DOCUMENT RESUME

ED 443 529 PS 028 682

TITLE	Teens and Their Parents in the 21st Century: An Examination of Trends in Teen Behavior and the Role of Parental Involvement.
INSTITUTION	Council of Economic Advisers, Washington, DC.
SPONS AGENCY	National Inst. of Child Health and Human Development (NIH), Bethesda, MD.
PUB DATE	2000-05-02
NOTE	30p.; Report released at the White House Conference on Teenagers: Raising Responsible and Resourceful Youth (Washington, DC, May 2, 2000). "Funding support for preparing the revised documentation for public distribution was provided by a grant 92 R44-HD31776 from the National Institute of Child Health and Human Development to Sociometrics Corporation."
CONTRACT	PO1-HD31921
AVAILABLE FROM	http://www.whitehouse.gov/WH/New/html/teenconf.html
PUB TYPE	Information Analyses (070)
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	Academic Achievement; *Adolescent Attitudes; *Adolescent Behavior; *Adolescent Development; *Adolescents; Antisocial Behavior; Child Health; Drinking; Drug Use; National Surveys; *Parent Child Relationship; Sexuality; Smoking; Suicide; Trend Analysis
IDENTIFIERS	National Longitudinal Study of Adolescent Health

ABSTRACT

This report by the Council of Economic Advisers analyzes key trends in teen behavior, and investigates the role of parents' involvement in their teenagers' lives. The report uses data from the National Longitudinal Study of Adolescent Health, a study of a nationally representative sample of seventh through twelfth graders, to examine the relationship between various teen behavioral outcomes and two measures of parental involvement: regularly eating dinner with the teen and perceived parent-child closeness. The report outlines significant opportunities and challenges for adolescents in the 21st century and demonstrates that teens are more likely to maximize opportunities and avoid risks when parents are involved in their lives. The report indicates that teenagers today live far healthier, more prosperous, and promising lives than ever before. Education levels have been improving across the board. College attendance rates have been increasing over the past decade, but income, race, and ethnicity still play a role. School-based teen participation in community service has increased. Despite increasing prosperity, teens are at high risk for poor nutrition. Rates of teen homicide and suicide remain high. Teen birth and pregnancy rates are steadily declining. The incidence of youth smoking rose during the 1990s. The report highlights findings from the longitudinal study indicating that parental involvement was a major influence in helping teens avoid risks while increasing educational achievement and expected attainment. Data tables are appended. (KB)

TEENS AND THEIR PARENTS IN THE 21ST CENTURY: AN EXAMINATION OF TRENDS IN TEEN BEHAVIOR AND THE ROLE OF PARENTAL INVOLVEMENT

EXECUTIVE SUMMARY

This report by the Council of Economic Advisers analyzes key trends in teen behavior, and investigates the role of parents' involvement in their teenagers' lives. The study outlines significant opportunities and challenges for teens in the 21st century and demonstrates that teens are more likely to maximize opportunities and avoid risks when parents are involved in their lives.

TRENDS IN TEENAGE BEHAVIOR AND OUTCOMES

- *Teenagers today live far healthier, more prosperous and promising lives than ever before.* Life expectancy for 15-year-olds today is 77 years compared with 62 at the beginning of the century. Such killers as typhoid, cholera, polio, and smallpox now pose only minimal threats to American teens' health. Per capita income has increased eight-fold over the course of the century, and things once considered luxuries such as telephones, televisions, CDs and video games are now staples of teen existence. Girls and minorities now have vastly greater educational and occupational choices open to them than ever before.

- *Education levels have been improving across the board.* Today's teens are taking more courses in core academic subjects and more challenging courses than their counterparts in the 1980s. African-Americans and whites now complete high school at virtually the same high rate: almost 90 percent.

- *College attendance rates have been increasing over the past decade, but income, race and ethnicity still play a role.* Most young people enroll in post-secondary school within 20 months of graduating high school. Women now are enrolled in college in greater numbers than men. However, while 90 percent of children from the richest 25 percent of families pursue post-secondary education, just 60 percent of students from the poorest 25 percent do. And of those going on to post-secondary schools, nearly three quarters of children from the richest families attend four-year colleges, while over half of those from the poorest families attend vocational, technical or 2-year institutions.

- *School-based teen participation in community service has increased. And community service has been demonstrated to improve academic and social outcomes.* One study

found, for example, that teens who participated in community service programs had a 75 percent lower rate of school dropout, and a 43 percent lower rate of pregnancy.

- *Despite increasing prosperity, teens today are at high risk for poor nutrition.* According to one recent estimate, only 5.5 percent of American teens are faced with concern over where their next meal will come from. But poor eating habits lead to significant nutrition deficiencies and imbalances among today's teens, with overconsumption of fat and insufficient consumption of fruits and vegetables. Some 60 percent of teen boys and 80 percent of teen girls are calcium deficient. And the rate of obesity has almost doubled in the last 20 years. Between 10 and 15 percent of children and adolescents are obese, placing them at higher risk for diabetes and cardiovascular disease as adults.

- *While there has been a recent decline in teen homicides and suicides, rates remain high. Guns are the leading cause of fatal teen violence—used in 85 percent of teen homicides and 63 percent of teen suicides.* Analysis prepared for this report indicates that in states where fewer homes have guns, there are fewer teen suicides and unintentional gun-related teen deaths. In comparison to the four states with the lowest levels of gun prevalence, the four states with the highest prevalence had twice as many teen suicides and about 10 times as many gun-related accidental deaths.

- *Teen birth and pregnancy rates are steadily declining.* Among teens aged 15-19, the overall birth rate has declined by 18 percent from 1991 to 1998 and have fallen in every state, and across ethnic and racial groups. Nonetheless, rates are still high and remain a serious challenge.

- *About 4 million young people smoke and the incidence of youth smoking rose during the 1990s.* White teens are more likely to smoke than African-American teens. Suburban teens and those with more highly educated parents are more likely to smoke than teens living in cities or rural areas. Research suggests that that the decline in cigarette prices over the early 1990s led to about one third of the increase in smoking among high-school seniors.

THE IMPORTANCE OF THE PARENT-TEEN RELATIONSHIP

- *Parental involvement is a major influence in helping teens avoid risks such as smoking, drinking, drug use, sexual activity, violence, and suicide attempts, while increasing educational achievement and expected attainment.* For many families, eating dinner together can be an important way for children and parents to maintain connection. Significant differences were noted between teens who eat dinner with their parents at least five times a week and those who do not. Similarly, significant differences were found for teens who reported feeling "close" to their mother and/or father and those who did not. These results persist after taking account of differences in teens' gender, poverty status, and family structure.

- *Smoking.* Among teens aged 15-16, 42 percent of teens who don't feel close to their mother and/or father smoke, compared with 26 percent of teens who do feel close to at least one parent. In this same age group, over 34 percent of teens who don't regularly eat dinner with their parents smoked, in contrast to just 25 percent of teens who do eat dinner regularly with their parents.

- *Drinking.* The prevalence of drinking is nearly twice as high among 15- to 16-year-olds who do not feel close to a parent and among those who do not eat dinner with a parent, compared with those who do.

- *Drug Use.* About 50 percent of 15- to 16-year-olds who aren't close to their parents have used marijuana, compared with just 24 percent of those who are close to their parents.

- *Violence.* Less than 30 percent of teens aged 15-16 who eat dinner with their parents have been in a serious fight, compared with more than 40 percent of those who do not eat dinner with their parents.

- *Sexual Activity.* Over 50 percent of teens who do not eat dinner with their parents have had sex by age 15 to 16. By contrast, only 32 percent of teens who do eat dinner with their parents have ever had sex.

- *Suicidal Thoughts.* Teens aged 15-16 who do not feel close to their parents are about three times as likely to think about suicide as teens who are close to their parents.

- *Suicide Attempts.* Teens aged 15-16 who don't eat dinner with their parents regularly are twice as likely to have attempted suicide.

- *Educational Achievement.* Teens of all ages who eat with their parents, or feel close to their parents, have higher grade point averages. In general, they are more likely to intend to go to college, and they are less likely to have been ever suspended from school.

TEENS AND THEIR PARENTS IN THE 21ST CENTURY: AN EXAMINATION OF TRENDS IN TEEN BEHAVIOR AND THE ROLE OF PARENTAL INVOLVEMENT

This report analyzes key trends in teen behavior, and investigates the role of parents' involvement in their teenagers' lives. It outlines significant opportunities and challenges for teens in the 21st century and demonstrates that teens are more likely to take advantage of opportunities and avoid risks when parents are involved in their lives.

1. INTRODUCTION

The teenage years are a time of great opportunities—both educational and personal—for children, but also a time when children face difficult growth challenges and decisions regarding sexual activity, smoking and drinking, and suicide. The key theme of this report is that parents play an important role in working with their teenage children in attaining successes and minimizing risks.

This report provides new evidence that teenagers are most successful at meeting today's challenges if they have close bonds with their parents. Young people are most likely to avoid dangerous or destructive behavior when they are closer to their parents. Similarly, teens who are closer to their parents are more likely to be successful in school. And the importance of parental involvement persists whether families are headed by one parent or by two parents.

In fact, teens today are more highly educated and have greater potential for economic success than ever in history, through opportunities to invest in education, work, and community service. The economic rewards of education are at an all-time high, and teens have responded by completing high school and enrolling in college at record rates. Work in the labor force during high school provides income to the teen, can create opportunities for work and life skills, and in some cases may be a useful way of gaining experience that leads to better economic outcomes in the long run. Finally, community service, often in the form of volunteerism for teenagers, provides meaningful involvement that enriches teen lives and leads to greater success in and out of school.

At the same time, parental bonds help teens face today's difficult decisions and serious risks to their well-being. Though many harmful or destructive behaviors among teens are on the decline—including youth violence, teenage pregnancy and childbearing, and, very recently, drug use—these remain serious problems facing today's teens. However, results described in this report show that young people who have a close parent-child bond are most likely to avoid dangerous and destructive behavior. The challenge for families is finding ways of remaining connected while accommodating busy lives. The challenge for society is to complement parents' efforts by providing meaningful school and community activities for teens outside the home, and by insuring that families have the flexibility they need to spend time together.

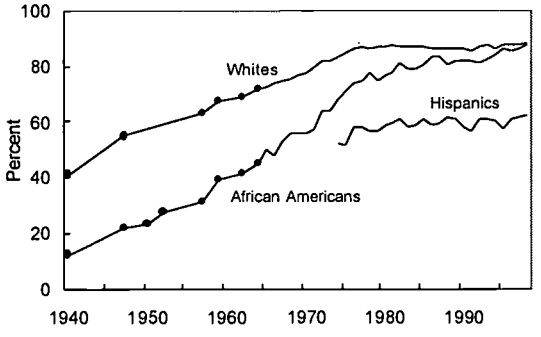
2. EXPANDING OPPORTUNITIES FOR TODAY'S TEENAGERS: EDUCATION, WORK, AND COMMUNITY SERVICE

As we enter the 21st century, teenagers face greater opportunities for personal growth and economic success than ever before. While much has changed over the past 100 years (see Box 1 on the next page), the focus of this section is on the recent changes that have shaped the opportunities that teens face today—opportunities for success arising from greater levels of education, work, and community service.

Trends in High School Completion for Teens

Today, attending school is the dominant activity for teens, and there has been a striking increase in high school graduation rates over time across demographic groups. High school completion rates for young adults (aged 25-29) are now nearly 90 percent for both whites and African Americans, with the earlier pronounced differences between the races disappearing by 1998 (Chart 1). Hispanics have not made the same gains, however, as the proportion of those aged 25-29 completing high school was only 63 percent in 1998. However, the figures for Hispanics include individuals who immigrated as adults and thus have had fewer educational opportunities in the United States.

Chart 1. High School Graduation Rates of 25- to 29-Year-Olds by Race and Ethnicity



Now, more than ever, a high school diploma is a prerequisite for economic success. A high school diploma is, of course, necessary for college attendance, and the economic gains from a college education are higher than ever before (described in the section below). In 1999, for example, men with a high school education earned 47 percent more than drop outs, up from 22 percent in 1979. But in addition, research shows that high school students who develop strong cognitive skills receive clear economic gains.[1] Among individuals with a high school education, but no college, those with a greater mastery of basic math and reading skills have higher wages. Moreover, this link between basic skills and wages appears to have grown stronger over time, perhaps as a result of the structural shifts in the economy toward service sector or computer-intensive jobs.

Students and their schools are responding to the greater earnings opportunities arising from higher skills—teens are taking tougher courses and are achieving more in school. High school teens today are taking more courses in core academic subjects than did their counterparts in the early 1980s, and the courses they are taking are more challenging. For example, a higher percentage of high school graduates are completing algebra and higher-level mathematics courses, as well as courses in biology, chemistry, and physics, than in the 1980s.

[1] See the *Economic Report of the President,* February 2000.

Box 1. American Teens, Then and Now

In 1900 America had a very young population—more than 1 in 5 were between the ages of 10 and 19—but these youth had low life expectancy and limited economic opportunities by today's standards. Such killers as typhoid, cholera, polio, and smallpox now pose only minimal threats to American teens' health. Per capita income has increased eight-fold over the course of the century, and things once considered luxuries, such as telephones, televisions, CDs and video games, are now staples of teen existence. Educational attainment has increased hand-in-hand with this substantial increase in prosperity. In 1900 total high school enrollment relative to teenage population aged 14-17 was only 10 percent. For young adults aged 25-29, the median level of education was only about 8 years—less than 5 years for African Americans. In contrast, by 1997 the high school enrollment rate was 93 percent, and in 1998 88 percent of those aged 25-29 had completed high school. Increasing numbers attend college or graduate school. African Americans and women have particularly benefited from changes over time. In 1900, few teenage girls could anticipate working outside their homes or farms—only a fifth of women of all ages worked for pay, and those who did were mainly single and poor. Today, 60 percent are in the labor force, and women increasingly hold professional jobs. Over 40 percent of those enrolled in professional schools in 1996 were women, and women attend college at higher rates than men. Similar changes have transpired for African Americans, whose high school completion rates today are equal to those of whites.

Trends for American Youth	1900	1950	1998*
Population aged 10-19 who are foreign born (percent)[1]	6.5	0.8	6.0
Life expectancy for 15-year-olds (years)			
Black male	53.3	63.2	68.6
Black female	54.8	66.4	76.0
White male	61.3	69.2	75.0
White female	62.8	74.4	80.5
Live births per 1,000 women aged 15-19	---	81.6	51.1
Population aged 15-19 ever married (percent)			
Male	1.2	3.3	1.4
Female	11.3	17.1	3.2
Average days of public school attendance per enrolled pupil	99	158	161 ('79-'80)
Percent of enrolled pupils attending public school each day	68.6	88.7	90.1 ('79-'80)
High school enrollment relative to population aged 14-17	10.2	76.1	92.8
Population aged 18-24 enrolled in college (percent)			
Male	2.3	33.1 ('67)	34.5
Female		19.2 ('67)	38.6
Population aged 25-29 with high school diploma (percent)	6.3[2]	52.8	88.1
Population aged 25-29 with 4 or more years of college (percent)	1.9[3]	7.7	27.3

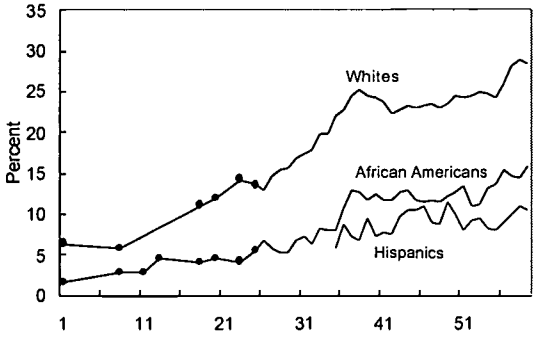
* The 1998 column presents the most recent statistics available for the late 1990s unless noted otherwise.
[1] Data for 1900 and 1950 are for whites only. In these years virtually all foreign born residents were white.
[2] The 1900 statistics refer to high school graduates as a percent of persons 17 years old.
[3] The 1900 statistics refer to bachelor's or first professional degrees conferred per 100 persons 23 years old.

Moreover, when tested for basic proficiency, teenagers are doing better. Data from the National Assessment of Education Progress indicate that the fraction of 8th graders performing at or above the "basic" achievement level in mathematics increased from 52 to 62 percent between 1990 and 1996; for 12th graders the fraction increased from 58 percent to 69 percent. Progress was also found in science achievement levels, relative to the early 1980s, though there was little change in reading performance from 1971 though 1996. In addition, improvement can be seen in the scores on the Scholastic Assessment Test (SAT, a test typically taken by college-bound high school juniors and seniors). Between 1976 and 1995, the combined verbal and mathematics scores of African Americans climbed by over 50 points, while those of white students remained roughly stable. Observed trends in average SAT scores are particularly impressive given that the proportion of high school graduates taking the test has increased by about a fourth since the early 1970s.

Going to College in an Increasingly High-Tech World

The clear goal for many teens is to attend college, as evident in the dramatic upward trend in college completion rates over time. As shown in Chart 2, college completion rates have increased six-fold from 1940 to 1998, from 5.9 percent to 27.3 percent. Women are now continuing on to college in record numbers; since 1980 more women have been enrolled in college than men. (In 1998, for example, 38.6 percent of women aged 18-24 were enrolled in college compared with 34.5 percent of men.) However, in contrast to our experience with high school completion rates, the racial and ethnic gap in college graduation rates remains large.

Chart 2. College Completion Rates of 25- to 29-Year-Olds by Race and Ethnicity



The substantially greater economic gains to college education have almost certainly contributed to teens' greater desire to attend college. Between 1979 and 1999 median real weekly wages increased by almost 15 percent for male college graduates, while falling by 12 percent for men with only a high school diploma (for full-time workers age 25 and over). As a result of these trends, college graduates earned 68 percent more than high-school graduates in 1999, up from a 29 percent differential in 1979.

A significant part of the greater wages associated with college attendance may be the shift of jobs toward greater use of information technology (IT) or computers in the workplace. In the last 10 years, firms' expenditure on IT surged to become one of the largest components of investment. And employers seem to increasingly need workers with computer as well as basic problem-solving skills.

Given these greater returns to a college education, and greater use of IT, it is increasingly important that no groups of teenagers be left behind in educational success. But some are lagging behind. Because African American students attend college at lower rates, they are considerably less likely to prepare for careers in the high-paying information technology sector. A recent report by the Office of Technology Policy[2] indicates a striking digital divide in the IT work force, with

[2] "The Digital Work Force: Building Infotech Skills at the Speed of Innovation," U.S. Department of Commerce, Office of Technology Policy, June 1999.

African Americans and Hispanics significantly underrepresented in this rapidly growing, highly-paid sector. Women also are underrepresented in the IT sector, but in contrast to racial minorities, women are underrepresented because they are less likely to choose science and engineering fields when in college.

One key reason why some demographic groups are left behind in college attendance is that parental income remains an important determinant of college attendance. High-income families are much more likely to send their teens to college, and they are particularly likely to send them to four-year colleges (Table 1).[3]

Table 1. Percentage of Students From Families In Each Income Quartile Enrolling in Post-Secondary Schools Within 20 Months of High School Graduation

Parental Income Quartile	Total	Vocational, Technical	2-Year College	4-Year College
Top	90	5	19	66
Second	79	6	25	48
Third	70	7	25	38
Bottom	60	10	22	28

Source: Kane (1999), based on data from the high school class of 1992.

The vast majority (90 percent) of students whose parents were in the top quartile of the income distribution were pursuing post-secondary education within 20 months of high school graduation, compared with only 60 percent of students whose parents were in the bottom quartile of the income distribution. And of those lower income students enrolling in post-secondary education, fewer than half of students enrolled in 4-year college, compared with almost three quarters of students from the top income group. Some of these differences in youths' college attendance may arise from differences in preparedness for college and in family attitudes toward education, rather than financial barriers. However, even after considering such family background influences, parental income remains an important determinant of college attendance.[4]

Thus, teens, their families, and the broader community continue to face the challenge of finding ways to insure that more young people have college access. Educational outreach programs designed to motivate and support students from low-income families can be effective in increasing prospects for higher education and subsequent employment. GEAR UP (Gaining Early Awareness and Readiness for Undergraduate Programs) helps low-income students prepare for education beyond high school by providing tutoring, counseling, mentoring, and financial aid. TRIO programs are another important resource to help disadvantaged students prepare for and succeed in college. Statistics about Upward Bound, a TRIO program, indicated that students in the program were four times more likely to earn a college degree than other students from similar backgrounds. The government has an important role in ensuring adequate funding for scholarship and loan programs for higher education, thereby helping more young people take advantage of strong demand for college-educated and high-tech workers.

[3] Thomas J. Kane, "Rethinking The Way Americans Pay For College," *The Milken Institute Review*, Third Quarter 1999.

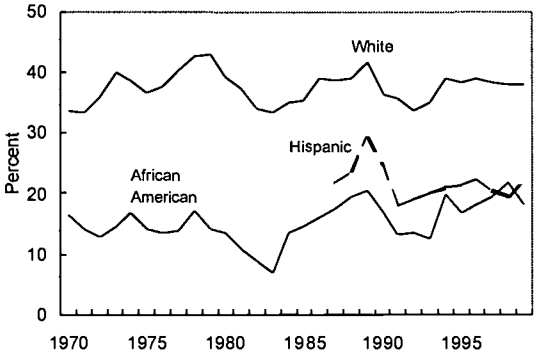
[4] This paragraph is also based on Kane's analysis.

Teens Working While in School

Working while in school can provide opportunities for learning that complement formal education. It may foster important life skills, such as accountability, punctuality, and time and money management. In fact, parents cite the development of these life skills as an important reason for encouraging their teens to work. Moreover, investing in a broad set of basic work-related skills, including the ability to work with others and communicate effectively, may be particularly valuable in the long run.

The vast majority of teens spend some portion of their time working as well as attending school. Approximately 80 percent of high school students report that they have held a job at some point during high school. At any given time, about one-third of all high school students are employed in the labor market, resulting today in 3.3 million students working. However, while student employment rates have not changed appreciably over time, there are fairly substantial differences between racial and ethnic groups (see Chart 3). Part of these differences may be explained by the differences in unemployment among teens who are actively seeking employment. The unemployment rate for white youths who are enrolled in high school is currently 13.4 percent, whereas it is a much higher 24 percent for African Americans and Hispanics. Higher unemployment rates for minorities suggest that it may be more difficult for them to find employment opportunities. Across all demographic groups, about half of all 15- to 17-year-olds are working in the retail sector (including restaurants, fast-food, or grocery stores).

Chart 3. Share of High School Students with Jobs



Work can create conflicts with schooling by taking time away from other valuable activities, such as studying and sleeping. The data suggest that when students work excessive hours, work can lead to decreased educational attainment or lower academic performance. Data on work intensity shows that among all employed students, only about 6 percent report working full-time, but some part-timers may also work excessively. Overall, the balance of the evidence suggests that high intensity work can be detrimental, but that low to moderate intensity work can be beneficial.[5]

[5]See Institute of Medicine, *Protecting Youth at Work: Health, Safety, and Development of Working Children and Adolescents in the United States*, National Academy Press, 1998, for a survey of this literature. Also addressed in their study is the issue of safety on the job. It has been estimated that each year about 100,000 15-17 year-olds seek treatment in hospital emergency departments for work-related injuries. The rate of injury per hour worked appears almost twice as high for children and adolescents as for adults—about 4.9 injured per 100 full-time equivalent workers among adolescents, compared with 2.8 for all workers. The most common nonfatal injuries observed among working young people are cuts and lacerations, sprains and strains, contusions, burns, and fractures.

Teens and Community Service

Teen service to the community is becoming a more integral part of their educational experience. High schools are placing a growing emphasis on "service learning"—community service integrated with classroom instruction. In 1999, 83 percent of high schools offered community service opportunities to their students and 46 percent offered service-learning, up dramatically from 1983-84 levels of 27 percent and 9 percent, respectively.[6] Community service in schools also reaches down to the middle schools—77 percent of middle schools had students participating in community service activities recognized by and/or arranged through the school, and 38 percent of middle schools had students participating in service learning. Moreover, anecdotal evidence suggests that more schools are introducing community service graduation requirements. Cities such as Chicago, Illinois, Washington, D.C., and Louisville, Kentucky, have recently implemented community service requirements for graduation, while Maryland has begun the first state-wide requirement.

Efforts to encourage volunteering have also come at the national level. In 1993, President Clinton outlined a vision for a national service program that would allow young people to serve their country while earning funds for a college education. The result is AmeriCorps, which brings together people of different racial, ethnic and economic backgrounds to solve community problems. Since the program's inception 5 years ago, over 150,000 AmeriCorps members aged 17 and over have served as tutors, mentors, disaster-relief workers, and other roles. Today there are more than 350 AmeriCorps programs nationwide serving an estimated 4,000 communities.

There is considerable evidence that community service results in higher levels of educational attainment and the avoidance of risky behaviors for some teens. Two carefully evaluated community service programs, the Teen Outreach Program (TOP) and the Valued Youth Program (VYP), are found to have had sizable positive effects on participants.[7] TOP, offered to middle and high school students at sites across the United States and Canada, combined volunteer community service opportunities with classroom discussions about life issues. Results from a random assignment evaluation, based on 7 years of follow-up data, show that TOP participants had a 32 percent lower rate of course failure in school, a 37 percent lower rate of school suspension, a 43 percent lower rate of pregnancy, and a 75 percent lower rate of school dropout, compared to the control group. VYP, on the other hand, was focused on middle school students and succeeded by showing at-risk youth that they were valued by having them tutor younger children. Results after 2 years, based on a random assignment evaluation, show that the program increased tutors' reading grades and substantially cut school dropout rates: Only 1 percent of tutors had dropped out by the end of the second year of the program, while 12 percent of students in the control group dropped out.

Overall, extensive research suggests that teens improve on many dimensions when they have meaningful involvement in useful and necessary tasks, and community service can provide such involvement. For example, youth who are at risk of destructive behavior are much more likely to have positive attitudes towards life's opportunities when these youth participate

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[6] See Rebecca Skinner and Chris Chapman, "Service-Learning and Community Service in K-12 Public Schools," National Center for Educational Statistics, September 1999. See also Brian Kleiner and Chris Chapman, "Youth Service-Learning and Community Service among 6th- through 12th-Grade Students in the United States: 1996-1999," National Center for Educational Statistics, November 1999.

[7] Cynthia Moore and Joseph Allen, "The Effects of Volunteering on the Young Volunteer," *The Journal of Primary Prevention*, 1996.

extensively in community-based organizations, such as arts programs, sports, leadership initiatives, work with elderly residents, or rehabilitation efforts.[8] These at-risk teens are eight times more likely to respond that it is "very important to get involved with community" than the average youth, and about twice as likely to "strongly agree" that they feel positively about themselves and feel that they have some control over their lives. Thus community-based organizations can have a significant impact on at-risk youth by providing them with the opportunity to engage in positive activities and to find value in themselves. This involvement tends to counteract teens' feeling about lacking a clearly defined and valued role in society—teens have a deep need to gain experience doing responsible, socially necessary work, and for moving away from parental supervision without losing contact with adults. All told, these activities provide opportunities for teens to mature in a way that leads to personal growth and higher economic attainment.

3. Tough Decisions and Serious Risks: Threats to Today's Teens

Despite the many improvements in teens' standards of living, level of education, and opportunities for advancement, today's teens still face many threats and challenges. Many of these threats are behavioral—such as drinking, smoking, drug-use, premature sexual activity, and violence. While there are many factors that influence the incidence of these risks, these behaviors can be significantly affected by teens themselves as well as by the involvement of their families or society at large to help overcome these risks and enable teens to reach their full potential. The media also plays a potentially important role not only in enriching the lives of teens, but also in influencing behavior, for better or for worse. (See Box 2.)

Box 2. Teens and the Media

Nationally representative survey data indicate that virtually all U.S. teens aged 14-18 live in a household with a TV, VCR, radio, and CD player.* And the majority have a video game player and a computer with internet access. Teens spend an average of 7 ½ hours each day exposed to media, including electronic media—TV and videos, movies, music, computers and video games—and books, magazines, and newspapers.

For many households, television is a constant presence. Among households with youth aged 8-18, almost half report that the TV is on "most of the time." Two-thirds indicate that they have the TV on during meals. While the 14- to 18-year-olds in the survey do watch TV almost 2 ¾ hours, they nonetheless watch less TV than kids aged 8-13. In turn, these older teens spend increasing time listening to music, an average of about 2 ½ hours a day. The perception that many teens spend time at the computer is correct. More than half of teens said they used a computer the previous day. Still, on average they spend more time reading (37 minutes) than using a computer (30 minutes).

The data in this same study indicate a provocative correlation: that the time spent with almost all media (the exception being reading) is higher for youth who are "less contented" than for those who are appear to be "most contented/well-adjusted." While the authors are careful not to draw causal inference, these results underscore the necessity of paying close attention to the effect of the media on youth. The American Academy of Child and Adolescent Psychiatry has suggested that active parenting (including viewing programs with children and placing limits on the amount

[8] Milbrey McLauglin, "Community Counts," Public Education Network, 2000.

of TV viewing) can help ensure that youth have a positive experience with TV. President Clinton and Vice President Gore led the successful fight for legislation that requires the V-Chip be installed in all new television sets sold beginning January 1, 2000. Many parents may find this feature useful for blocking programming that they consider inappropriate for their children. Paying appropriate attention to youth media use, including internet use, is a challenge for today's families.

*The survey is reported in the Donald Roberts, Ulla Foehr, Victoria Rideout, and Mollyann Brodie, "Kids &Media @ The New Millennium," The Henry J. Kaiser Family Foundation, 1999. This report provides extensive discussion of the media and youth, and references to further literature.

Challenges to Teen Nutrition

In spite of increasing prosperity and availability of food, many teenagers are not receiving proper nutrition. According to a recent study,[9] only about 5.5 percent of teens (predominantly low-income teens) are worried about the source of their next meal. However, lack of food is not the general problem for teen nutrition. Poor eating habits among teens are widespread. Excess consumption of fats and insufficient consumption of fruits and vegetables are the main culprits in teens' diet imbalances.

Among the most prevalent problems are obesity and future osteoporosis—the results of excessive caloric intake in relation to energy expenditure, and of deficient calcium intake in childhood, respectively. Obesity has increased in young people to about 10-15 percent of children and adolescents depending on age, gender, and ethnicity, almost doubling in the past two decades. Obese young people are more likely to become obese adults, with increased risk for diabetes and cardiovascular disease. In addition, among youth aged 10-19 Type-2 diabetes has recently increased dramatically. The great majority of these cases have occurred among obese youth. The seriousness of the problem of obesity is indicated by the major attention given to it in the Surgeon General's Health Goals for the Nation for 2010. At the same time, eating disorders such as bulimia and anorexia, especially among teen girls, are also of concern, making it important to focus on nutritional balance.

Calcium deficiency is a serious deficiency in the American diet and is worst among adolescents. Six in ten teen boys and eight in ten teen girls are deficient in calcium intake. This deficiency has major lasting effects on the population's well-being, as calcium deficiencies cannot be made up later in life because essentially all the calcium that will ever be in bones is present by age 20. Thus, childhood intake is essential to prevent later development of osteoporosis, which affects over 25 million Americans and is the leading cause of bone fractures in women over 50 and the elderly.

Poor eating has been linked to cancer and heart disease later in life. Eating patterns established by youth, which often carry over to adulthood, are therefore crucial. Research by the USDA Center for Nutrition Policy indicates that 20 percent of 13 to 18 year-old youths have a "poor diet" and an additional 74 percent have a diet that "needs improvement." These researchers

[9] Jay Bhattacharya and Janet Currie, "Youths at Nutritional Risk: Malnourished or Misnourished?" in Jonathan Gruber, editor, *An Economic Analysis of Risky Behavior Among Youths.* NBER Monograph, University of Chicago Press, forthcoming.

found that the quality of diets for teens is lower than for younger children, and that this decline in diet quality is linked to declining consumption of fruit and milk.[10]

Dangers of Smoking, Drinking and Drugs

Smoking. Smoking continues to pose a significant health risk to a large number of teens. Some 4.1 million young people aged 12 to 17 are smokers. It has been estimated that every day more than 3000 American youth become regular smokers, about one-third of whom will die prematurely as a result. One report estimated that about 5 million of today's young people will die of smoking-related illness.[11]

In 1999, 8 percent of 8th graders, 16 percent of 10th graders, and 23 percent of 12th graders reported smoking daily. For all three groups, rates of smoking generally increased from 1992 levels. There is some recent good news, though: from 1997 to 1999 there was some stabilization in smoking rates for these age groups. Over the longer term, the incidence of youth smoking declined between the mid-1970s and the early 1990s, and current rates among 12th graders (the only group for whom longer trend data are available) are below mid 1970s rates.

The 1992-97 increase contrasts with the continued steady decline in adult smoking rates and resulted in a youth smoking rate that was nearly twice that of adults. The high rate of smoking among young people is particularly troubling because smoking by youth is strongly linked to smoking as an adult. Indeed, young smokers tend to greatly overestimate the likelihood that they will be able to quit as adults. Among high school seniors who smoked, 56 percent said that they would not be smoking 5 years later, but in fact only 31 percent quit.[12]

Recent research shows that while adult smoking tends to be concentrated among those in low socioeconomic status groups, youth smoking trends are more varied.[13] This research indicates that for teens (in 1997) the single most important determinant of smoking is race, with black youth smoking rates much lower than white youth smoking rates. Youth smoking is more likely in the suburbs than in either the city or rural areas, and the children of more educated parents are more likely to smoke. All else equal, though, it is also more likely among those with worse academic performance, those who miss more school, and those who do not plan to go to college. The study provides direct evidence that more income earned by the teen leads to a higher probability of smoking.

The role of cigarette prices is intriguing from the standpoint of public policy, since they are much more likely to be under the control of policy than personal characteristics that might also affect the demand for cigarettes. The study estimates that for high school seniors, a 10 percent increase in price would reduce the proportion of youth who smoke by about 6½ percent. Overall, it appears that the decline in cigarette prices over the early 1990s led to about one third of the increase in smoking among high school seniors. Curiously, the price decrease does not

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[10] A good source for many statistics about children and young is www.ChildStats.gov. Statistics about nutrition listed in this report can be found at that site.

[11] CDC, *Mortality and Morbidity Weekly Review,* November 8, 1996.

[12] Department of Health and Human Services, *Preventing Tobacco Use Among Young People: A Report of the Surgeon General.* Washington, D.C.: U.S. Government Printing Office.

[13] This paragraph and the next two are based on Jonathan Gruber and Jonathan Zinman, "Youth Smoking in the U.S.: Evidence and Implications," Jonathan Gruber, editor, *An Economic Analysis of Risky Behavior Among Youths.* NBER Monograph, University of Chicago Press, forthcoming.

appear to explain trends for younger teen smokers. However, restrictions on access to cigarette purchases were found to lower the quantity of cigarettes smoked by younger teens.

State-level evidence indicates that an adequately funded, comprehensive tobacco prevention and control program can reduce tobacco use among both youth and adults. CDC's "Best Practices" provides specific funding ranges and programmatic recommendations to guide States in planning comprehensive tobacco programs that could substantially reduce disease, disability, and death related to tobacco use.[14]

Alcohol and Illegal Drugs. The use of alcohol and illegal drugs by teens is another cause for concern. From around 1980 until the early 1990s, consumption of alcohol among 12th graders declined substantially.[15] Since the early 1990s, however, alcohol consumption appears to have increased slightly. In 1999, over half (51 percent) of 12th graders reported drinking in the previous month, and a third reported having gotten drunk. While these rates are lower at younger ages, a worrisome 40 percent of 10th graders and 24 percent of 8th graders reported having had alcohol in the previous month. Recent trends are particularly troubling in light of dangers associated with teenage inebriation, including smoking, motor-vehicle crashes and unwanted sex. Also, youthful drinking may increase the likelihood of heavy drinking in later years, as well as reduce future success in the work force.[16]

Non-alcohol illicit drug use among teens has also increased substantially during most of the 1990s. Since 1997, rates have leveled off or fallen slightly, but drug use remains high. In 1999, a quarter of all 12th graders reported using illicit drugs in the previous month, up from just one-sixth in 1991. Among students in grades 8 and 10, use of illicit drugs has doubled since 1991. Most of this increase in drug use is driven by greater use of marijuana, which rose to 23 percent for 12th graders and 10 percent for 8th graders in 1999. A view that marijuana use is not an especially dangerous drug may help explain recent trends. Teen perceptions of the risks associated with marijuana have been falling in the 1990s. The timing of these changing perceptions coincides with the recent increase in marijuana use. The use of hallucinogens, heroin, amphetamines, and cocaine all increased from 1991 to 1997, but have remained below 5 percent among 12th graders.

Suicide, Accidental Deaths, and Homicide: the Role of Guns

Harm to teens is often behavioral and thus preventable. The most visible and distressing examples of such harm are suicide and homicide. And perhaps the most obvious means for prevention of these deaths lies in averting those that are caused by firearms.

In 1997, homicide and suicide were the second and third leading causes of death among teens after accidents.[17] Although both suicide and homicide are rare events for teens (around 1

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[14] Center for Disease Control and Prevention, "Best Practices for Comprehensive Tobacco Control Programs," August 1999.

[15] Alcohol and drug use statistics are from "Monitoring the Future," an annual survey of approximately 45,000 8th, 10th and 12th graders conducted by the University of Michigan's Institute of Social Research.

[16] This analysis draws from Phil Cook and Michael Moore, "Environment and Persistence in Youthful Drinking Patterns" in Jonathan Gruber, editor, *An Economic Analysis of Risky Behavior Among Youths*, NBER Monograph, the University of Chicago Press, forthcoming.

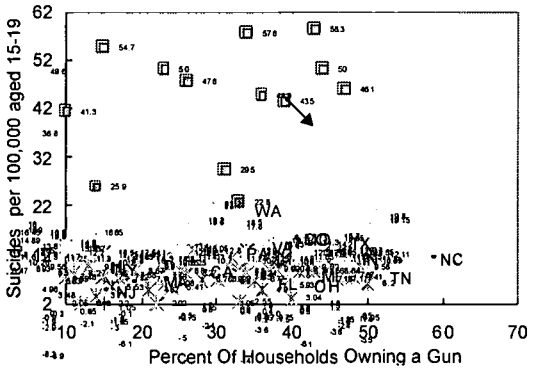
[17] In 1997, there were 2,601 homicides and 1, 802 suicides among teens aged 15 to 19. Male teens composed 85 percent of homicide victims and 83 percent of suicide victims. Black teens were slightly less likely to commit suicide than white teens (7.1 per 100,000 vs. 10.0 per 100,000) while black teens are

per 10,000 teens per year),[18] many are potentially preventable. It is thus vitally important to look at trends in these deaths and their proximate causes, and to search for strategies that will reduce the number of such tragedies.

The Surgeon General's report on mental health discusses many facets of teen suicide—including the role of depression and other mental disorders as risk factors, as well as the potential for strong parent-child communication as a protective factor.[19] Here we focus on guns because guns are far and away the most common means of fatal teen violence, used in 85 percent of teen homicides and 63 percent of teen suicides. Available evidence strongly suggests that gun availability is the cause of many teen deaths: the data clearly show that in areas where fewer guns are available, there are fewer teen deaths.

Our first piece of evidence about the role of guns comes from an examination of state rates of teen suicide. Because guns are an especially lethal means of suicide, suicide attempts (which are often impulsive) are more likely to result in death when a gun is involved. In states where more households have guns, teen suicide rates are indeed much higher. Chart 4, which plots the correlation between teen suicides and the density of gun ownership in 17 states (for which data were available) demonstrates clearly that increasing gun prevalence is associated with higher numbers of teen suicides.[20] Importantly, the data suggest that this relationship is not merely coincidental. The rate of non-gun suicides are not correlated with the availability of guns in the state, suggesting that the high teen suicide rates in high-gun states do not occur simply because these states happen to have teenagers more prone to commit suicide.

Chart 4. State Gun Ownership Rates & Teen Suicide



Use of an alternative index of gun ownership allows us to draw the same inference.[21] In the four states with the highest levels of gun availability, the *overall* teen suicide rate was 11.4 per 100,000 for 1990-97, about twice as high as in the four states with the lowest gun availability (5.8 per 100,000). Unintentional teen gun fatalities were far higher in the top four states with the highest index of gun ownership: Despite similarly-sized teen populations, 346 teens died from unintentional firearm injuries in the four high-index states compared with 28 deaths in the four low-index states.

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substantially more likely to be homicide victims than white teens (48.4 per 100,000 vs. 7.0 per 100,000). Source: Centers for Disease Control.

[18] Recent reports have shown that although such fatal tragedies are especially rare in America's schools, recent highly visible tragedies have created a false public perception about the likelihood of homicide occurring in schools. See "School House Hype: Two Years Later," Justice Policy Institute/Children's Law Center, April 2000.

[19] The report can be found at www.surgeongeneral.gov.

[20] Our analysis uses statistics on gun ownership based on data derived from the General Social Survey and reported in T. Smith, L. Martos, "Attitudes Towards and Experiences With Guns: A State-level Perspective," National Opinion Research Center, December 1999.

[21] The index we use here is gun availability in each state is estimated as the average of the percentage of homicides and suicides that are firearm related. This index, created by Philip Cook, is used to designate states with the highest average gun levels (Louisiana, Alabama, Mississippi, and Kentucky) and lowest average gun levels (Hawaii, Massachusetts, Rhode Island, and New Jersey) for 1988-1997.

Chart 5. Homicide Rates for African American Teens

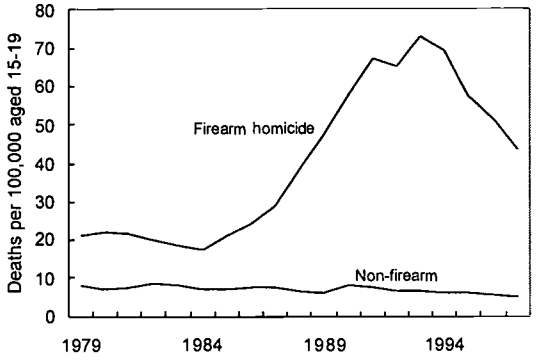


Chart 6. Suicide Rates for African American Teens

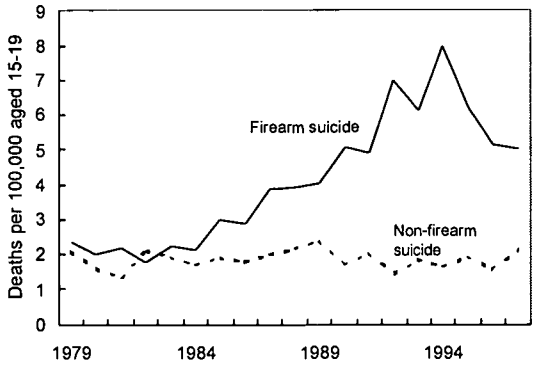
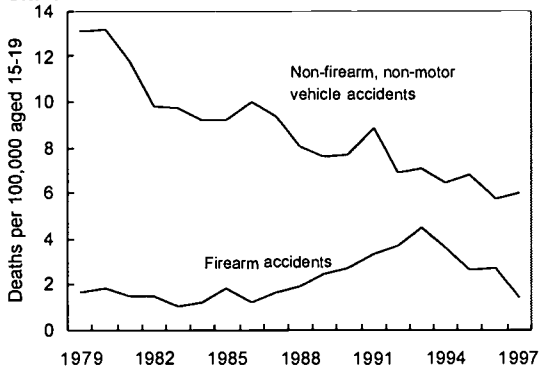


Chart 7. Accident Rates for African American Teens



Our inference about the potential importance of guns as a causal factor in teen deaths is mirrored in one recent prominent study, which focuses on the sharp rise in gun-related deaths among black teens that began in the mid-1980s. The authors of this study, Alfred Blumstein and Daniel Cork, link the dissemination of guns into the hands of American teenagers and young adults in the second half of the 1980s with the advent and growth of the crack cocaine trade.[22] Crack cocaine first arrived in large cities like Miami, Los Angeles, and New York in about 1983. After remaining fairly constant from 1975 though 1984, drug arrest rates among non-white juveniles more than doubled from 1985 to 1989. The authors suggest that guns were carried by teens directly involved in drug markets, but possession became far broader as other teens acquired a gun in reaction to this trend—for perceived self-protection or as a status symbol.[23] This period saw a dramatic proliferation of guns: domestic production of pistols, the type of gun most commonly traced to teens by law enforcement,[24] more than tripled to 2.3 million units in 1993. Consistent with this presumed increase in teen gun possession in the second half of the 1980s, juvenile arrest rates for weapons law violations more than doubled from the mid-1980s to the early 1990s.

The researchers point to this increase in teenage gun possession as a factor in several trends, the most disturbing of which is the rapid rise in deaths among black teens due to gun homicide (see Chart 5). There are two competing explanations for the sharp rise in homicides. First, the rise in gun possession may have directly increased the lethality of confrontations among teens. Second, there may simply have been an increase in teens' inclination toward violence. If the latter explanation were the predominant influence we might expect to observe an increase in both gun and non-gun homicide. In fact, non-gun homicide victimization among black teens remained roughly constant through the 1980s. Trends in black teen suicide and black teen accidental death show a similar

[22] The hypothesis discussed in this paragraph and the next draw primarily from Alfred Blumstein and Daniel Cork, "Linking Gun Availability to Youth Gun Violence," *Law and Contemporary Problems*, Winter 1996.

[23] Blumstein and Cork cite a 1993 study conducted in center-city schools in which 22 percent of students possessed guns, with 68 percent citing protection as the main reason.

[24] "Kids and Guns," U.S. Department of Justice, March 2000.

pattern: increased gun fatalities in the early 1990s with no contemporaneous increase in non-firearm mortality rates. The rate of teen gun suicides (Chart 6) increased rapidly after the mid-1980s and the rate of fatal gun accidents was more than four times as high in 1993 as in 1983 (Chart 7). Non-gun suicide rates and accidental deaths show no such upward trend. Again, this evidence is consistent with a causal effect of gun possession on mortality.

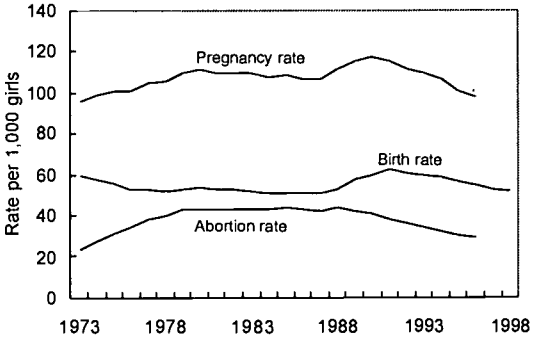
By the mid-1990s gun-related death rates were declining for both black teens and teens generally. It is important to understand why. One explanation consistent with the analysis we have presented here is that gun possession in more recent cohorts of teenagers may be lower than it was in their immediate predecessors. Policies that are effective in reducing gun access and gun possession by teens should reinforce the recent downward trend in teen mortality.

Challenges to Reduce Adolescent Pregnancy and Births

Birth and pregnancy rates for teens of all races have been steadily declining, but high rates remain one of the most serious challenges facing our nation. In 1995 President Clinton challenged "parents and leaders all across this country to join together in a national campaign against teen pregnancy to make a difference." The most recent trends show the overall birth rate to teens aged 15-19 declined by 18 percent from 1991 to 1998 and teen birth rates have fallen in every state and across ethnic and racial groups. For a subset of teens, girls aged 15-17, the birth rate, 30 births for every 1,000 in 1998, was a record low. In addition, pregnancy rates for this group are at the lowest level since 1976, the earliest year for which such data are available. More generally, for 15- to 19-year-olds, the pregnancy rate decreased by approximately 15 percent between 1991 and 1996 (the latest year available). The abortion rate declined by 22 percent over the same period, and the share of pregnancies ending in abortion fell. (See Chart 8 for recent trends.)

Similarly, repeat births among teens declined by 21 percent from 1991 to 1998, when nearly 18 percent of teen mothers had a second child. Though these trends are encouraging, teen mothers face even greater challenges if they do not have the supports they need to raise their children. One strategy to reduce repeat pregnancies and break the cycle of dependency is Second-Chance Homes, or adult-supervised and supportive living arrangements for unmarried teen parents and their children.

Chart 8. Pregnancy, Birth, and Abortion Rates for Girls Aged 15-19



Despite recent reductions in teen pregnancy and childbearing, teen birth rates are very high compared with those in other countries.[25] Among concerns surrounding this high rate is that

[25] A recently published study compiled data on adolescent birthrates for 46 developed countries over recent decades, and gathered abortion and pregnancy rates for a subset of these countries. (See Susheela Singh and Jacqueline Darroch, "Adolescent Pregnancy and Childbearing: Levels and Trends in Developed Countries," *Family Planning Perspectives,* January/February 2000). The range in the pregnancy rates across these countries in the mid-1990s is very wide, from a low of 12 births per 1,000 adolescent females in the Netherlands to a higher levels, near 80 per 1,000, in Bulgaria and the United States. Western European and other developed countries generally have lower teen pregnancy rates than Eastern European countries and the United States. Over the early 1990s adolescent pregnancy rates declined in nearly all of

adolescent childbearing in the United States has been tied to a number of negative outcomes for both the mother and the child. A recently published collection of studies on teen parenthood found that roughly four-fifths of teen mothers end up on welfare.[26] The children of adolescent mothers have poorer health outcomes and were 50 percent more likely to be of low birthweight. In addition, the sons of adolescent mothers were found to be 2.7 times as likely to be incarcerated as the sons of mothers who delayed pregnancy, and the daughters of adolescent mothers were one-third more likely to become teen mothers themselves.

The large majority of births to teens are to unmarried young women, 79 percent in 1998. Moreover, evidence about a recent upturn in sexual activity among girls under the age of 15 highlights the serious challenge facing teens, their families, and their communities. In particular, data from the National Survey of Family Growth shows that in 1988, 11 percent of girls under the age of 15 had had sex. In 1995, this fraction had increased to 19 percent.

As will be discussed in the next section of this paper, there is evidence that parents can play an important role in teens' decisions about having sex at young ages. Teens who have a strong attachment to their parents are far less likely to have had sex. The National Campaign to Prevent Teen Pregnancy web site www.teenpregnancy.org gives considerable additional information about the seriousness of the problem of teen pregnancy and the issue of who suffers the consequence, as well as information for teens and their families about preventing teen pregnancy (see the web site's "Facts and Stats," which provides citations). Among the points emphasized are:

- Most adults (95 percent) and teens (93 percent) believe it is important that society give the strong message to school-age young people to abstain from sex until they are out of high school. Still, most adults believe that sexually active teens should have access to contraceptives.
- Many teens rate their parents highly as a preferred and trustworthy source of information about contraception. About half of teens say their parents are a reliable source for such information, compared with 12 percent who say a friend.
- A majority of sexually active teens—both boys and girls—say that they wished they had waited.

4. The Role of Parental Involvement in Teen Behavior

Decisions teens make are critical for their present and future well-being. Educational choices play a potentially large role in teens' future career choices and success. However, their future health and economic status are also greatly affected by other decisions they make while they are young, including sexual behavior and substance abuse. As teens weigh these decisions, parents have an enormous potential to influence their teenagers' behavior. As this report shows, having a close relationship with one's children and spending time with them, for example, by having dinner together on a regular basis, is strongly related to whether teens engage in risky behavior such as drinking, fighting or having sex at early ages. A close relationship with parents is also associated with higher grades and a greater intention to go to college.

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the reporting countries. International comparisons of adolescent birth and abortion rate data reveal a similar pattern.

[26] Rebecca Maynard, *Kids Having Kids,* Urban Institute Press, 1997.

To understand a parent's role in influencing teen behavior, this report provides a new analysis of a large and detailed data set, the National Longitudinal Study on Adolescent Health (Add Health). These data, collected from several thousand adolescents in grades 7 to 12, underscore some emerging research on the pivotal role that parents play in the lives of their teen children.[27]

We examine the relationships between various teen behavioral outcomes—like school performance or smoking behavior—and two simple measures of parental involvement: parents regularly eating dinner with the teen and a measure of perceived parent/child closeness. The "eating dinner together" variable, although a crude summary measure of parent-teen interaction, has the virtue that it reflects a visible pattern of *behavior* on the part of the parent and teen child. The "parental closeness" variable, in contrast, may reflect more accurately an important psychological construct concerning the connection between the teen and parent(s), but is based solely on the teen's *perceptions,* rather than tangible behavior.

With busy and oftentimes inflexible schedules of both teens and parents, arranging to eat evening meals together may be difficult or impossible. For others it may simply not be a high priority. In any event, the data indicate that about 74 percent of kids aged 12-14 had in the previous week 5 or more evening meals with a parent.[28] This declined to 61 percent for teens aged 15-16, and to 42 percent for teens aged 17-19. Certainly, some parents who do not eat evenings meals with their teens find other occasions to maintain a connection with their kids. On average though, eating dinner together proves to be a useful summary of the parent-child relationship, and is correlated with our other indicator of teens' connection with their parents and with a number of measures of teen behavioral outcomes.

The second indicator of parental involvement in teens' lives is a very simple measure of the teens' perceived relationships with their mother and/or father.[29] In the survey, the teens are asked about their level of agreement with the following three statements for their mother and father:

(1) "Most of the time, your mother [father] is warm and loving toward you."
(2) "You are satisfied with the way your mother [father] and you communicate with each other."
(3) "Overall, you are satisfied with your relationship with your mother [father]."

A very simple measure of teens' closeness to their parent(s) was constructed using responses to these statements. Teens are said to be "close" to their mother and/or father when they indicate "Strongly Agree" or "Agree" to all three of the statements listed above for at least one parent. In our sample, 89 percent of teens aged 12 to 14, 81 percent of teens aged 15 to 16, and 79 percent of teens aged 17 to 19 are "close" to either their mother or father (or both) using this measure.

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[27] These data are a nationally representative sample of youth in grades 7 through 12. The Wave 1 data used in this report were collected from teens in their own homes in 1995. The analysis presented here is based on the public-use version of the data. While this version has only about half of the total group that was actually surveyed, it does provide relatively large samples. The Add Health data include a very small number of 11 year-olds and 20 and 21 year-olds. These are excluded from the sample. Our sample generally includes 1,849 12- to 14-year-olds, 2,006 15- to 16-year-olds, and 1,825 17- to 19-year-olds. The actual number of observations varies for each outcome because of item non-response.

[28] The survey data asks "On how many of the past 7 days was at least one of your parents in the room with you while you ate your evening meal?" For analysis responses to this question were collapsed into a dicotomous variable indicating whether or not the teen had 5 or more such meals.

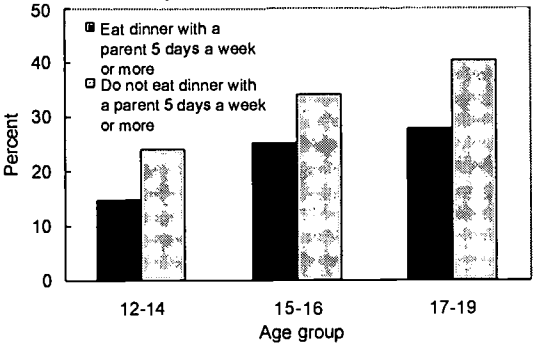
[29] In the data mother and father are broadly defined to include biological, adoptive, or step parents. The specific "closeness" variables used in our analysis refer to residential mothers and fathers.

The analysis presented here describes the relationships between the parent-teen interaction measures and a series of teen behavior or decision variables. Results form a remarkably consistent picture of the importance of parent-child bonds for teen behavior.[30]

Smoking. Throughout the teenage years, teens who eat dinner with a parent regularly or who feel close to their mother and/or father have lower rates of smoking (see Chart 9).[31] Only 15 percent of 12- to 14-year-olds who eat dinner with a parent at least five days a week have smoked in the last 30 days. By contrast, 24 percent of 12- to 14-year-olds who don't eat dinner with a parent had smoked in the same time period.

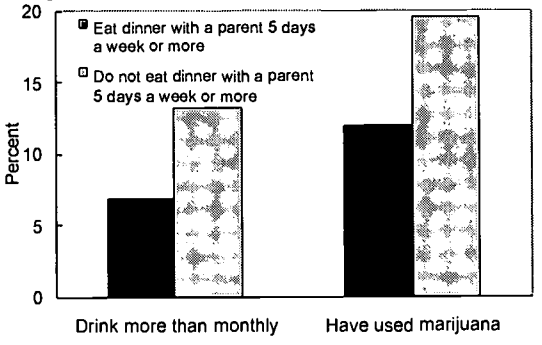
The difference is even larger for teens who do, and do not, feel close to their parents. Among 12- to14-year-olds who do not have close relationships with a parent, 34 percent smoked—more than twice the rate of those teenagers who do have good relationships with their parents. This pattern holds true for older teens as well. Across the board, teens who indicate that they are close to their parent—who feel loved, are able to communicate with a parent, and are satisfied with their relationship with a parent—are much less likely to smoke.

Chart 9. Percent of Teens Who Smoked in the Last 30 Days



Drinking and Marijuana Use. As is true of smoking, drinking and marijuana use is lower for teens who spend time at the dinner table together or who have a close parental relationship (see Chart 10). For example, 12- to 14-year-olds who regularly eat dinner with a parent are only about half as likely to drink more than monthly in the past year as teens who don't. For this same age group, teens who regularly eat with their mother or father are significantly less likely to have ever used marijuana than teens who don't (11.9 percent versus 19.6 percent).

Chart 10. Percent of 12- to 14-Year-Olds Using Alchohol or Marijuana



Lying to Parents, Getting into Fights, and Getting Suspended from School. Teens' willingness to lie to their parents about where they had been or who they have been with varies

[30] One concern for all of the outcomes in the analysis is that statistical results might in part be due to gender or family background. To address this concern a regression model (a linear probability model) was estimated in which the teen behavior (e.g., smoking or GPA) is taken to be the dependent variable and independent variables are the "eating dinner together" variable along with variables controlling for sex, family structure, and poverty status. In additional analysis not reported here, race was also included as a control. This made very little difference to estimated results. Readers who consult the Appendix will notice that these controls generally make little difference to inferences. Asterisks indicate statistical significance.

[31] The full results of our analysis are shown in an appendix table to this report.

significantly with the closeness of their relationship (see Chart 11). For example, over three-quarters of the teens aged 15 to 16 who do not have close relationships with their parents say that they lie to their parents. By contrast, half of teens who have close relationships do so. Similarly, the likelihood of getting into a serious fight is lower across the board for children who eat dinner regularly with their parents or who have close relationships with their parents. Finally, the likelihood of getting suspended from school is lower for those teens to have close parental relationships.

Chart 11. Percent of 15- to 16-Year-Olds in Antisocial Behaviors

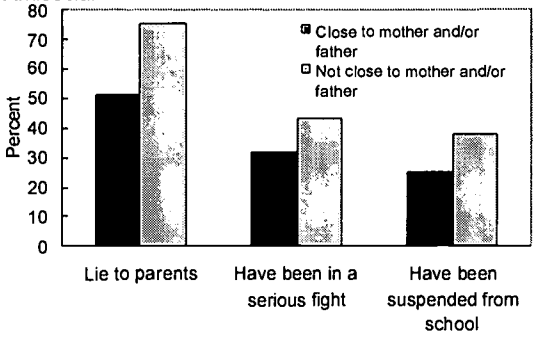


Chart 12. Percent of Teens Who Have Had Sex

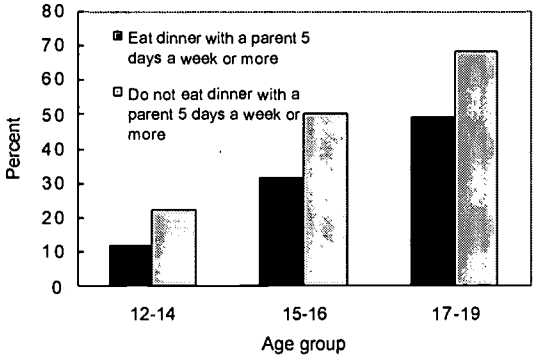
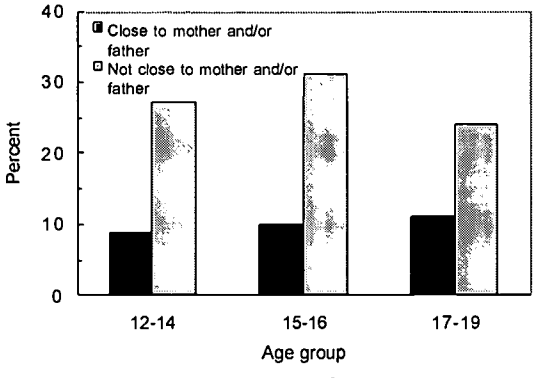


Chart 13. Percent of Teens Who Think About Suicide



Initiation of Sexual Activity. The likelihood of having had sex is strongly correlated with eating dinner with a parent and with being close to a parent (see Chart 12). In the youngest age group, 12- to 14-year-olds, teens who eat dinner regularly with a parent are about half as likely to have had sex as other teens their age, and those who are close to a parent are less than half as likely to have had sex. Similar patterns pertain for older teens as well. Among 15- and 16-year-olds, for example, more than 50 percent of the teens who don't regularly eat with their parents had sex, as compared with just 32 percent of those teens who do routinely eat with their parents. And even among those aged 17 to 19, parental involvement corresponds with lower rates of sexual activity. For this age group, 68 percent of teens who don't eat with their parents have had sex, but only 49 percent of those who do eat with their parents have done so.

Thoughts of Suicide and Reported Suicide Attempts. A critical sign of distress in teens is suicidal thoughts or suicide attempts. In the Add Health data, substantial numbers of teens reported thinking about suicide and actually attempting suicide. The proportions who have seriously thought about suicide in the past 12 months are: 10.8 percent for 12- to 14-year-olds, 14.0 percent for 15- to 16-year-olds, and 13.8 percent for 17- to 19-year-olds. The percentages who reported having attempted suicide within the past year were 3.7 percent for the youngest group, 3.9 percent for the middle group, and 3.0 percent for older teens. Results indicate that younger teens who eat with their parents are about half as likely as other teens to think about suicide (see Chart 13). And for all teens there are very big differences in suicidal thoughts between teens who feel close to parents and those who do not. Among teens aged 12-14, teens who don't feel close to their parents are about three times as likely to think about suicide. And among those aged 17-19, they are more than twice as likely.

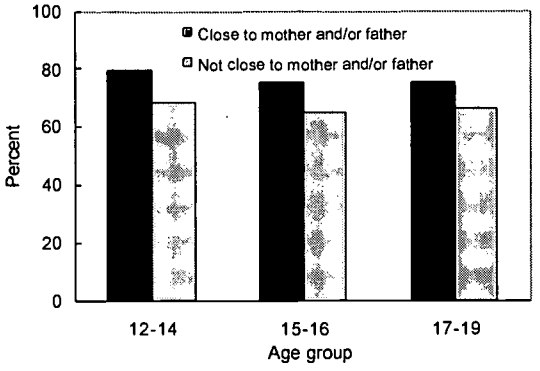
Turning to actual suicide attempts, the results are striking as well. For most age groups, teens are more than twice as likely to attempt suicide if they do not eat dinner regularly with a parent or if they do not have a close relationship with their parents. An especially dramatic case is among 15- to 16-year-olds, who are four times as likely to attempt suicide if they do not have a close relationship with a parent (10.0 percent versus 2.5 percent).

School Performance and Likelihood of Attending College. Not only is parental involvement correlated with a reduction risky behavior, but it may also encourage positive outcomes, such as good grades in school and intentions to pursue a college education.

In the Add Health data, teens are asked about their grades in four key subjects; English, mathematics, history, and science. By assigning a 4.0 for an A, 3.0 for a B, 2.0 for a C, and 1.0 for a lower grade, each teen's grade point average was calculated for these subjects. Analysis indicates that grades are generally significantly higher for teens who eat dinner with a parent or who are close to a parent.

These same teens indicate a higher perceived likelihood of attending college (see Chart 14). As we discuss above, success in today's labor market is strongly linked to earning a college education. And the importance of a college education has been increasing over time. About three quarters of 17- to 19-year-olds who are close to their parents say they expect to go to college, compared with only two-thirds of those teens who are not close to their parents.

Chart 14. Percent of Teens Intending to Go to College



In sum, across all variables a robust pattern of results emerges: teens who continue to connect with their parents by eating dinner with their family, as well as teens who express a close relationship with a mother and/or father, fare better. Those teens with closer parental relationships are much less likely than other teens to engage in smoking and substance abuse. They are less likely to have sex at young ages, to get into fights, or to be suspended from school. And they are at lower risk for thoughts of suicide and suicide attempts. These kids tend to get better grades and express more optimism about going to college. This pattern of results holds when we control for the teen's sex, family poverty status, and family structure.

The key findings described here—that teens who eat with a parent also fare better on a variety of dimensions than other teens—generally hold true whether both parents are present or only one.[32] Thus the analysis is not simply isolating differences across single-parent and two-parent households.

As with all non-experimental social science, care must be taken in interpreting causality. One obvious interpretation of our results is that when families eat evening meals together, parents

[32] In analysis that controls for sex, family poverty status and family structure, in most cases these relationships hold for both family types. This result is established by estimating a model in which the parental involvement indicator is interacted with the family structure variable. As a typical example, among teens 15- to 16-years-old, the estimated effect on marijuana use of "eating with a parent" is a reduction of 15.1 percentage points in single-parent households and 13.4 in two-parent households (but not a statistically significant difference).

are "protecting" their teen children from risky behavior, perhaps by providing structure to teens' lives and by affording an opportunity for connection. There is a large literature that highlights how parental choices affect outcomes of children.[33] The inference about parental behavior affecting teens' behavior is consistent with this literature.

For some teens, though, the appropriate interpretation might be the reverse. Some troubled teens may withdraw from their families—choosing to be absent at mealtimes, for example, and also feeling a disconnection from their parents. These same teens may also be more likely than other teens to engage in high-risk behaviors. It is crucial that social and behavioral scientists continue to sort out the causal connections between parenting and teen outcomes.

This report's focus on teens eating with parents is reflected in one recent study showing that for 12- to 13-year-olds, "eating dinner with family" appears predictive of spending more time studying and reading.[34] An important recent research report published in the *Journal of the American Medical Association* by Michael Resnick and co-authors highlights the key importance of parents' involvement with their teenage children (and they conduct additional work on the role of school).[35] These authors, using data from the Add Health Survey, produce a series of important findings about the family context and behaviors of teens. Having controlled for socioeconomic differences in teens' families, the authors identify a number of factors of family life—including "Parent and Family Connectedness," "Parent/Adolescent Activities," and "Parental Presence"—that emerge as "protective factors" for teens. Teens who have relatively higher parental involvement in their lives are somewhat protected from emotional stress, suicide thoughts or attempts, substance abuse, becoming sexually involved at young ages, and, to a lesser extent, involvement in violence.

We view our work as complementing this prior research by focusing on one important indicator of parent involvement not explicitly examined in this work—eating dinner as a family. Also, our report provides a sense of the magnitude of differences in teen outcomes associated with teens maintaining a family connection by eating dinner with their parents, and with teens being close to parents.

5. Meeting the Challenges Facing 21st Century Families: Concluding Observations

Teens today are being raised in very different family environments from those of 50 or 100 years ago (see Box 3). Families are smaller, are more likely to be headed by one parent, and more likely to live in an urban or non-farm setting. These factors, and many more, are likely to have contributed to the busy lives that families lead. Among these changes, two stand out—the

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[33] One classic cite is Gerald Patterson, B. D. DeBaryshe, and E. Ramsey, "A Developmental Perspective on Antisocial Behavior," *American Psychologist,* 1989.

[34] This work provides additional evidence on the role parents play in how their children spend their time. See Robin Tepper, "Parenting Style, Involvement in Structured Activity and Adolescent Discretionary Time-Use Decisions: Findings from the NLSY97," working paper, Harris School, University of Chicago, 1999. Another study examines the role of family routines (including eating dinner together), finding a strong association between a family routine index and youth outcomes. See Kristin A. Moore et al. "Family Process and Adolescent Outcome Measures," Child Trends, 1999.

[35] See Michael Resnick, et al., "Protecting Adolescents From Harm: Findings From the National Longitudinal Study on Adolescent Health," *Journal of the American Medical Association,* September 1997. An accessible summary of many of the study's findings can be found in Robert Blum and Peggy Rinehart, "Reducing the Risk: Connections That Make a Difference in the Lives of Youth," Division of General Pediatrics and Adolescent Health, University of Minnesota.

dramatic increase in female labor force participation and the increase in the prevalence of single-parent families. Over just the last five decades, the "traditional" one-breadwinner, one-homemaker family has been declining as a share of all families, from 56 percent to 24 percent. The share of married couples in which both spouses work full-time rose from 32 percent to 48 percent from 1968 to 1998. And the share of single parents working full-time rose from 56 percent to 67 percent over this span. It is little wonder that when individuals were asked in a 1995 national survey about "always feel[ing] rushed, even to do the things you have to do," 33 percent of respondents said "yes," up from 24 percent in 1965.

The increasing parental time spent in the workplace and in commuting puts a substantial squeeze on families to find time for other important activities, including time for parents to spend with children. Nonetheless, many parents have been resourceful in finding time to spend with children. One study showed that hours per day mothers spent in care of family members actually was quite similar in 1925 and 1975. Although mothers had many new demands on their time, they found ways to preserve time with their family. A recent report emphasizes that similar conclusions follow from a comparison of mothers' time with children in 1965 and 1998. This work indicates that even with the increase in single parenting and market work by mothers, mothers are spending as much time with children now as in 1965. There is also evidence of modest increases in time spent with children by married fathers.[36]

This research reminds us that the difficulty families often face in finding time for family and work is not a new phenomenon. Still, it is undeniable that families feel stress in finding time for coping with the time crunch is clearly a serious challenge for today's families. Teens are most likely to be successful and safe when parents and teens are able to meet this challenge—by eating meals together, or finding other ways of remaining connected. An important societal challenge is finding ways to complement parents' efforts by providing meaningful school and community activities, and by insuring that parents and teens have the flexibility they need to spend time together.

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[36] See Suzanne M. Bianchi, "Maternal Employment and Time With Children: Dramatic Change or Surprising Continuity?" 2000 Presidential Address, Population Association of America, March 2000. She cites statistics for 1925 and 1975 from Cathleen Zick and W. Keith Bryant, "A New Look at Parents' Time Spent in Child Care: Primary and Secondary Time Use," *Social Science Research*, 1996. These authors point out that in 1925 many women not in paid work nonetheless worked long hours on farms or on difficult domestic chores. (Because of data limitations, the analysis is restricted to white, two-parent families.)

Box 3. Changes in American Households Over 100 Years

The transformation of the labor force has provided a dramatic expansion of economic opportunities for women. In 1900 job opportunities for women were severely limited: only a fifth of women worked for pay, and those who did were mainly single and poor. In the early 1900s about 47 percent of women who did work in the paid market worked in agriculture or manufacturing and 29 percent more as private household workers. It is estimated that in 1890, over 90 percent of African American female workers worked as servants or agricultural workers. Although there are still large gender differences in some occupations, female representation in many key professions—including law, medicine, chemistry and biology—has increased markedly over the past several decades. (See the *Economic Report of the President*, February 2000.)

Trends in the American Family	1900	1950	1998
Living arrangements of children by family status (percent)			
Two-parent farm family	41	17	----
Two-parent non-farm family			
Father breadwinner, mother homemaker	43	56	24
Dual earner	2	13	44
Single-parent	9	8	28
Not living with parent	5	6	4
Labor force participation of women (percent)	20.0	33.9	60.0
Average household size (persons)	4.8	3.4	2.6
Households with seven or more people (percent)	20.4	4.9	1.2

The trends in female integration into the labor force signal to today's young women a great broadening of opportunities for their own future success. In combination with the increasing prevalence of one-parent families, though, these trends have reduced the number of "traditional" families with stay-at-home moms.

Appendix Table. Teen Outcomes Related to Parental Involvement

	Age 12-14	15-16	17-19
Percent of Teens who Smoked in the Last 30 Days			
Teens who do *not* eat dinner with a parent 5 days a week.	24.0	34.1	40.6
Teens who eat dinner with a parent at least 5 days a week.	14.8	25.2	27.6
Percentage point difference in outcome:	9.1*	8.8*	13.0*
Difference after statistical controls:	8.5*	8.3*	12.0*
Teens who are *not* close to their mother and/or father.	34.4	41.9	43.9
Teens who are close to their mother and/or father.	15.0	25.5	32.9
Percentage point difference in outcome:	19.3*	16.4*	11.0*
Difference after statistical controls:	18.0*	15.2*	10.3*
Percent of Teens who Drink More Than Monthly			
Teens who do *not* eat dinner with a parent 5 days a week.	13.2	23.6	30.7
Teens who eat dinner with a parent at least 5 days a week.	6.8	13.9	25.8
Percentage point difference in outcome:	6.4*	9.6*	4.9*
Difference after statistical controls:	6.3*	9.1*	4.3*
Teens who are *not* close to their mother and/or father.	18.3	29.3	32.1
Teens who are close to their mother and/or father.	7.2	15.0	27.8
Percentage point difference in outcome:	11.1*	14.3*	4.3
Difference after statistical controls:	10.9*	14.4*	4.0
Percent of Teens who Ever Used Marijuana			
Teens who do *not* eat dinner with a parent 5 days a week.	19.6	38.8	43.8
Teens who eat dinner with a parent at least 5 days a week.	11.9	22.8	28.7
Percentage point difference in outcome:	7.6*	16.0*	15.1*
Difference after statistical controls:	6.6*	13.9*	14.1*
Teens who are *not* close to their mother and/or father.	30.9	50.1	48.9
Teens who are close to their mother and/or father.	11.8	24.1	34.3
Percentage point difference in outcome:	19.1*	26.0*	14.6*
Difference after statistical controls:	17.1*	24.3*	13.5*

	Age 12-14	15-16	17-19
Percent of Teens who Lie to Parents			
Teens who do *not* eat dinner with a parent 5 days a week.	55.1	62.1	59.9
Teens who eat dinner with a parent at least 5 days a week.	40.5	52.6	51.6
Percentage point difference in outcome:	14.7*	9.5*	8.3*
Difference after statistical controls:	13.2*	9.3*	8.9*
Teens who are *not* close to their mother and/or father.	72.1	75.7	71.6
Teens who are close to their mother and/or father.	40.9	51.6	52.3
Percentage point difference in outcome:	31.2*	24.1*	19.3*
Difference after statistical controls:	29.8*	22.9*	19.8*
Percent of Teens who Have Been in a Serious Fight			
Teens who do *not* eat dinner with a parent 5 days a week.	40.5	41.3	28.7
Teens who eat dinner with a parent at least 5 days a week.	33.8	29.3	24.9
Percentage point difference in outcome:	6.7*	12.0*	3.9
Difference after statistical controls:	6.9*	10.5*	2.6
Teens who are *not* close to their mother and/or father.	45.0	43.6	34.3
Teens who are close to their mother and/or father.	34.3	31.6	25.3
Percentage point difference in outcome:	10.6*	12.0*	9.0*
Difference after statistical controls:	11.4*	11.5*	8.7*
Percent of Teens Who Have Been Suspended from School			
Teens who do *not* eat dinner with a parent 5 days a week.	29.6	33.9	31.4
Teens who eat dinner with a parent at least 5 days a week.	20.6	24.0	25.5
Percentage point difference in outcome:	9.0*	9.9*	5.9*
Difference after statistical controls:	7.6*	7.3*	3.7
Teens who are *not* close to their mother and/or father.	33.9	38.1	37.8
Teens who are close to their mother and/or father.	21.5	25.3	26.7
Percentage point difference in outcome:	12.4*	12.8*	11.1*
Difference after statistical controls:	7.9*	11.5*	9.6*

	Age 12-14	15-16	17-19
Percent of Teens Who Ever Had Sex			
Teens who do *not* eat dinner with a parent 5 days a week.	22.3	50.3	68.2
Teens who eat dinner with a parent at least 5 days a week.	11.9	31.7	49.1
Percentage point difference in outcome:	10.3*	18.6*	19.0*
Difference after statistical controls:	8.8*	15.1*	17.4*
Teens who are *not* close to their mother and/or father.	27.5	54.7	70.6
Teens who are close to their mother and/or father.	12.9	35.2	57.6
Percentage point difference in outcome:	14.7*	19.5*	13.1*
Difference after statistical controls:	10.4*	15.4*	10.5*
Percent of Teens Who Think About Suicide			
Teens who do *not* eat dinner with a parent 5 days a week.	16.6	18.5	14.8
Teens who eat dinner with a parent at least 5 days a week.	8.6	11.1	12.5
Percentage point difference in outcome:	8.0*	7.4*	2.3
Difference after statistical controls:	8.0*	7.1*	2.3
Teens who are *not* close to their mother and/or father.	27.1	31.2	24.2
Teens who are close to their mother and/or father.	8.7	10.0	11.1
Percentage point difference in outcome:	18.4*	21.2*	13.1*
Difference after statistical controls:	18.0*	21.0*	13.1*
Percent of Teens Who Report Having Attempted Suicide			
Teens who do *not* eat dinner with a parent 5 days a week.	6.1	7.0	3.1
Teens who eat dinner with a parent at least 5 days a week.	2.6	2.0	2.9
Percentage difference in outcome:	3.5*	5.0*	0.2
Difference after statistical controls:	3.5*	4.9*	0.2
Teens who are *not* close to their mother and/or father.	8.3	10.0	5.7
Teens who are close to their mother and/or father.	3.2	2.5	2.3
Percentage difference in outcome:	5.1*	7.5*	3.4*
Difference after statistical controls:	5.0*	7.5*	3.2*

	Age 12-14	15-16	17-19
School Performance: Self-Report Grade Point Average			
Teens who eat dinner with a parent at least 5 days a week.	2.98	2.84	2.89
Teens who do *not* eat dinner with a parent 5 days a week.	2.76	2.72	2.75
Difference in average GPA:	0.22*	0.12*	0.14*
Difference after statistical controls:	0.20*	0.08*	0.08
Teens who are close to their mother and/or father.	2.95	2.82	2.86
Teens who are *not* close to their mother and/or father.	2.68	2.67	2.63
Difference in average GPA:	0.27*	0.15*	0.23*
Difference after statistical controls:	0.22*	0.11*	0.19*
Percent of Teens Intending to Go to College			
Teens who eat dinner with a parent at least 5 days a week.	80.6	75.2	78.0
Teens who do *not* eat dinner with a parent 5 days a week.	73.3	71.0	70.4
Percentage point difference in outcome:	7.3*	4.2*	7.6*
Difference after statistical controls:	6.9*	2.1	6.2*
Teens who are close to their mother and/or father.	79.8	75.6	75.4
Teens who are *not* close to their mother and/or father.	68.4	64.9	66.5
Percentage point difference in outcome:	11.5*	10.8*	8.9*
Difference after statistical controls:	11.8*	9.9*	8.1*

*Indicates significance at the 0.05 level. All statistics are estimates from the public-use version of the Add Health data. Data are for students in grades 7 to 12. Eleven-year-olds and those over age 19 have been excluded from the analysis. For all analyses that have "statistical controls," the conditioning variables are gender, poverty status, and family structure (see text). The data in this publication were made available by the American Family Data Archive (AFDA), Sociometrics Corporation, 170 State Street, Suite 260, Los Altos, CA 94022-2812. The study entitled *The National Longitudinal Study of Adolescent Health (Add Health), Waves I & II, 1994-1996* was conducted by J. Richard Udry of the Carolina Population Center, CB# 8120, University Square, University of North Carolina at Chapel Hill, Chapel Hill, NC 27516-3997. Funding for the data collection was provided by the National Institute of Child Health and Human Development (NICHD) under Grant No. P01-HD31921. Funding support for preparing the revised documentation for public distribution was provided by a grant 92 R44-HD31776) from the NICHD to Sociometrics Corporation. The original investigators, funding agency, and Sociometrics Corporation are not responsible for the analyses or interpretations presented here.

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EFF-089 (3/2000)