of Family Growth (NSFG). The 1982 NSFG confirmed that levels of premarital sexual intercourse had risen steadily, from 32% in 1971 to 38% in 1976, 43% in 1979 and 45% in 1982. However, the 1982 NSFG analysis suggested that by the early 1980s, the earlier rise in the level of premarital sexual experience had leveled off among white adolescents, and that a decrease had occurred among black teenagers.<sup>2</sup>

The 1988 NSFG, however, revealed another large increase in the proportion of all American adolescent women who had

had premarital sexual intercourse, from 45% in 1982 to 52% in 1988.<sup>3</sup> The newly available national trend data also showed that the proportion of all 15–19-year-old women who had ever had sexual intercourse had increased during the 1980s, from 47% in 1982 to 53% in 1988.<sup>4</sup>

For several reasons, this general increase in sexual experience among adolescents has attracted societal attention.<sup>5</sup> It has given rise to fears of declines in morals and values; worries about rising rates of sexually transmitted diseases (STDs); and concern about other negative consequences, such as unwanted pregnancy and the potential public and private costs of childbearing by unmarried adolescents.

At the same time, this broad trend is known to characterize most developed countries.<sup>6</sup> Thus, it is increasingly acknowledged that sexually active unmarried youth need comprehensive sexuality

education and that such education should begin at younger ages than is now the case, so that adolescents have the knowledge and skills they need to make and carry out decisions concerning their sexual behavior. Moreover, it is also recognized that sexually active adolescents need ready access to services for the prevention of STDs and unwanted pregnancy.<sup>7</sup>

This has led to the formulation of policies and programs, both public and private and in a variety of settings, to try to meet these needs. Recent examples are the increased provision of HIV and AIDS education, an increased emphasis on teaching abstinence within sexuality education programs, and implementation by most states of abstinence-only education programs (as part of states' response to the 1996 welfare reform law).<sup>8</sup>

Given the heightened importance of trends and levels of adolescent sexual behavior for public policies and programs, up-to-date information on trends is greatly needed. With the most recent NSFG (carried out in 1995), it is now possible to follow these trends into the mid-1990s. By comparing the new 1995 data with information from 1982 and 1988, we can examine changes in the sexual experiences of American teenage women over a 13-year time period, using data collected in similar ways over the entire time period.

As with earlier studies, this article examines trends and differentials in sexual intercourse across various racial and ethnic groups and among younger and older adolescents. We also look at differences by the

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economic level of the young woman's family. Indeed, economic status has been shown to be a strong predictor of adolescent pregnancy and childbearing, and of negative consequences for young women in terms of health, education and employment.<sup>9</sup> While it is difficult to measure, it is probably more relevant than race or ethnicity to young women's opportunities and risk behaviors.

This article presents findings on the proportion of teenagers who have ever had and who are currently having sexual intercourse, and on the mean number of months in the past year during which adolescents had intercourse. Each of these measures describes a different aspect of adolescent sexual behavior; using all three yields a more comprehensive (although not complete) picture of the sexual behavior of adolescent women.

The proportion who have ever had intercourse is a broad measure of the extent of sexual initiation during the adolescent years, and provides an indicator of exposure to pregnancy and STDs, as well as of the need for related health services. However, more current or point-in-time measures are needed because, in the early adolescent years, sexual relationships are unlikely to be long-lasting. In fact, studies show that more than half of adolescents who have ever had sexual intercourse have been in at least two sexual relationships, often with some time between them.<sup>10</sup>

For these reasons, the proportion currently in a sexual relationship (measured as the percentage who had intercourse in the three-month period before interview) is a useful additional measure, providing a minimum indicator of the extent of risk for pregnancy and STDs and of the need for health services. The number of months of sexual activity in the past year describes another dimension—the extent of continuity in sexual intercourse, once a teenager has become sexually active.

## Data and Methods

The data for most of the analysis come from the 1982, 1988 and 1995 cycles of the NSFG. All three surveys interviewed

large, nationally representative samples of women aged 15–44 who were living in households, including all females aged 15–19, both those in school and those not in school.\*

The basic measures that we use in this article are comparable across surveys. All three surveys used similar questions to obtain information on when first intercourse took place and the respondent's age at that time. However, in the 1995 round of the NSFG only, questions on intercourse more clearly defined intercourse as heterosexual by including the phrase "with a man." (In 1995, the question used was: "Think back to the very first time in your life that you ever had sexual intercourse with a man. In what month and year was that?") Also, in the 1995 survey, the interviewer was directed not to count oral sex, anal sex, sex with a female partner, heavy petting or other forms of sexual activity that did not involve vaginal penetration.

The definition of teenage sexual behavior used in this article has some limitations, particularly in measuring risk for STDs. With a focus on understanding exposure to pregnancy, the 1982 and 1988 NSFGs imply that "intercourse" should be interpreted to mean heterosexual vaginal intercourse, and the 1995 NSFG clearly defines it as such (i.e., that "intercourse" excludes oral and anal sex). Although the prevalence of homosexual relationships may be relatively low, the level of genital sexual activities among adolescent females who have never had vaginal intercourse has been found to be about 10%.<sup>11</sup> The results presented here therefore provide only a minimum estimate of sexual behavior that puts adolescents at risk for STDs.

A second variation across surveys is that in measuring the timing of first intercourse, both the 1982 and the 1988 surveys excluded intercourse before menarche, while the 1995 survey did not. (The question asked in 1982 and 1988 was: "Thinking back, after your first menstrual period, when did you have sexual intercourse for the first time—what month

and year was that?") In addition, the 1995 survey obtained new information on whether first intercourse was voluntary; the earlier surveys did not collect this information. To maintain comparability across all three surveys, we defined first intercourse to exclude intercourse prior to menarche, and to include any experience of intercourse after menarche, regardless of whether it was voluntary. Because in 1995 those who only ever had involuntary sex were not asked about sexual activity in the three months before the 1995 survey, we assumed that the 0.4% of all teenagers who only ever had involuntary intercourse did not have sex in the last three months.<sup>†</sup>

To maintain comparability across surveys, our analyses use the respondent's age at the time of the actual interview, not at the estimated midpoint of the data collection period—the point in time that was used in the two most recent surveys to select women into the sample. We consider age at the time of the interview the more appropriate of the two measures. In light of the steep increase in the likelihood of sexual debut as adolescents age, even small differences between surveys in how age is measured could affect the proportion reported to be sexually active at given ages, and could result in an inaccurate depiction of trends over time. The results presented here differ slightly from previously published estimates for both 1988 and 1995 largely because of the difference in measurement of age.<sup>12</sup> However, differences in the definition of sexual intercourse (inclusion or exclusion of those adolescents who had only had involuntary intercourse or who had only had intercourse before menarche) can also affect estimates.<sup>‡</sup>

To examine the effect of changes in the age composition of teenagers over the period 1982–1995, we standardized the data for selected basic measures (such as the proportion of 15–19-year-olds who had ever had intercourse), using the 1990 census distribution of 15–19-year-olds by sin-

\*Although a telephone survey was conducted in 1990 to reinterview women who had been interviewed in the 1988 NSFG (as well as an added subsample of 15–17-year-olds), the 1990 survey data are not analyzed here. This is because of the especially low response rate in the 1990 sample for younger teenagers (53%), compared with that among women aged 17–44 (68%). (Source: Peterson LS, Contraceptive use in the United States: 1982–90, *Advance Data*, 1995, No. 260, Feb. 14, 1995, technical notes, p. 12.) In addition, the interviews were short and conducted by telephone, which may affect response on the sensitive topic of sexual behavior, particularly among adolescents.

†This is in agreement with the recoded variable provided by NCHS on the 1995 NSFG data file. It is also large-

ly supported by analysis of month-by-month reporting over the past year: Eighty percent of this small group of women were not sexually active throughout most or all of the year (60% did not have intercourse in any of the last 12 months, and 20% did not do so in nine of the last 12 months).

‡In the 1988 NSFG, the proportion of participants aged 15–19 who had ever had intercourse after menarche varied depending on how age was defined. This proportion was estimated to be 52.9% when age was based on the women's age at the date used to determine the sample (March 15, 1988—approximately the midpoint of the period in which the survey was fielded). In comparison, this proportion was 52.6% when based on respondents' age

at the actual date of interview. In the 1995 NSFG, the proportion of 15–19-year-olds who had ever had intercourse after menarche (including those who had had only involuntary intercourse postmenarche) was 50.6% when age was based on the sample date (April 1, 1995), but was 51.5% when age was based on women's actual age at interview (source: special tabulations). In 1988, inclusion of those who only had had intercourse prior to menarche increased the proportion by 0.3% (source: reference 4), while in 1995, such an approach adds 0.2% (source: special tabulations). For 1995, using the postmenarche definition and excluding those who had had involuntary intercourse only would reduce the proportion who had ever had intercourse among those aged 15–19 at interview by 0.4% (source: reference 12).

gle year of age as the standard. However, changes in age composition accounted for little of the time trend. As a result, the actual unstandardized results are presented in this article.

Never-married adolescents exclude both those who had ever been formally married and those who had ever been in a cohabiting union.\* However, data limitations lead the results to be inconsistent across surveys: The NSFG data for 1988 and 1995 fully identified past marital and cohabiting unions, whereas the 1982 NSFG obtained current cohabiting status but did not obtain information on cohabiting unions that had ended. The number of never-married adolescents who were formerly in a cohabiting union is likely to be smaller in 1982 than it was by the mid-1990s, given the overall upward trend in cohabitation as a type of union during the 1980s.<sup>13</sup> We expect that the net effect should not introduce any substantial element of noncomparability into the analyses of trends in sexual activity levels among the never-married or of trends in the proportion who had ever had premarital intercourse. In fact, the proportion of all adolescent women who have ever been in a marital or cohabiting union has changed very little between 1982 and 1995, and remains quite low, as can be seen below:

Status	1982	1988	1995
Married	6.4	3.1	4.0
Cohabiting	1.5	3.7	4.2
Formerly married	0.8	0.1	0.6
Never-married	91.3	93.1	91.2
Formerly cohabited	na	3.7	3.2
Never cohabited	na	89.4	88.0
Total	100.0	100.0	100.0

Because of the importance of economic status, we present differentials by income group. However, classifying adolescents according to what they say their families earn is somewhat unreliable: Many teenagers may report family income incorrectly because they simply are unlikely to have this information, and thus give approximate answers. To minimize potential error, we used a dichotomy, dividing adolescents into those with a family income below 200% of the federally designated poverty level and those with an income at or above 200% of the poverty level. In addition, we present differences according to racial and ethnic sub-

\*Premarital sexual activity is defined to include married and cohabiting women who first had intercourse at least one month prior to the month in which they married or started to cohabit, as well as all never-married women who had initiated sexual activity.

groups—Hispanic, non-Hispanic white and non-Hispanic black.

All percentages reported in this article are weighted national estimates. Unweighted sample sizes are shown in Table 1 to give an indication of the potential reliability of the estimates. Non-Hispanic adolescents of races other than white and black are excluded from subgroup analyses because of the small size of this group, although they are included in the totals.

As can be seen in Table 1, despite the large total samples used in the NSFG, the numbers of respondents in some subgroups are small (fewer than 100 among some Hispanic subgroups, for example). Thus, we may be unable to identify some differences as being statistically significant, even when absolute differences appear large.

Some changes at the national level may also prove not to be statistically significant, even when the change appears substantial. For example, the proportion of 18–19-year-olds who ever had sexual intercourse increased between 1982 and 1988; this change was not statistically significant at the standard level of  $p < .05$ , although it was weakly significant (at  $p < .10$ ). The ability to have a 90% power to detect change at a 5% level of significance between 1982 and 1988 would have required a slightly larger number of respondents. Any smaller change that might have occurred would have required a much larger sample of respondents to detect with confidence whether it was statistically significant.

As a result, in this article we present information on levels of significance in four categories: at the 5–10% level ( $p < .10$ ); at the 1–5% level ( $p < .05$ ); at the 0.1–1% level ( $p < .01$ ); and lower than 0.1% ( $p < .001$ ). We discuss some findings even if they are significant at relatively weak levels (5–10%), because with small sample sizes, these findings may indicate differences that might prove to be statistically significant if the sample were larger. However, we place greater confidence in findings that are statistically significant at  $p = .05$  or less.

We assessed statistical significance between percentages using two-tailed t-tests. For all three surveys, we estimated standard errors using approaches that take the surveys' complex sample designs into account, following procedures recommended by the National Center for Health Statistics, the government agency in charge of the NSFG.<sup>14</sup>

While these and other surveys have used similar definitions and questions for three decades, it is nevertheless possible that any of the three surveys may actually underestimate levels of sexual intercourse, given

**Table 1. Unweighted number of adolescent respondents interviewed in the National Survey of Family Growth (NSFG), by age at interview and selected characteristics, according to year**

Age at interview and characteristic	1982	1988	1995
<b>Total</b>			
15–19	1,888	1,231	1,396
15–17	939	713	815
18–19	949	518	581
<b>Never married/never cohabited</b>			
15–19	1,711	1,097	1,231
15–17	909	687	776
18–19	802	410	455
<b>Income &lt;200% of poverty</b>			
15–19	1,001	634	574
15–17	471	383	330
18–19	530	251	244
<b>Income ≥200% of poverty</b>			
15–19	887	597	822
15–17	468	330	485
18–19	419	267	337
<b>Non-Hispanic white</b>			
15–19	1,120	711	842
15–17	511	397	474
18–19	609	314	368
<b>Non-Hispanic black</b>			
15–19	562	368	289
15–17	320	224	177
18–19	242	144	112
<b>Non-Hispanic other†</b>			
15–19	37	34	55
15–17	16	24	41
18–19	21	10	14
<b>Hispanic</b>			
15–19	169	118	210
15–17	92	68	123
18–19	77	50	87

†Analyses are not presented for this subgroup because of its small sample size.

the fact that women are sometimes reluctant to report their sexual activity. (Males, on the other hand, are believed to overreport their sexual behavior.<sup>15</sup>) There is, however, little research examining adolescents' tendencies to underreport or overreport whether they have had sexual intercourse while still single. Neither is there any documentation of whether younger teenagers are likely to report less accurately than older adolescents are, or whether the likelihood of accurate reporting has changed over time in response to changing sexual attitudes and mores.

A related question is whether the trends reported in the NSFG measure actual changes in behavior or reflect differences in young women's comfort in reporting their behavior. Adolescents' willingness to report sexual activity could have increased during the 1980s, as society became more accepting of nonmarital sex; in addition, although there is no hard information on this issue, such willingness to report may have

lessened through the 1990s, with the increased emphasis on the teaching of abstinence in sexuality education.<sup>16</sup>

As a check on the 1982–1988 trends, we constructed retrospective cohort estimates of the proportion of women sexually active by age 20 in 1982 and 1988 from all three NSFG surveys. The results of the cohort analysis indicate a trend similar to that derived from the cross-sectional measures over the period of the 1980s (not shown). Although there are small inconsistencies, the retrospective cohort estimates are very close to, and serve to confirm, the point-in-time estimates derived from the 1982 and 1988 NSFGs. This comparison, therefore, basically supports the validity of reported age of onset of sexual intercourse. However, these results do not mean that period differences in the reporting of current sexual activity did not occur, at least among the unmarried.

## Results

### Proportion Who Ever Had Sex

Between 1982 and 1988, the proportion of all adolescent women aged 15–19 who had ever had sexual intercourse increased from 47% to 53% (Table 2). In absolute terms, the increase between 1982 and 1988 was twice as large among women aged 18–19 (from 64% to 74%) as it was among those aged 15–17 (from 32% to 38%). During this same period, there were substantial increases in this measure among adolescents at every single year of age, although these changes were not statistically significant (not shown).

There was little change between 1988 and 1995 in the proportion of all adolescents who had ever had sexual intercourse (Table 2), and while trends were somewhat different for younger and older adolescents, none were statistically significant at  $p < .05$ . Among women aged 15–17, the proportion sexually experienced increased slightly, while among those aged 18–19 it decreased somewhat.

If the age composition of 15–19-year-olds had been the same in 1988 as it was in 1982, the increase in the proportion of young women who had ever had sexual intercourse over the period 1982–1988 would actually have been slightly greater. However, age-composition did not contribute to the observed pattern of stability between 1988 and 1995 (not shown).

Trends in the proportions of women 15–19 who have ever had premarital sexual intercourse—that is, who first had intercourse before marriage or cohabitation—essentially paralleled those in the proportion who ever had intercourse. The

proportion who were sexually active premaritally increased significantly between 1982 and 1988, both among all adolescents and especially among 18–19-year-olds (Table 2). This is not surprising, since almost all women who begin intercourse in their adolescence do so before marriage or cohabitation—93.6% in 1982, 99.8% in 1988 and 98.3% in 1995 (not shown).

### Current Sexual Activity

The proportion of all American women aged 15–19 who were currently sexually active—that is, who had had intercourse at some time during the three months preceding the survey—showed no significant change between 1982 and 1988 (Table 2). Although the increase among those aged 18–19 was large in absolute terms (from 55% to 63%), it was not statistically significant ( $p = .12$ ). Likewise, none of the other changes in the proportion currently sexually active, whether among adolescents aged 15–17 or among all 15–19-year-olds, were statistically significant.

Over the period 1988–1995, the same pattern of stability observed in the proportion who had ever had sexual intercourse can also be seen in the proportion currently sexually active. Among all young women aged 15–19, the proportion currently sexually active in 1995 was 40%, slightly but not significantly less than in 1988 (43%). Similarly, change was minimal among adolescents aged 15–17, while a small, nonsignificant decline occurred among those aged 18–19.

### Continuity of Sexual Intercourse

Among all those who had ever had sex, the proportion currently in a sexual relationship declined over the 13-year period, from 85% in 1982 to 81% in 1988 and 79% in 1995 (not shown). The decline between 1982 and 1995 was marginally statistically significant (at  $p = .06$ ), while the declines in the periods 1982–1988 and 1988–1995 were not. This trend suggests that although adolescent women are now more likely to begin having intercourse during their teenage years than was the case in the early 1980s, those who do so are somewhat less likely to be continuously sexually active than their counterparts in the early 1980s.

In 1982, the average sexually experienced adolescent had had sex during 9.1 months in the year before the interview; this average had declined significantly (to 8.6 months) by 1988, but remained unchanged between 1988 and 1995 (Table 2).<sup>\*</sup> This trend suggests decreasing continuity of sexual activity since 1982, which is

**Table 2. Selected measures of current and lifetime sexual activity among women aged 15–19, by age at interview, according to year**

Measure	1982	1988	1995
<b>ALL ADOLESCENTS</b>			
<b>% who ever had intercourse</b>			
15–19	46.9*	52.6	51.5
15–17	32.2	37.6	38.5
18–19	64.1*	74.3	70.8†
<b>% who ever had premarital intercourse‡</b>			
15–19	43.9****	52.2	50.6††††
15–17	31.1*	37.5	38.3†††
18–19	58.6****	73.7	69.0††††
<b>% who had intercourse in past 3 months</b>			
15–19	40.0	42.6	40.3
15–17	26.8	28.5	28.0
18–19	55.2	63.0	58.7
<b>Mean no. of months in past year in which sexually experienced women had sex</b>			
15–19	9.1*	8.6	8.6††
15–17	8.7	8.2	8.0†
18–19	9.2	8.9	9.1
<b>NEVER-MARRIED ADOLESCENTS§</b>			
<b>% who ever had intercourse</b>			
15–19	41.8*	47.0	44.9
15–17	30.0	35.3	35.6†
18–19	57.6*	67.7	62.2
<b>% who had intercourse in past 3 months</b>			
15–19	34.3	36.6	32.9
15–17	24.4	26.3	24.6
18–19	47.4	54.9	48.3

\*Significantly different from 1988 at  $p < .10$ . \*\*\*\*Significantly different from 1988 at  $p < .001$ . †Significantly different from 1982 at  $p < .10$ . ††Significantly different from 1982 at  $p < .05$ . †††Significantly different from 1982 at  $p < .01$ . ††††Significantly different from 1982 at  $p < .001$ . ‡Those who first had sex one month or more prior to the month they first married or cohabited. §Excludes those who have been married and those who have ever cohabited. Note: No differences between 1988 and 1995 were statistically significant at  $p < .10$ .

consistent with the drop in the proportion of sexually experienced teenagers currently in a sexual relationship. It reflects the fact that teenage sexual relationships tend to be short-term and sporadic. Indeed, one-quarter of sexually active adolescents have intercourse in fewer than six months out of a year.<sup>17</sup>

### Sex Among Adolescents Never in a Union

The level of sexual activity among adolescent women who have never married and never cohabited (referred to as “never-married” subsequently) is of special interest to policy makers and service providers because of this group’s heightened risk of STDs,<sup>18</sup> childbearing outside

<sup>\*</sup>In 1982, the recoded variable on the number of months sexually active in the year before interview did not provide this information for currently pregnant women. Pregnant teenagers constituted 4.8% of all adolescents in 1982. Data from 1988 and 1995 show that the mean number of months sexually active in the past year is somewhat higher among pregnant teenagers than among other sexually experienced teenagers, suggesting that the 1982 estimate of mean number of months sexually active in the past year was slightly understated.

**Table 3. Percentage of women aged 15–19 who ever had sexual intercourse, percentage who had intercourse in the past three months and mean number of months in the past year in which sexually experienced adolescents had sex, by poverty status and age at interview, according to year**

Measure and age	1982	1988	1995
<b>% WHO EVER HAD INTERCOURSE</b>			
<b>&lt;200% of poverty</b>			
15–19	55.4	55.5	57.0
15–17	45.4	40.4	45.6
18–19	65.0*	80.1	72.7
<b>≥200% of poverty</b>			
15–19	39.4***	49.7	48.0†††
15–17	22.5***	34.8	34.3†††
18–19	63.0	69.5	69.5
<b>% WHO HAD INTERCOURSE IN PAST 3 MONTHS</b>			
<b>&lt;200% of poverty</b>			
15–19	49.2	44.5	45.3
15–17	38.5	30.4	34.7
18–19	59.5	67.3	60.1
<b>≥200% of poverty</b>			
15–19	31.8**	40.7	37.1†
15–17	18.3**	26.6	23.9†
18–19	50.7	59.4	57.8
<b>MEAN NO. OF MONTHS IN PAST YEAR IN WHICH SEXUALLY EXPERIENCED WOMEN HAD SEX</b>			
<b>&lt;200% of poverty</b>			
15–19	9.4****	8.5	8.9†
15–17	9.1*	8.2	8.3
18–19	9.6*	8.8	9.4
<b>≥200% of poverty</b>			
15–19	8.7	8.7	8.4
15–17	8.3	8.2	7.7
18–19	8.9	9.0	8.9

\*Significantly different from 1988 at  $p < .10$ . \*\*Significantly different from 1988 at  $p < .05$ . \*\*\*Significantly different from 1988 at  $p < .01$ . \*\*\*\*Significantly different from 1988 at  $p < .001$ . †Significantly different from 1982 at  $p < .10$ . †††Significantly different from 1982 at  $p < .001$ . Note: No differences between 1988 and 1995 were statistically significant at  $p < .10$ .

of a union and abortion.<sup>19</sup> Policies and programs to motivate and support youth to be abstinent until marriage have chiefly focused on this group.<sup>20</sup> Overall, the proportions ever sexually active and currently sexually active would be expected to be slightly lower among never-married teenagers than among all teenagers. Otherwise, because the vast majority of adolescent women have never been married, most measures for this group would be expected to closely parallel those for all adolescent women.

As expected, the proportion of never-married adolescent women who have ever had intercourse and the proportion currently in a sexual relationship are slightly lower among never-married teenagers than among all adolescents (Table 2). For example, in 1995, 45% of never-married

teenage women had ever had intercourse, compared with 52% of all 15–19-year-olds.

Trends in the proportion of never-married 15–19-year-olds who had ever had sex were similar to trends among all adolescent women: Small, weakly significant increases occurred between 1982 and 1988. Trends between 1988 and 1995 in the proportions of never-married women who had ever had intercourse were also similar to those among all adolescent women, and not statistically significant.

In 1995, the proportion of never-married adolescents who were currently sexually active remained moderately high, at 33% of 15–19-year-olds, 25% of 15–17-year-olds and 48% of 18–19-year-olds. Over the entire period 1982–1995, there was little change in the proportion of never-married adolescents currently sexually active. Only among 15–17-year-old never-married adolescents was an increase over this period in the proportion who had ever had intercourse even marginally significant ( $p = .06$ ). Marginally significant increases between 1982 and 1988 in the proportion of never-married 18–19-year-olds who had ever had intercourse were paralleled by nonsignificant increases in the proportion currently sexually active at these ages.

The decline between 1982 and 1995 in the proportion of all sexually experienced adolescent women who were currently in a sexual relationship was also seen among never-married women, with this proportion decreasing from 82% of never-married 15–19-year-olds in 1982 to 73% in 1995 ( $p < .01$ , not shown).

### Trends by Income

Overall, there were no statistically significant changes during the period 1982–1995 in the proportion of lower income adolescents who had ever had sex or were currently sexually active. However, somewhat erratic and opposing trends occurred among younger and older lower income adolescents (Table 3). Although none of these changes were significant, the proportion of lower-income 15–17-year-olds who had ever had sex decreased between 1982 and 1988 and increased from 1988 to 1995. In contrast, among 18–19-year-olds, levels of sexual activity rose and then fell.

Among adolescents from higher income families, however, the proportions who had ever had intercourse and who were currently sexually active increased significantly between 1982 and 1988: Among all 15–19-year-olds, the proportion who were sexually experienced increased from 39% to 50%, and the proportion currently sex-

ually active increased from 32% to 41%.

Between 1988 and 1995, as was true in the general population, there was no change among higher income teenagers in the proportion who ever had sex, and there was a small, nonsignificant decrease in the proportion currently sexually active. Changes among the two age-groups were generally similar and not statistically significant.

The net result was that between 1982 and 1995, the proportions who had ever had sex or who were currently sexually active increased sharply among all higher income teenagers and among young higher income adolescents.

Because levels of sexual activity stayed fairly stable among lower income teenagers but rose during the period 1982–1988 among those with a higher income, differentials between these subgroups narrowed over time. For example, among 15–19-year-old females, the difference between the two income groups in the proportion who had ever had sexual intercourse was 16 percentage points in 1982 and nine percentage points in 1995.

Nevertheless, both among young adolescents and among all 15–19-year-olds, lower income adolescents still were significantly more likely to have ever had or to be currently having sexual intercourse than were higher income adolescents. By late adolescence, however, lower income and higher income teenagers were about equally likely to have ever had intercourse or to be currently sexually active.

Among higher income adolescents who had had intercourse, there was relatively little change in the mean number of months in the past year in which they had been sexually active. On the other hand, among lower income teenagers, the number of months spent sexually active declined significantly from 1982 to 1988, but rose only slightly and nonsignificantly between 1988 and 1995.

### Racial and Ethnic Trends

Trends in levels of sexual activity among white adolescents were very similar to the national pattern and to that seen among higher income adolescents. This is not unexpected, given that white teenagers represent the largest population subgroup and that most are above poverty level.\* Over the period 1982–1988, the proportions of non-Hispanic white adolescents aged 15–19 and aged 18–19 who had ever had intercourse increased significantly (Table 4). Similarly, the proportion of 18–19-year-old white adolescents who were currently sexually active increased significantly. However, trends among

\*"White" includes only non-Hispanic whites. Non-Hispanic women of other backgrounds are excluded from Table 4 and from this discussion, but they are included in the totals.

white adolescents in the period 1988–1995 were similar to those found among all adolescent women: Essentially, little change occurred, except for nonsignificant small declines among older teenagers.

In contrast to the experience of non-Hispanic white adolescents, the proportion of black teenagers aged 15–19 who had ever had intercourse changed little throughout the whole period 1982–1995. Although this proportion increased somewhat among young black adolescents from 1982 to 1988 (from 44% to 50%), the change was not statistically significant.

From 1982 to 1995, the proportion of black adolescents who were currently sexually active declined somewhat; for example, among all black 15–19-year-olds, this proportion fell from 54% to 47%. However, none of these changes were statistically significant. Among all black adolescents 15–19 who had ever had intercourse, the proportion currently sexually active declined from 91% in 1982 to 77% in 1995 (not shown), a change that was significant ( $p < .01$ ).

The proportions of Hispanic teenagers who had ever had sexual intercourse remained virtually unchanged between 1982 and 1988. Hispanic adolescents became slightly less likely to be currently sexually active between 1982 and 1988, but this change was not statistically significant. Among Hispanic teenagers who had ever had intercourse, the proportion currently sexually active dropped from 85% in 1982 to 66% in 1988, yet this decline, although large, was not statistically significant.

During the period 1988–1995, trends among Hispanic adolescents differed from the overall pattern: There was a large, statistically significant increase among younger Hispanics in the proportion currently sexually active (from 20% to 39%), and a marginally significant increase among all Hispanic 15–19-year-olds (from 31% to 45%,  $p = .06$ ). Similarly, there was a marginally significant rise in the proportion of younger Hispanics who had ever had sexual intercourse (from 34% to 49%,  $p = .09$ ). And during this period, the proportion currently sexually active among Hispanic 15–19-year-olds who had ever had intercourse rose from 67% to 80%, although this increase was not statistically significant. The wide variations observed over time in measures of sexual activity among Hispanic teenagers clearly are mainly a result of the small samples on which these results are based (Table 1). The lack of statistical significance for trends in all groups except 15–17-year-olds suggests that only these younger Hispanic

adolescents experienced substantial change—a trend toward increased levels of sexual activity between 1988 and 1995.

The net result of these changes is that by 1995, racial and ethnic differences had narrowed: Across subgroups of 15–19-year-olds by race and ethnicity, the difference seen in 1982 in the proportion who had ever had sexual intercourse (15 percentage points) had narrowed substantially (to about 10 percentage points) by 1995. This resulted primarily from the substantial rise in the proportion of white teenagers who had had sex, combined with little change among black teenagers. While Hispanic adolescents were more similar to white non-Hispanic teenagers in 1982, by 1995 their levels of sexual activity were closer to those of black non-Hispanic adolescents.

There was relatively little change among sexually experienced non-Hispanic white teenagers in the mean number of months in the past year that were spent sexually active. Among young Hispanic adolescents, the mean rose substantially, from 5.8 months in 1982 to 7.8 months in 1995, but this increase was only weakly significant. However, non-Hispanic black teenagers reported significant declines from 1982 to 1988 in the mean number of months sexually active in the past year.

## Discussion

Our analysis of three NSFG surveys spanning the period 1982–1995 confirms that the proportion of adolescent women who had ever had sexual intercourse increased during the 1980s, a continuation of the trend observed during the 1970s. This upward trend appears to have stabilized between the late 1980s and the mid-1990s. While a small decline between 1988 and 1995 has been heralded, it is not statistically significant, even at a very weak level ( $p < .20$ ). These broad patterns of increase followed by stabilization characterize the experience of both never-married adolescent females and all teenage women.

The trends identified in the NSFG are supported by findings from the Youth Risk Behavior Survey (YRBS).<sup>\*</sup> The YRBS shows that the proportion of female high school students who had ever had intercourse increased somewhat between 1990 and 1995 (from 48% to 52%), but this change was not statistically significant.<sup>21</sup> Thus, both surveys essentially show no significant change during the early 1990s in the proportion of adolescent women who had ever had intercourse.

In contrast, over the entire period 1982–1995, the NSFG data show little

**Table 4. Percentage of women aged 15–19 who have ever had sexual intercourse, percentage who had intercourse in the past three months and mean number of months in the past year in which sexually experienced adolescents had sex, by race or ethnicity and age at interview, according to year**

Measure and age	1982	1988	1995
<b>% WHO EVER HAD INTERCOURSE</b>			
<b>Non-Hispanic white§</b>			
15–19	44.4**	52.2	50.7††
15–17	29.7	35.6	36.2†
18–19	60.5**	74.5	70.7†††
<b>Non-Hispanic black</b>			
15–19	58.9	60.8	60.4
15–17	44.1	50.2	48.9
18–19	79.1	78.1	78.8
<b>Hispanic</b>			
15–19	49.9	46.7	56.0
15–17	34.4	33.6‡	49.4
18–19	70.1	70.9	65.6
<b>% WHO HAD INTERCOURSE IN PAST 3 MONTHS</b>			
<b>Non-Hispanic white§</b>			
15–19	37.1	43.2	39.9
15–17	25.2	27.6	26.2
18–19	50.3**	63.6	58.8††
<b>Non-Hispanic black</b>			
15–19	53.6	50.6	46.8
15–17	38.8	39.1	34.9
18–19	73.9	69.3	65.6
<b>Hispanic</b>			
15–19	42.2	31.2‡	44.9
15–17	22.0	19.9†††	38.5††
18–19	68.3	52.1	54.3
<b>MEAN NO. OF MONTHS IN PAST YEAR IN WHICH SEXUALLY EXPERIENCED WOMEN HAD SEX</b>			
<b>Non-Hispanic white§</b>			
15–19	8.9	8.7	8.5
15–17	8.8	8.5	7.9†
18–19	9.0	8.8	8.9
<b>Non-Hispanic black</b>			
15–19	9.8**	9.0	9.3
15–17	9.5*	8.5	8.6†
18–19	10.1	9.6	10.0
<b>Hispanic</b>			
15–19	8.5	7.7	8.5
15–17	5.8	6.6	7.8†
18–19	9.9	8.7	9.2

\*Significantly different from 1988 at  $p < .10$ . \*\*Significantly different from 1988 at  $p < .05$ . †Significantly different from 1982 at  $p < .10$ . ††Significantly different from 1982 at  $p < .05$ . †††Significantly different from 1982 at  $p < .01$ . ‡Significantly different from 1995 at  $p < .10$ . ‡‡Significantly different from 1995 at  $p < .01$ . §The small subgroup consisting of non-Hispanic respondents of other races is excluded.

change in the proportions of female adolescents who were currently sexually active, with about 40% of all 15–19-year-olds reporting that they had had intercourse in the most recent three months. The YRBS yields a similar result for female high school students: Although there appeared

<sup>\*</sup>Based on a national sample of schools, the YRBS surveys high school students (those in grades 9–12, who are approximately 14–18 years of age). Interviews are self-administered, and only adolescents attending school are represented.

to be a small increase between 1990 and 1995 in the proportion currently sexually active (from 36% to 40%), it was not statistically significant.

The fact that both the YRBS and the NSFG show approximately the same proportion currently sexually active in 1995 (40%) may be interpreted as evidence of inconsistency between the two surveys: The YRBS represents a younger age-group (students in grades 9–12, who were approximately ages 14–18) than the NSFG (all 15–19-year-olds). Given this, we would expect the YRBS to show a lower proportion of adolescents sexually active than the NSFG.

Possible explanations for the higher than expected level of sexual activity in the YRBS include differences in how the questions on sexual behavior were asked. The question used in the YRBS is: “Have you ever had sexual intercourse?” There is no further elaboration. In all questions concerning sexual behavior in the 1995 NSFG, homosexual relationships, oral and anal sex, heavy petting or any other form of sexual activity that did not involve vaginal penetration were specifically excluded. In addition, the YRBS measured current sexual activity based on the question: “During the past three months, with how many people did you have sexual intercourse?” In contrast, the 1995 NSFG used a more specific and detailed approach, and asked a series of questions on the dates of periods in which intercourse did not take place.

Increases between 1982 and 1988 in the percentage of teenagers who had ever had sex, but stability in the percentage who had had sex in the past three months, reflect a reduction in the continuity of sexual relationships among those who had ever had intercourse. Thus, while the proportion of teenagers who had initiated intercourse increased from 1982 to 1988, the mean number of months in the past year during which sexually experienced adolescents had sex decreased. However, there was no change in the mean number of months sexually active between 1988 and 1995.

Patterns of change were generally similar across ages—that is, we saw similar trends among younger and older adolescents. However, in some cases, trends by income and race or ethnicity differed from the overall trend. In the subgroups that in the early 1980s were most likely ever to have had intercourse (lower income teenagers and black teenagers), the proportion who had done so remained more or less stable between 1982 and 1988. Conversely, levels of sexual experience rose during

the 1980s among those who had lower rates at the beginning of the 1980s (such as higher income teenagers and non-Hispanic whites).

The net result of these trends is that formerly large differences among population subgroups appear to have narrowed. In the case of the proportion of teenagers who were currently sexually active (which hardly changed among all teenagers throughout the period), there were significant increases during the 1980s among teenagers with an income above 200% of poverty and among non-Hispanic white adolescents aged 18–19. During the period 1988–1995, younger Hispanic teenagers also seem to have experienced significant increases in both the proportion currently sexually active and the proportion who had ever had intercourse. The proportion of all Hispanic adolescents 15–19 who were currently sexually active also increased.

However, the number of respondents to the NSFG surveys limits the extent to which changes over time and differences between subgroups can be analyzed, especially for population subgroups. Even though these national surveys are very large, ranging from 8,000 to 10,800 respondents per survey, the limited number of teenagers in the sample provides little statistical power to identify even relatively sizable changes as being statistically significant. Plans for the next NSFG cycle (expected to be conducted in the year 2001) include oversampling adolescents to increase the number of female respondents aged 15–19 from 1,400 (in the 1995 survey) to 2,500. While this will not solve the limitations of small sample size for all population subgroups, it will greatly enhance efforts to identify differences between major subgroups and across time periods.

In most subgroups and for both measures, the level of sexual activity among adolescent women in 1995 is higher than it was in 1982, and in some cases it is significantly higher. By 1995, about half of all 15–19-year-old adolescent women had already had sexual intercourse, and 40% were currently sexually active. Overall, relatively few very young adolescents are sexually active: In 1995, about 14% of 20–24-year-olds reported that they had intercourse before age 15. Nevertheless, 81% had done so before their 20th birthday.<sup>22</sup>

A central aspect of long-term trends in sexual activity is that the increase occurred almost wholly among unmarried adolescents. In contrast, the proportion of adolescents who were either married or cohabiting showed little change in this same period, although cohabitation increased

and marriage declined over the 13-year period. The proportion whose first experience of intercourse occurred within marriage or cohabitation actually declined slightly.<sup>23</sup> Throughout the period studied here, the large majority of adolescent women who were in a current sexual relationship were unmarried.

The tendency over recent decades for adolescent women to begin their sexual lives at ever earlier ages and before marriage or cohabitation—a trend observed in most developed countries—reflects greater tolerance of sexual activity among the unmarried and the delinking of sex and marriage. The proportion of all never-married adult U.S. women who had ever had intercourse also increased over the period 1982–1995. For example, among 20–24-year-olds who had never legally married, the proportion who were currently sexually active increased from 54% in 1982 to 58% in 1988 and to 62% in 1995.<sup>24</sup>

However, social and political responses to this general societal trend show wide variation within the United States and reflect a range of values concerning sexual activity among adolescents, especially the timing of initiation of sexual intercourse. Some are concerned about the urgent need to minimize the potential for negative consequences, such as by providing comprehensive sexuality education and contraceptive and STD education and services. But while educating adolescents to make informed and responsible decisions about sex has long been a common goal of sexuality education, more attention has recently been focused on abstinence-only education and on programs aimed at convincing young people not to have sex, providing social support to those who abstain and taking some direct policy actions, such as tightening enforcement of statutory rape laws.<sup>25</sup>

It is not clear what effects such efforts will have. For example, will an increase or a decline follow the stabilization of sexual activity levels among adolescent women between 1990–1995? One factor suggesting that young women may experience a decline is the fact that a significant decline has occurred in the proportion of adolescent men who have ever had intercourse.<sup>26</sup> On the other hand, a sharp decrease seen in the YRBS between 1995 and 1997 in the proportion of female high school students who had ever had intercourse (from 52% to 48%) was not statistically significant. The large size of this decrease over such a short time period suggests that measurement or sample fluctuations may account for at least some

of the change. Only further analyses of data that will be collected over the next few years will indicate whether this change was a short-term fluctuation or the beginning of a downward trend.

Should a decrease occur, and if it is combined with vigorous efforts to expand information, education and health services, for both pregnancy prevention and protection against STDs, some negative consequences will be ameliorated and the drop in teenage pregnancy that has been recently observed is likely to continue, and may proceed at a more rapid pace.<sup>27</sup> However, the limitations of available data on adolescent sexual behavior must be borne in mind, and efforts are needed to achieve more comprehensive and more accurate measurement of sexual behavior.

Our findings suggest that trends in levels of sexual activity among American adolescents must be viewed from a longer term perspective. Focusing on short-run fluctuations may lead to incorrect conclusions. Only continued monitoring of change over the next years will tell us whether the patterns observed during 1988–1995 signify a new stability, a temporary leveling off in a generally upward trend in levels of adolescent sexual activity or the precursor of a decline. Nevertheless, the sustained level of initiation of sexual activity during adolescence over the past decade and one-half is by now a recognized pattern of behavior, and is an important characteristic of the transition to adulthood in the United States.

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