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ABSTRACT

One major challenge facing adolescents concerns choices about sex. The results of this survey indicate that the majority of North Carolina's high school students are sexually active. As a group, males generally reported a higher rate of sexual involvement and more sexual partners than females at all grade levels. Black students appear to be a particularly high risk group due to their early ages at sexual initiation and activity with multiple partners. The rate of reported pregnancies is higher among black students. Black females also reported the highest percentage of sexually transmitted diseases. White students were found to be more likely to use alcohol or other drugs prior to intercourse. The AIDS epidemic has focused attention on high risk sexual behaviors among individuals who are sexually active. Findings indicate that among sexually active students slightly over half used a condom the last time they had intercourse. However, nearly one in five sexually active students used nothing. Teenage childbearing also presents numerous risks to both the mother and the child. Almost one in 10 high school students, or a projected 27,000 adolescents, reported having been pregnant or impregnated someone. These findings need to be considered carefully as curricula are reviewed or prevention programs developed to encourage sexual abstinence among teenagers and to ensure high risk practices are reduced among those engaging in sexual behavior. Contains 20 references. (BF)

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**SELECTED INDICATORS OF ADOLESCENT
SEXUAL BEHAVIOR:**

RESULTS FROM
THE 1993 NORTH CAROLINA YOUTH RISK BEHAVIOR SURVEY

Report Prepared by

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Bob Etheridge, State Superintendent
1994

FOREWORD

The primary mission of the Department of Public Instruction is to ensure that our young people receive the very best education possible. Teachers and other educators know that many things that occur outside the education setting affect how well a child succeeds in school. Students are affected by their family situation, health, parental involvement, role models and other factors. Although schools cannot solve societal problems alone, they must continue in their efforts to make a difference for children. One area in which schools must continue to try to have an impact is in increasing sexual abstinence among school age children.

This report takes a careful look at the reality of teen sexual behavior. Its findings suggest that there are many areas for concern. Too many teens have chosen to be sexually active, and early initiation into sexual activities carries with it high risks for the well-being and future success of young people. The AIDS epidemic has reached our adolescent population. Too many teens drop out of school because of pregnancy. When teenagers have babies, they are also at risk for a life of poverty and welfare dependency.

North Carolina as a whole suffers when young people lose their ability to be productive citizens because of their earlier decisions. As State Superintendent, I want every child to achieve, and I want every child to grow up safe, healthy, and optimistic about his or her future. I believe that it is critical that we help teens to develop values that encourage sexual abstinence and reduce other high risk behaviors.



Bob Etheridge,
State Superintendent of Public Instruction

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EXECUTIVE SUMMARY

The current generation of adolescents faces some difficult challenges in addition to the normal developmental tasks of their age. Given the bombardment of sexual messages in the media that appear to endorse adolescent sexuality, one major challenge for teens concerns choices about sex. The findings from the *1993 North Carolina Youth Risk Behavior Survey* show that the majority of North Carolina's high school students are sexually active. As such, many teens are at risk due to their high risk sexual behaviors.

A substantial proportion of North Carolina students begin sexual activities at young ages. Nearly one in six youngsters reported that they had engaged in sexual intercourse prior to the age of thirteen. More than six in ten students in grades 9-12 have had intercourse at least once. By the time they were seniors in 1993, almost three-quarters of twelfth-grade students had engaged in sexual intercourse at least once. As a group, male students reported a higher rate of sexual involvement and more sexual partners than female students at all grade levels, with the exception of white females who reported slightly more current sexual activity than white males during the three months prior to the administration of the survey. Based on population estimates, findings indicate that about 129,000 North Carolina students were sexually active in the three months prior to the survey administration.

Black students appear to be a particularly high risk group due to their early ages of sexual initiation and activity with multiple partners. Eight in ten black high school students and nine out of ten black males have had sex at least once. Both black males and females reported a greater level of current sexual activity than white males or females. The rate of reported pregnancies is higher among black students as well. Black females reported the highest percentage of sexually transmitted diseases.

Nearly one-quarter of all students reported that they had engaged in sexual intercourse with four or more sexual partners. This statistic indicates that a significant proportion of the high school student population is at high risk for sexually transmitted diseases because of activity with multiple sexual partners. In fact, nearly one in fourteen, or an estimated 21,000 high school students, were reportedly told by a doctor or nurse that they had already acquired a sexually transmitted disease.

Although black males, in general, reported higher levels of sexual activity than white males, white males were more likely to use alcohol or other drugs prior to intercourse. Similarly, white females were more likely to report the use of substances at last intercourse than black females.

The AIDS epidemic has focused attention on high risk sexual behaviors among individuals who are sexually active. The use of latex condoms has been encouraged by health practitioners as one method to prevent the transmission of the HIV virus and other sexually transmitted diseases. Condom use may also prevent unintended pregnancy. Findings indicate that among sexually active high school students, slightly over half used a condom at last intercourse. However, nearly one in five sexually active students used nothing. Additionally, about one in seven used withdrawal as a birth control method the last time that they had intercourse. Clearly, among sexually active students, a large percentage were engaged in high risk sexual behaviors.

Unintended pregnancy is another outcome associated with early sexual activity. Teenage childbearing presents numerous risks to both the mother and the child. Almost one in ten high school students, or an estimated 27,000 adolescents, reported that they had either been pregnant or impregnated someone.

The findings in this study show that the majority of high school students in North Carolina are sexually active and a significant proportion of them are at high risk for sexually transmitted diseases, including HIV infection. Further, because they do not consistently practice low risk sexual behaviors or use birth control when they engage in sexual intercourse, many high schools students are at risk for unintended pregnancies.

Since 1993 was the first year in which representative information concerning high school students' sexual behavior was collected, it represents a baseline from which future comparisons may be made. Beginning with the 1995 North Carolina Youth Risk Behavior Survey, we will be able to track the progress in increasing sexual abstinence and in reducing high risk sexual behavior among North Carolina's teenagers.

These findings need to be considered carefully as curricula are reviewed or prevention programs developed to encourage sexual abstinence among teenagers and to ensure that high risk practices are reduced among those who cannot be dissuaded from engaging in sexual behavior.

INTRODUCTION

Although concern has always existed over adolescent sexual behavior, the AIDS epidemic has brought a new urgency and complexity to the issue. Schools are mandated to provide students with factual information so that youth may learn about ways to abstain from early sexual activity. At the same time, the provision of services to students who are already sexually active is generally not available at the local school level. A careful look at the reality of teen sexual behavior is needed so that parents and educators may respond to help adolescents abstain from sex and reduce the risks associated with early sexual activity.

National data indicate that rates of premarital sexual activity, teen pregnancy, and sexually transmitted diseases (STDs) among teens continue to increase, while age at first intercourse continues to drop (American Medical Association, 1990a). Youth under the age of 24 comprise the fastest growing human immunodeficiency virus (HIV) positive group in the United States (Centers for Disease Control, 1992a). To date, more than one million Americans have been infected with the HIV virus. An estimated 10 million other sexually transmitted diseases are reported each year among those aged 15-29 in the United States (Roper, Peterson, & Curran, 1993). Research has shown that the younger the age at first intercourse, the greater the number of lifetime sexual partners. Also, the earlier that an individual engages in sexual intercourse and the greater the number of lifetime sexual partners, the greater the likelihood of acquiring a sexually transmitted disease (Roper, et al., 1993).

HIV is now present throughout the teenage community in the United States (Hein, 1993). The highest rates of sexually transmitted diseases occur among adolescents. Consequently, HIV is likely to become even more widespread. Rapid growth of HIV among teens requires only two things, according to the research: unprotected intercourse and the presence of the HIV virus (Hein, 1993). Eighty-six percent of all sexually transmitted diseases occur among individuals aged 15-29 (Centers for Disease Control, 1992c). "By age 21, approximately one in five young people have acquired a sexually transmitted disease. Because only a portion of teenagers are sexually active, this amounts to a rate of at least 25 percent among those who are." (American Medical Association, 1990b).

Among major risks of early sexual activity are unwanted and unintended pregnancy. More than one million adolescent girls become pregnant every year (Hayes, 1987). Teenagers are more likely to die in childbirth than older mothers. Babies born to teenage mothers are more likely to be medically fragile, have low birth weight, and limited intellectual functioning. School-age girls who carry their babies to term are not likely to marry the father who is often a teenager himself; and, teen mothers are very likely to drop out of school, often precipitating a cycle of poverty and welfare dependence.

Research suggests that parental and peer behavior influence the sexual behavior of both boys and girls (Brooks-Gunn & Furstenberg, 1988; Udry, 1988; Udry, Billy, Morris, Groff, & Raf, 1985; Udry, Talbert, & Morris, 1986). Social norms also influence the onset and progression of high risk behavior (Fisher, Misovich, & Fisher, 1992; Romer & Hornik, 1992). "Social environments are especially critical during the early adolescent years when standards for behavior are often set by parents and peers" (Romer,

Black, Ricardo, Feigelman, Kaljee, Galbraith, Nesbit, Hornik & Stanton, 1994). Teenagers report that the social pressure exerted by peers is the primary reason that adolescents do not wait until they are older to initiate sex. Research also shows that sexual activity is more common among adolescents from low socioeconomic backgrounds, and among youth who use alcohol or other drugs, smoke, or participate in anti-social or delinquent acts (Fisher, et al., 1992).

A recent study of inner-city minority youth aged 9 to 15 (Romer, et al., 1994), showed that all of the males and eight in ten females reportedly engaged in sexual intercourse by the age of 15. The investigators found that sexual activity was related to social influences. Peer attitudes favorable for sex were strong predictors of the likelihood of engaging in sex. That is, when the youth believed that their peers were sexually active and approved of sex, the subjects were likely to have engaged in sexual intercourse. Also, the youth were highly likely to have engaged in sex when they believed that their parents or other caretakers were not monitoring their behavior.

In addition to high rates of sexual activity, the teens engaged in other high risk sexual behaviors. They rarely used condoms during sexual intercourse to prevent sexually transmitted diseases, nor did they consistently use other methods of birth control. Based on findings from the self-reported behavior, the authors concluded that minority youth living in poverty represent a particularly high risk population for exposure to HIV and other sexually transmitted diseases as well as unintended pregnancies because of their high rates of early sexual involvement and high risk sexual behaviors.

Other studies show that young women also constitute a high risk group. When adolescent girls become involved in a sexual situation, they report that they are often unable to control what occurs in the encounter or terminate a relationship over risky sexual practices (United Nations, 1993). This effectively places young women in a high risk situation and may explain, to some extent, why the rates of sexually transmitted diseases are higher among adolescent women.

Research shows that teens' decisions to abstain from sex or postpone sexual involvement can be directly attributed to a social environment that supports postponement (Hein, 1993). Other research supports widely held beliefs that adolescents respond positively to directive counseling from adults about sexuality (American Medical Association, 1990b). Early sexual activity is associated with numerous risks, so it is appropriate to encourage adolescents to abstain from, or at least delay, sex. However, prevention programs often fail to incorporate knowledge of the social processes and peer attitudes that influence sexual expression among teenagers.

The rising rates of HIV infection and other sexually transmitted diseases among youth as well as the increase in the number of unintended pregnancies among teenagers, have lead the Centers for Disease Control (CDC) to emphasize the reduction of these high risk behaviors as primary health objectives for adolescents. The CDC developed the Youth Risk Behavior Survey (YRBS) as a part of a national health monitoring effort to determine the extent to which 9th-12th grade students engage in behaviors that are associated with the leading causes of death and disability in their age group.

Since 1990, the North Carolina Department of Public Instruction has participated in a cooperative agreement with the CDC to conduct the Youth Risk Behavior Survey. The Youth Risk Behavior Survey contains indicators of high risk behavior in six areas:

- Unintentional (accidental) and intentional (physical violence) injuries
- Alcohol and other drug use
- Sexual behavior that results in HIV infection, other sexually transmitted diseases, and unintended pregnancies
- Tobacco use
- Physical fitness
- Nutritional and dietary habits

The information provided by the YRBS is intended to be used to help focus educational programs and resources to address particular high risk behaviors, such as early teen sexuality. The survey data also serve as benchmarks in tracking the progress toward reducing the risky behaviors.

Overview of the 1993 Survey

The purpose of the Youth Risk Behavior Survey is to examine the behaviors of high school age youth that are associated with the six leading causes of death or disability. For this report, selected indicators of adolescent sexual behavior, taken from the 1993 North Carolina Youth Risk Behavior Survey (NC YRBS), are examined. The selected indicators provide a fairly comprehensive, though not exhaustive, view of the extent of risk for HIV infection, unintended pregnancies, and other sexually transmitted diseases among high school students as reported by the students themselves.

In 1990, the North Carolina Department of Public Instruction contracted with East Carolina University to conduct the first, limited YRBS survey. The partial 1990 YRBS excluded the sexual behavior questions and sampled only 9th and 12th grade students.

Beginning in 1993, North Carolina elected to participate fully in the YRBS. However, a modified version of the YRBS was developed so that some questions from the North Carolina Alcohol and Drug Defense (ADD) Student Survey could be included. The 1993 NC YRBS was administered to a representative sample of all 9th-12th grade public school students in the spring of 1993.

Schools were randomly selected as NC YRBS survey sites from a base of 407 public schools containing approximately 300,000 students in grades 9-12. Of the 71 schools chosen and 2961 students included in the sample, 12 (16.9%) schools elected not to participate in the study at all, four (5.6%) schools required active parental permission for students to participate in the survey, and six (8.5%) chose not to include the sexual behavior questions. The two reasons cited most often for non-participation in the survey were: (1) the questions about adolescent sexual behavior were unacceptable or inappropriate at the local level, and (2) other similar survey or educational activities were scheduled at the same time. The final sample included 59 (83.1%) schools and 2531 students responding to the survey. To ensure accurate responses to sensitive questions as well as privacy and confidentiality, participation in the 1993 NC YRBS was entirely voluntary; students could decline to participate at any point in the survey administration. The sexual behavior questions were placed at the end of the survey to maximize completion of the rest of the survey while allowing students to opt out of these questions, should they desire to do so.

Eighty-two percent (2439) of the students sampled completed usable surveys. Of those, 49 percent (1200) were male and 51 percent (1235) were female (Figure 1). Four students did not identify their sex. Summarizing by grade, the results indicate that 30 percent (722) of students were in 9th grade, 29 percent (694) were in 10th grade, 24 percent (582) were in grade 11, and 17 percent (425) of students sampled were in grade 12. There were 16 (.7%) students who did not identify their grade level. By ethnic group, 65 percent (1595) of high school students identified themselves as white, 28 percent (693) as black, 1 percent (30) as Hispanic, and 5 percent (117) as "other." The 1993 NC YRBS sample closely approximates the ethnic distribution of North Carolina students as a whole in 1993: white students in North Carolina comprised 66 percent, blacks represented 30 percent, and Hispanics were 1 percent of the total population. Because there were too few Hispanic (1%) students to provide representative information about their sexual behavior, the 1993 NC YRBS findings reported in this study are limited to white, black, and "other" students.

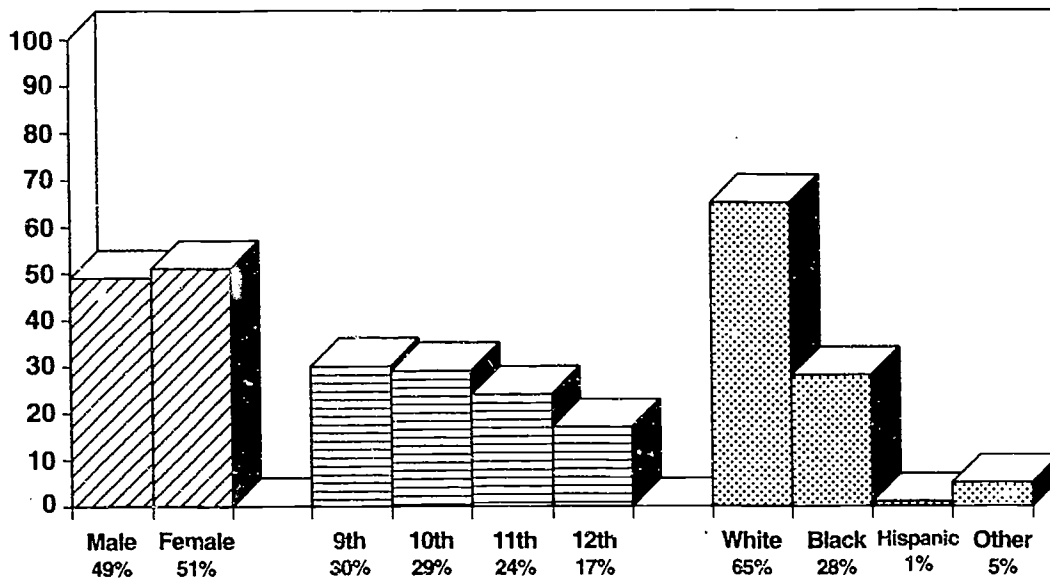


Figure 1. 1993 NC YRBS 9th-12th grade student sample by sex, grade, and race

INDICATORS OF ADOLESCENT SEXUAL BEHAVIOR

In order to anchor the findings concerning North Carolina students' sexual behavior, some limited findings for sexual behaviors of high school students from the national Youth Risk Behavior Surveillance study, conducted in 1990, are reported next using the same YRBS survey questions used in the 1993 NCYRBS (Centers for Disease Control, 1992a; Holtzman, Lowry, Kann, Collins, & Kolbe, 1994; Lowry, Holtzman, Truman, Kann, Collins, & Kolbe, 1994). Direct comparisons are not made to North Carolina students because of the number of years that have elapsed. However, the information from the 1990 YRBS national study does provide a broad gauge of the proportion of high school students in the United States who were sexually active and those who were engaged in high risk sexual behaviors.

In 1990, a little more than half (54%) of all high school students nationally reported ever having had sexual intercourse (Centers for Disease Control, 1992a, 1992b; Holtzman, et al., 1994; Lowry, et al., 1994). Fifty-two percent of white high school students reported ever having had sexual intercourse compared to 72 percent of black high school students. Nationally, the proportion of male high school students (61%) who reported having ever engaged in sexual intercourse was higher than female high school students (48%) in 1990. Nationally in 1990, 19 percent of all high school students reported having had sex with four or more partners, a high risk sexual behavior. The proportion of male students (43%) who engaged in sexual intercourse in the past three months was more than female students (36%). Reported condom use among high school students nationally in 1990 was 49 percent for males and 40 percent for females. Four percent of all high school students reported that they had been told by a doctor or a nurse that they had a sexually transmitted disease. Black students (8%) were nearly three times more likely than white students (3%) to report a sexually transmitted disease. Nationally in 1990, 74 percent of high school students reported receiving HIV/AIDS instruction in school. Fifty-three percent of high school students reported that they talked about HIV or AIDS at home with their parents or other adults. In the next sections, findings about sexual behaviors for North Carolina students are reported.

Findings are reported in the next sections pertaining to the eight questions about self-reported sexual behavior that were included in the 1993 NC YRBS. Also included are findings from two questions concerning HIV/AIDS education received in school or discussions held at home since an understanding of the risky behaviors that lead to HIV infection are believed to impact on the prevention of HIV transmission.

Lifetime Sexual Activity

As previously noted, the younger the age at first intercourse and the greater the level of sexual involvement, the greater the associated risks of adverse outcomes. Thirty-eight percent of all high school students in North Carolina have never had sexual intercourse (Figure 2). Using a base of approximately 300,000 9th-12th grade students in 1992-1993, about 114,000 high school students had never engaged in sexual intercourse. However, more than six in ten students (62%) have had intercourse at least once. Eight in ten black students, five in ten white students, and nearly seven in ten "other" students in North Carolina have had sex at least once. Fifteen percent of all 9th-12th graders reported first intercourse prior to the age of 13. This means that approximately 45,000 youngsters in North Carolina engaged in sexual intercourse before they were teenagers, based on population estimates. Male students (66%) were more likely than female students (58%) to have ever engaged in sexual intercourse. Sexual activity increased with age; by the time they were seniors, almost three-quarters of twelfth-grade students had intercourse at least once.

Although the rate of sexual activity appears to be high among North Carolina students, some researchers (Orr, Beiter, & Ingersoll, 1991) have suggested that school-based surveys may actually underestimate the true rate of sexual activity among adolescents since early sexual intercourse is associated with dropping out of school and other social attitudes may inhibit reporting.

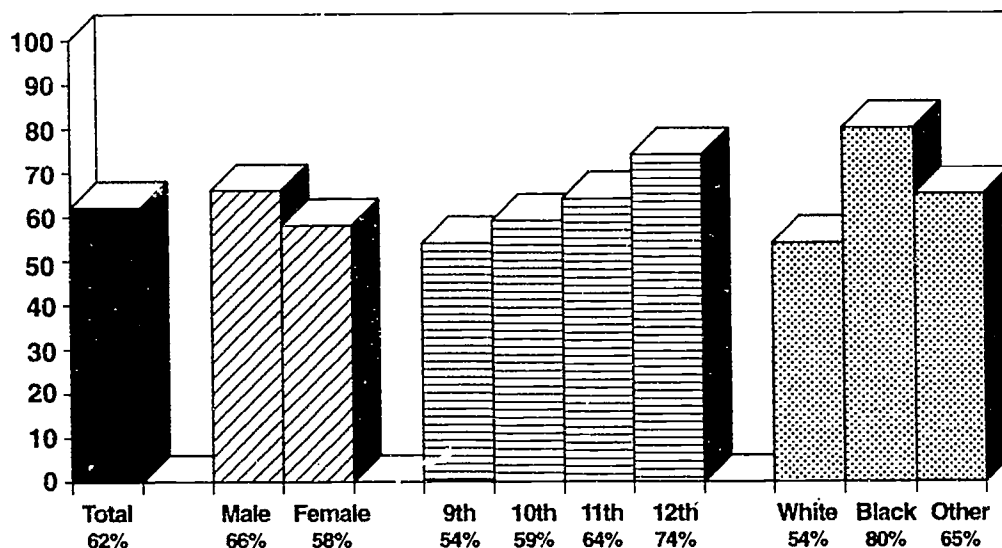


Figure 2. Percent of NC students who have ever had intercourse by sex, grade, and race

- Sixty-two percent of all 9th-12th grade students had intercourse at least once.
- Thirty-eight percent of all 9th-12th grade students have never had intercourse.
- By grade twelve, 74 percent all seniors reported sexual intercourse at least once.
- Twenty-six percent of high school seniors have never had intercourse.

In Figure 3, the percentage of North Carolina students who reported having had intercourse at least once is shown by sex and race for each grade. At all grade levels, males reportedly engaged in intercourse at a higher rate than females. Nearly nine out of ten black males in grades 9 through 12 reported ever having sexual intercourse compared to almost seven out of ten white males. Almost three-quarters of black females engaged in sexual intercourse at least once compared to half of all white females in high school.

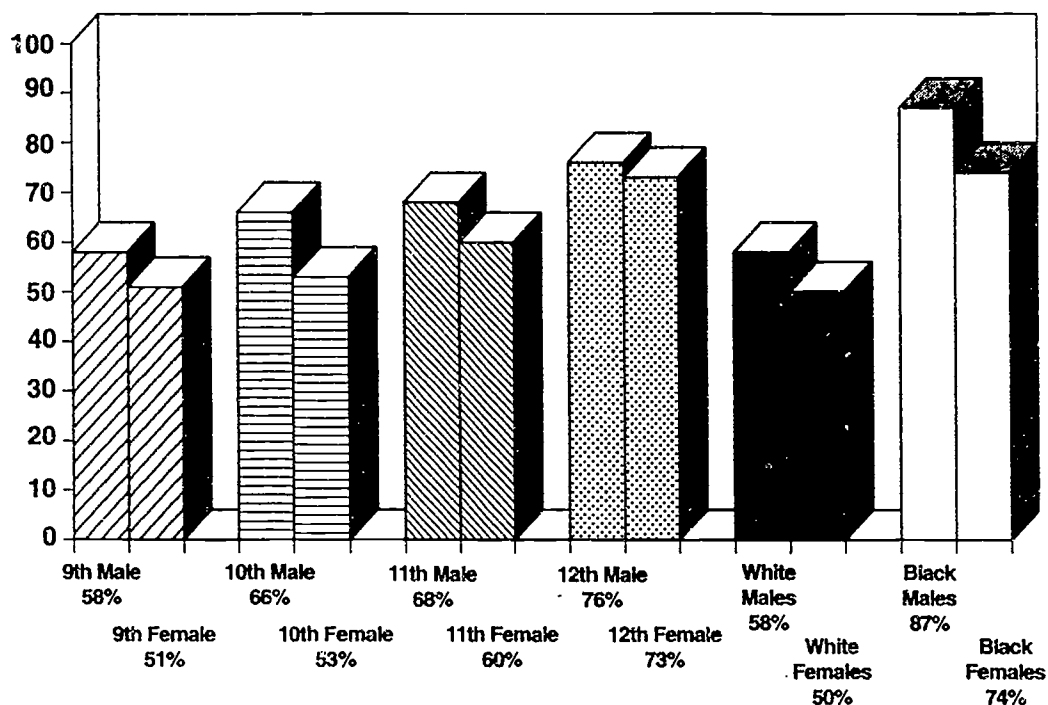


Figure 3. Percent of NC students who ever had intercourse by grade and sex, and race and sex.

- Fifty-eight percent of 9th grade males and 51 percent of 9th grade females reported ever having sexual intercourse.
- Sixty-six percent of 10th grade males and 53 percent of 10th grade females reported ever having sexual intercourse.
- Sixty-eight percent of 11th grade males and 60 percent of 11th grade females had sexual intercourse at least once.
- Seventy-six percent of 12th grade males reported sexual intercourse while 73 percent of 12th grade females reported doing so.
- Black males (87%) in grades 9-12 were one-and-one half times more likely to have reported sexual intercourse than white males (58%).
- Black females (74%) in grades 9-12 were nearly one-and-one-half times more likely than white females (50%) to have reported having sexual intercourse at least once.

Number of Sexual Partners in Lifetime

More than one in five sexually active high school students (21%) reported that they had sexual intercourse with six or more sexual partners in their lifetime. Based on population estimates, this indicates that approximately 39,000 students in North Carolina are in a particularly high risk group because of the number of sexual partners reported.

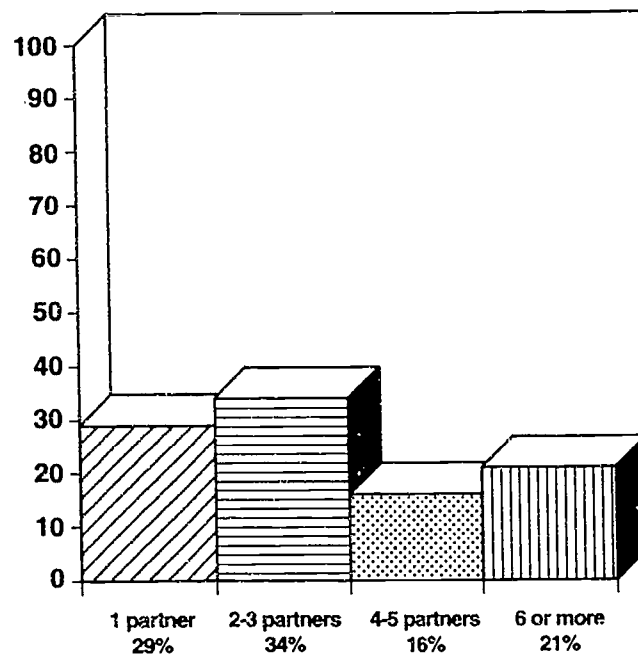


Figure 4. Percent of sexually active NC students reporting number of sexual partners

- Sixty-two percent of all high school students reported having engaged in sexual intercourse at least once with one or more partners.
- Of sexually active students, 29 percent reported having engaged in sexual intercourse with only one sexual partner in their lifetime.
- Thirty-four percent of sexually active students reported two to three sexual partners.
- Sixteen percent of sexually active students reported that they had four to five sexual partners.
- Twenty-one percent of sexually active high school students reported that they had 6 or more partners.

Number of Sexual Partners by Race

The number of sexual partners with whom North Carolina students in grades 9-12 had engaged in sexual intercourse is shown by race in Figure 5. Consistent with national data (Lowry, et al., 1994), black students report a much higher rate of sexual activity and more sexual partners than white students.

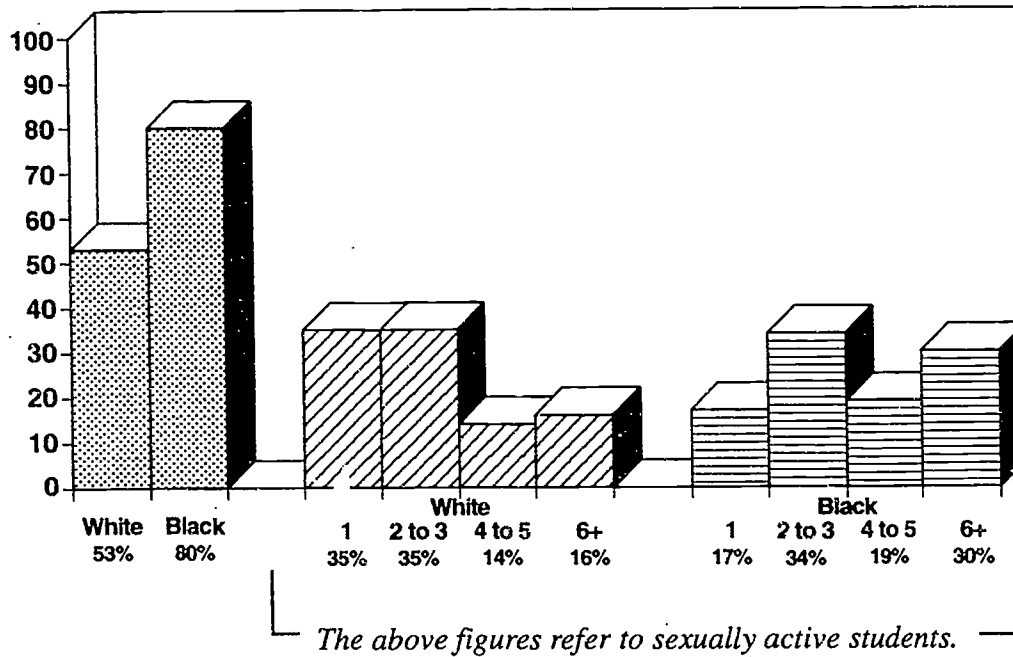


Figure 5. Percentage of NC students who have ever engaged in sexual intercourse by race and number of sexual partners

- Eighty percent of all 9th-12th grade black students reported having had sexual intercourse with one or more sexual partners compared to 54 percent of all white high school students.
- Of sexually active students, 35 percent of white students and 17 percent of black students reportedly had sex with only one partner.
- Black and white high schools students who were sexually active reported similar activity involving two to three sexual partners. Thirty-five percent of white and 34 percent of black high school students said that they had sex with two to three partners.
- Fourteen percent of white and 19 percent of black sexually active students reported four to five sexual partners.
- Almost twice as many black (30%) as white sexually active students (16%) reported sexual intercourse with six or more partners.

Current Sexual Activity

Following national guidelines, current sexual activity is defined as having had sexual intercourse within three months prior to the administration of the survey. High school respondents were asked to report the number of sexual partners with whom they had engaged in sex in the past three months. More than half (57%) of all high school students were sexually abstinent in the three months prior to the survey. Forty-three percent (Figure 6) of high school students reported that they had sex with at least one partner. Based on population estimates, approximately 129,000 high school students were currently sexually active in 1993. Male students (57%) were much more likely to report having had sexual intercourse in the past three months than female students (43%). More than half (55%) of the twelfth grade students reported that they had engaged in sexual intercourse with at least one partner in within the three-month period prior to survey administration.

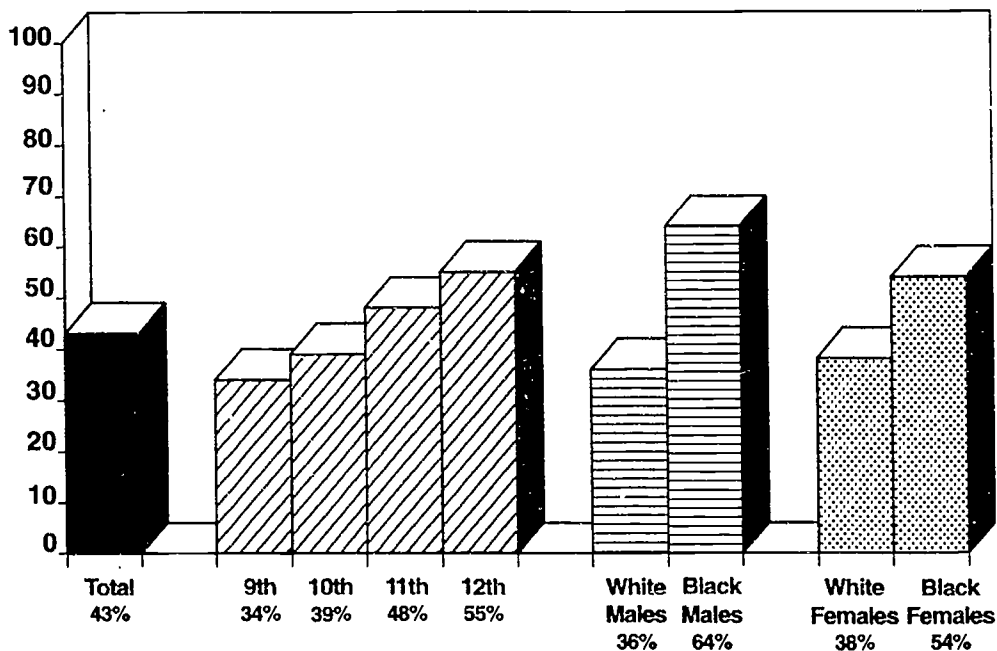


Figure 6. Percent of NC students who reported sexual intercourse in previous 3 months by grade, sex, and race.

- Fifty-seven percent of all high school students were sexually abstinent in the three months prior to the administration of the survey.
- Forty-three percent of 9th-12th grade students reported sexual intercourse with one or more partners in the three months prior to the survey.
- As in lifetime sexual activity, current sexual behavior increases with age: 34 percent of 9th graders, 39 percent of 10th graders, 48 percent of 11th graders, and 55 percent of 12th graders reported sex with at least one partner in the three-month period prior to the survey.

- Black males (64%) were nearly twice as likely as white males (36%) to report current sexual activity.
- Black females (54%) were almost one-and-one-half times more likely than white females (38%) to be sexually active.
- White females (38%) were more sexually active during this three-month period than were their white males counterparts (36%).

Use of Alcohol and/or Drugs at Last Intercourse

A recent report by Lowry et al. (1994) based on data collected from the national Youth Risk Behavior Survey in 1990, examined the probability of high risk sexual behavior (four or more sexual partners and not using a condom at last intercourse) associated with the use of alcohol, tobacco, or other illicit drugs. Their findings indicate that the likelihood of engaging in the types of high risk sexual behavior that result in HIV infection increases as drug use increases. That is, students who have never used any substances are also most likely to have never engaged in sexual intercourse. Conversely, students who have used the gateway drugs (alcohol and/or tobacco) are more likely to have engaged in sexual behavior than students who reportedly have not used any substances. However, students who reported the riskiest sexual behavior nationally were those who reported the use of marijuana, cocaine, and other illegal drugs in addition to alcohol and tobacco.

Although black males in North Carolina, in general, report more sexual activity than white males, white males were more likely to use substances prior to sexual intercourse (Figure 7). Similarly, white females in North Carolina were more likely than black females to report the use of alcohol or other drugs prior to last intercourse.

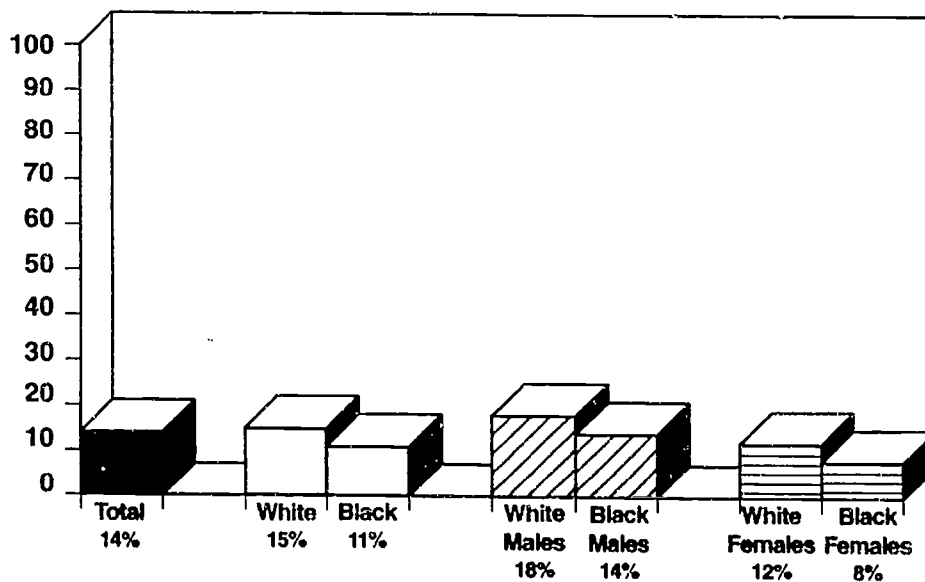


Figure 7. Percent of sexually active NC students who used alcohol or other drugs at last intercourse

- Of those reporting sexual intercourse, 86 percent did not use alcohol or other drugs prior to sexual activity.
- Fourteen percent of sexually active students reported that they used alcohol or other drugs at the time of last intercourse.
- White males (18%) were more likely than black males (14%) to report having used alcohol or other drugs prior to sexual intercourse.
- Similarly, white females (12%) were more likely than black females (8%) to use substances prior to intercourse.

Use of Condom at Last Intercourse

The AIDS epidemic has focused attention on the reduction of risky sexual practices for individuals who are sexually active. One practice that has been encouraged by health practitioners to reduce the transmission of the HIV virus is the use of latex condoms. Condoms have also been shown to be effective as a contraceptive device and as protection against other sexually transmitted diseases. Sexually active males (60%) in North Carolina were more likely to use condoms at last intercourse than sexually active female students (48%). Of all sexually active high school students in North Carolina, over half (54%) reported using a condom at last intercourse (Figure 8). However, given the deadly nature of AIDS, it is alarming that almost half of the high school students engaging in sex were not using practices that reduce the risk of HIV transmission.

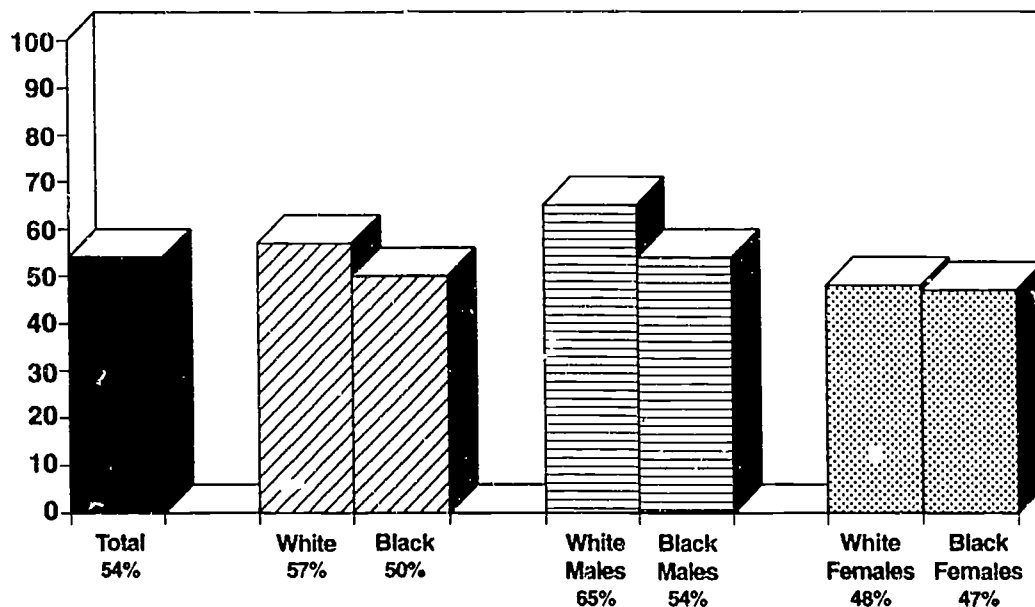


Figure 8. Percent of sexually active NC students who used a condom at last intercourse by race and sex

- Of those who were sexually active, over half (54%) reported using a condom at last intercourse.
- Blacks (50%) were somewhat less likely than whites (57%) to report the use of condoms at last intercourse.
- White males (65%) were more likely than black males (54%) to use condoms.
- White females (48%) and black females (47%) were nearly equally likely to report the use of condoms.
- Males (60%) were more likely than females (48%) to report using a condom at last intercourse.

Use of Birth Control at Last Intercourse

As previously noted, unintended pregnancy is a major risk factor associated with adolescent sexual activity. In order to determine the extent of risk for unintended pregnancy, teens were asked what one method of birth control was used at last intercourse. Nearly one in five sexually active teens reported that they had not used any method to prevent pregnancy the last time they had intercourse (Figure 9). More than one in seven students reported that withdrawal was used as the one method of birth control. Since withdrawal is as ineffective as no method, it appears that a substantial proportion of high school students were at risk for pregnancy the last time they had intercourse. Although the difference is not great, it should be noted that there is some difference in the percentage of students (54%) who reported the use of a condom at last intercourse in the results reported in Figure 8 and the percentage of students (50%) who reported the use of a condom for birth control reported in Figure 9.

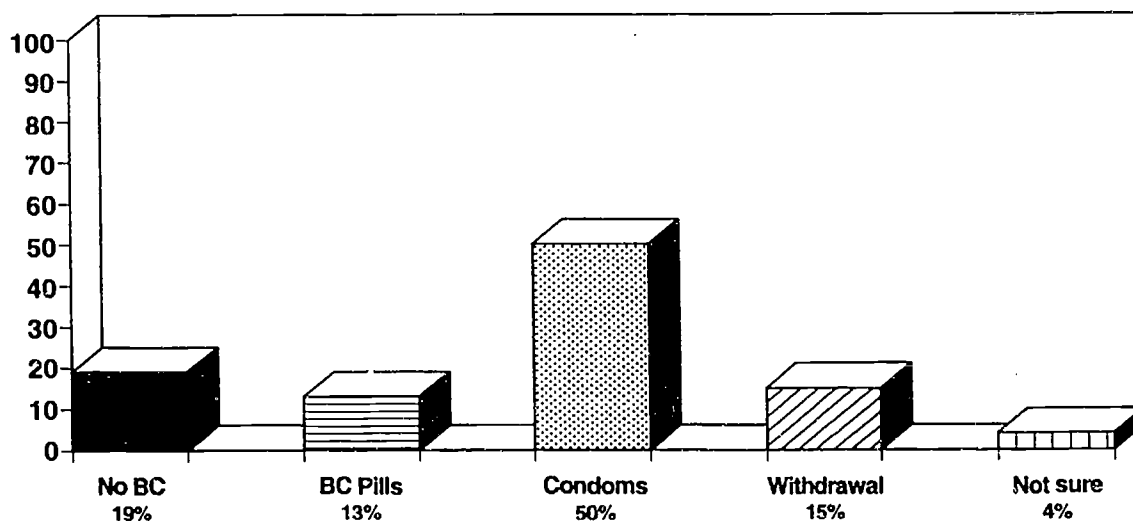


Figure 9. Percent of sexually active NC students reporting birth control method used to prevent pregnancy at last intercourse

- Of those who were sexually active, 19 percent reported that no method was used during last intercourse.
- Fifteen percent of high school students reported that they used withdrawal as the one method of birth control at last intercourse.
- Fifty percent of high school students reported using a condom at last intercourse.
- Twelve percent of students who were sexually active reported that they used birth control pills or an implant as the one method of birth control that they used at last intercourse.
- Four percent of 9th-12th grade students were not sure what method was used or reported that some other method was used the last time they had intercourse.

Reported Pregnancies

Teenage pregnancy and childbearing presents numerous risks to both the mother and the child. North Carolina has one of the highest pregnancy and birth rates to adolescents in the United States (NC Department of Environment, Health, and Natural Resources, 1994). Most other states in the nation report declining pregnancy rates for teenagers. However, North Carolina reported an 18 percent increase in births to women aged 15-19 in 1993 (NC Department of Environment, Health, and Natural Resources, 1994). Findings from this study (Figure 10) show that eight percent of the teenagers in North Carolina or about 24,000 high school students reported that they had either been pregnant or impregnated someone.

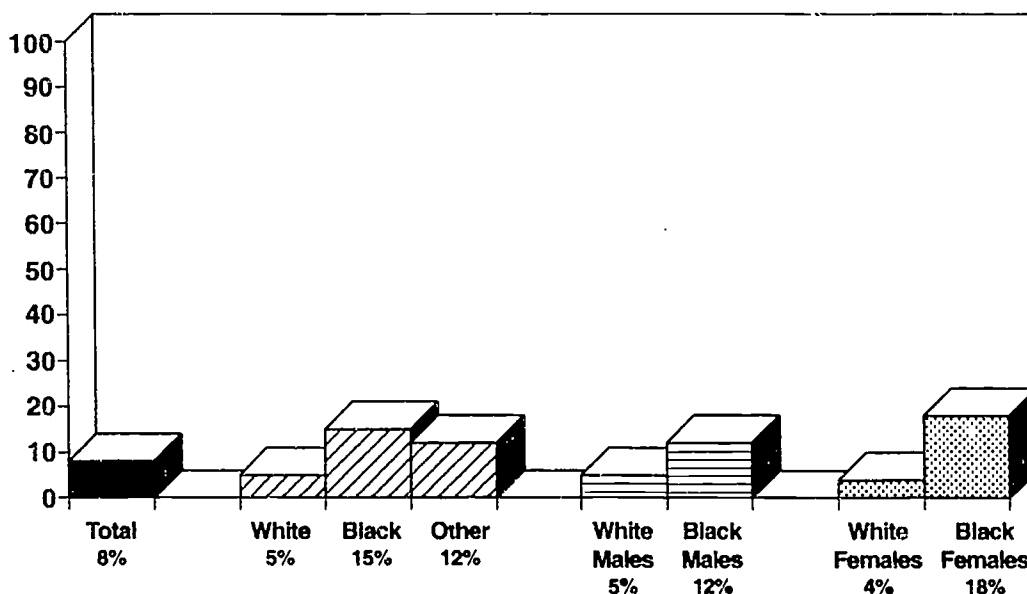


Figure 10. Percent of NC students reporting at least one pregnancy

- Eight percent of all high school students reported having been pregnant or impregnating someone.
- Blacks (15%) were three times more likely than whites (5%) to report one or more pregnancies. Twelve percent of “other” students reported one or more pregnancies.
- Five percent of white males reported having impregnating someone while 12 percent of black males reported doing so.
- More than four times as many black female high school students (18%) reported one or more pregnancies compared to 4 percent of white female students.

Sexually Transmitted Diseases

As previously noted, nearly nine out of ten cases of sexually transmitted diseases (STDs) occur among individuals aged 15-29 (Centers for Disease Control, 1992c). In North Carolina in 1993, seven percent or about 21,000 high school students reported that they had been told by a doctor or a nurse that they had a sexually transmitted disease (Figure 11). One in ten black students in North Carolina, about one in sixteen white students, and almost one in ten “other” students reported having a sexually transmitted disease. As can be seen in Figure 12, black females (11%) in North Carolina reported the highest proportion of sexually transmitted diseases.

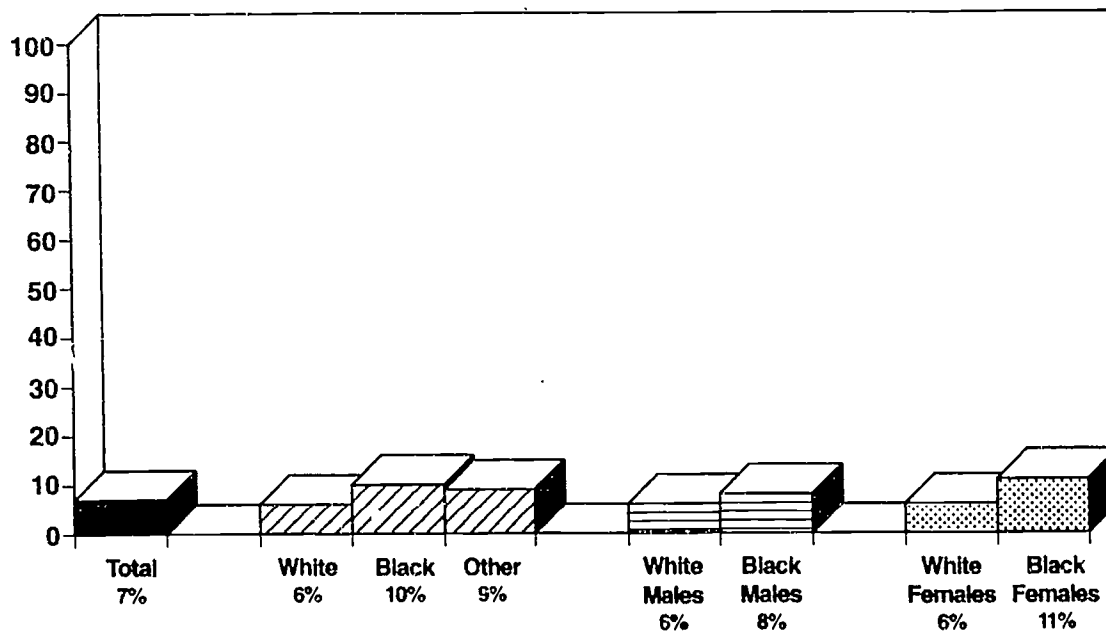


Figure 11. Percent of NC student ever told they had a sexually transmitted disease

- Seven percent of all high school students have been told by a doctor or nurse that they had a sexually transmitted disease.
- Black males (8%) reported more sexually transmitted diseases than white males (6%).
- Black females (11%) were nearly twice as likely as white females (6%) to have reported a sexually transmitted disease.

HIV/AIDS Education at School

Health practitioners have been strong advocates of educating youth about the ways the HIV virus is transmitted in order to prevent the spread of AIDS, which - at present - constitutes a death sentence. Since HIV is primarily transmitted sexually, knowledge of how it is transmitted is assumed to have an impact on high risk sexual behaviors. To assess the extent to which youth are knowledgeable about HIV infection and to examine whether knowledge may assist in limiting risky sexual practices, several questions about HIV/AIDS education were asked of high school students in the national YRBS study. Comparing results from the national YRBS studies in 1989 and 1990 (Holtzman, et al., 1994), findings on HIV instruction received in school and high risk sexual behavior were inconclusive. Students reported more knowledge in some areas in 1990 when compared to 1989, and there was some decline in the riskiest sexual behaviors. However, it was not possible to determine, based on two time points, whether the increase in knowledge resulted in a decrease in risky sexual behavior.

Findings from the 1993 NC YRBS study show that most high school students in North Carolina are receiving education about HIV and AIDS in school. More than nine out of ten North Carolina high school students reported that they were taught about HIV/AIDS in school (Figure 12).

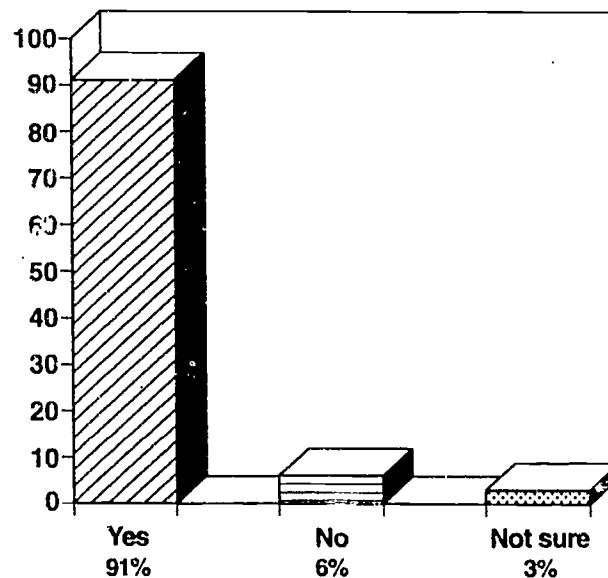


Figure 12. Percent of NC students receiving HIV/AIDS instruction at school

- Ninety-one percent of all 9th-12th grade students reported receiving instruction in school about HIV/AIDS.
- Nine percent of high school students said that they did not receive instruction or were not sure if they had been taught about HIV in school.
- Males (91%) and females (91%) were equally likely to report receiving HIV/AIDS education in school.
- Black students (90%) were somewhat less likely than white students (92%) to have been taught about AIDS.

Discussion about HIV/AIDS at Home

As previously noted, parents have a strong impact on the decisions that their children make about sex. In North Carolina in 1993, nearly three-quarters of high school students reported that they talked about HIV with their parents or other adults at home (Figure 13).

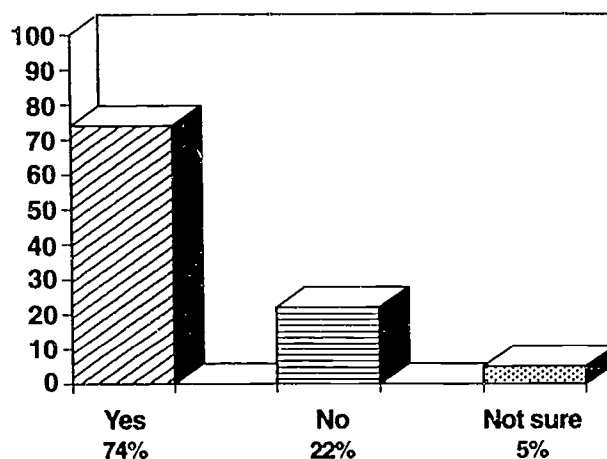


Figure 13. Percent of NC students discussing HIV/AIDS at home

- Seventy-four percent of high school students talked with their parents or other adults in the home about HIV/AIDS.
- White (74%) and black (75%) students were nearly equally likely to talk to someone at home about HIV. However, "other" students (64%) were less likely than white or black students to have discussed HIV/AIDS at home.
- Seventy-one percent of males and 77 percent of females reported discussing HIV/AIDS at home.

SUMMARY OF FINDINGS

Although adolescence is generally a time of optimism, growth, and mastery of adult roles, the current generation of adolescents faces some particularly difficult challenges. One major challenge is early involvement in high risk sexual behavior. As the findings from this study show, the majority of North Carolina's high school students are sexually active. As such, many of our teens are at risk due to their rate of sexual involvement and high risk sexual behaviors.

Clearly, many students in North Carolina begin sexual activities at young ages. Nearly one in six youngsters reported that they had engaged in sexual intercourse before they were teenagers and more than six in ten high school students have had intercourse at least once. By the time they were twelfth-graders in 1993, almost three-quarters of all high school seniors had engaged in sexual intercourse at least once. As a whole, males reported a higher rate of sexual involvement and more sexual partners than female students at all grade levels. However, white females reported slightly more current sexual activity than white males during the three months prior to the survey. An estimated 129,000 students indicated that they were sexually active in the three months prior to the survey.

Black students appear to be a particularly high risk group due to their early ages at sexual initiation and multiple partners. Eight in ten black high school students and nine out of ten black males have had sex at least once. Both black males and females reported a greater level of current sexual activity than white males or females. In addition, the rate of reported pregnancies is higher among black youth as well. Black females reported the highest percentage of sexually transmitted diseases. Minority youth have been identified as a high risk group in terms of HIV infection as well as other sexually transmitted diseases and pregnancy.

As noted earlier, the greater the number of sexual partners, the greater the likelihood of adverse health outcomes. Nearly one-quarter of all high school students reported that they had sexual intercourse with four or more sexual partners. This indicates that a significant proportion of students in North Carolina are in a particularly high risk group because of the number of sexual partners reported. Nearly one in fourteen, or an estimated 21,000 high school students reported that they had already acquired a sexually transmitted disease.

Although black males, in general, report a greater level of sexual activity than white males, white males were more likely to use alcohol or other drugs prior to intercourse. Similarly, white females were more likely to use substances at last intercourse than black females.

The AIDS epidemic has focused attention on high risk sexual behaviors among individuals who are sexually active. The use of latex condoms by the sexually active has been encouraged by health practitioners as one method to prevent the transmission of the HIV virus and other sexually transmitted diseases, especially because young people represent the group that has the highest rate of sexually transmitted diseases. Condom use may also prevent unintended pregnancy. Slightly over half of sexually active high school students reportedly used a condom the last time they had intercourse. White male students were more likely than black males and females or white females to report the use of a condom. On the other hand, nearly one in five sexually active students used nothing at last intercourse. Clearly, among sexually active students, a large percentage are engaged in high risk sexual behaviors.

Unintended pregnancy is another outcome associated with early sexual activity. Teenage childbearing presents numerous risks to both the mother and the child. Almost one in ten high school students, or a projected 27,000 adolescents, reported that they had either been pregnant or impregnated someone.

The findings presented in this study show that the majority of high school students in North Carolina are sexually active and a significant proportion of them are at high risk for sexually transmitted diseases, including HIV infection. Further, because they do not consistently practice low risk sexual behaviors or use birth control when they engage in sexual intercourse, many high school students are at risk for unintended pregnancies.

Since 1993 was the first year in which representative information was gathered concerning high school students' sexual behavior, it represents a baseline from which future comparisons may be made. Beginning with the 1995 NC YRBS, we will be able to track our progress in reducing high risk sexual behaviors among North Carolina's teenagers.

These findings need to be considered carefully as curricula are reviewed or prevention programs developed to encourage sexual abstinence among North Carolina teenagers and to ensure that high risk practices are reduced among those who cannot be dissuaded from engaging in sexual behaviors. School-based programs may assist teens in creating social values that encourage abstinence and postponement of sexual activity. For youth who have initiated sexual activity, practices that emphasize protection from sexually transmitted diseases and unintended pregnancies may limit the impact of risky behavior.

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SELECTED INDICATORS OF SEXUAL BEHAVIOR AMONG 9TH-12TH GRADE STUDENTS
From the *1993 North Carolina Youth Risk Behavior Survey*

75. Have you ever been taught about AIDS/HIV infection in school?
- a. Yes
 - b. No
 - c. Not sure
76. Have you ever talked about AIDS/HIV infection with your parents or other adults in your family?
- a. Yes
 - b. No
 - c. Not sure
92. How old were you when you had sexual intercourse for the first time?
- a. I have never had sexual intercourse
 - b. Less than 12 years old
 - c. 13 years old
 - d. 14 years old
 - e. 15 years old
 - f. 16 years old
 - g. 17 or more years old
93. During your life, with how many people have you had sexual intercourse?
- a. I have never had sexual intercourse
 - b. 1 person
 - c. 2 people
 - d. 3 people
 - e. 4 people
 - f. 5 people
 - g. 6 or more people
94. During the past 3 months, with how many people did you have sexual intercourse?
- a. I have never had sexual intercourse
 - b. I have had sexual intercourse, but not during the past 3 months
 - c. 1 person
 - d. 2 people
 - e. 3 people
 - f. 4 people
 - g. 5 people
 - h. 6 or more people

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95. Did you drink alcohol or use drugs before you had sexual intercourse the last time?
- a. I have never had sexual intercourse
 - b. Yes
 - c. No
96. The last time you had sexual intercourse, did you or your partner use a condom?
- a. I have never had sexual intercourse
 - b. Yes
 - c. No
97. The last time you had sexual intercourse, what one method did you or your partner use to prevent pregnancy? (Select only one response)
- a. I have never had sexual intercourse
 - b. No method was used to prevent pregnancy
 - c. Birth control pills/implant
 - d. Condoms
 - e. Withdrawal
 - f. Some other method
 - g. Not sure
98. How many times have you been pregnant or gotten someone pregnant?
- a. 0 (zero) times
 - b. 1 time
 - c. 2 or more times
 - d. Not sure
99. Have you ever been told by a doctor or nurse that you have a sexually transmitted disease such as genital herpes, genital warts, chlamydia, syphilis, gonorrhea, AIDS, or HIV infection?
- a. Yes
 - b. No