

Findings from the Girls Incorporated[®]
Girls Shape the Future study
Early Predictors of Girls' Adolescent Sexual Activity

**girls
inc.**[®]



High rates of risky sexual behaviors among U.S. adolescents have long been a concern for parents, educators, policy makers, researchers, and the media, as recent national estimates indicate that nearly half of all high school students have had sexual intercourse.

To add to our knowledge in this area, Girls Incorporated® collaborated with Mathematica Policy Research, Inc. (MPR) to conduct a longitudinal study, *Girls Shape the Future*, of a relatively high-risk sample of adolescent girls. From 2001 to 2006, more than 800 adolescent girls participated in the study by completing three rounds of survey questionnaires over a three-year period from approximately sixth through ninth grades. Upon completion of the study, MPR conducted a secondary analysis of these survey responses, resulting in the report, *Early Predictors of Girls' Adolescent Sexual Activity: Longitudinal Findings from the Girls Shape the Future Study*.

This summary, intended for the general public, provides highlights from that report, focusing on the findings related to two questions:

- 1) How do girls' sexually risky behaviors change in early adolescence?
- 2) What factors put girls at risk for early involvement in sexual activity?

These questions are of considerable concern to Girls Incorporated, as the organization has historically been at the forefront of providing girls with the knowledge, skills, and tools to understand their bodies and make healthy behavioral choices. First introduced in 1988, Girls Inc. Preventing Adolescent Pregnancy® is an age-phased, research-based, and evaluated program that helps girls and young women acquire the skills, insights, values, motivation, and support to postpone sexual activity, as well as to use effective protection to avoid pregnancy and sexually transmitted diseases when they do choose to become sexually active.

The pre-teen and early teen years are particularly critical in a girl's life. Between the ages of eleven and fourteen, girls begin to confront the many facets of an emerging adulthood: increasingly abstract and "future oriented" thinking processes; the search for and creation of identities—including their maturing sexual and gender identities; and the development and maintenance of more adult-like and complex relationships with peers and romantic partners.^{2,3}

Of the girls participating in the *Girls Shape the Future* study, 79 percent were girls of diverse ethnicities, 63 percent received free or reduced-price lunches, and 25 percent lived in single-parent households. The average age of the girls participating in the baseline survey was 12.17 years. These characteristics are typical of the girls and young women served by Girls Inc. programming, with relatively high proportions of African Americans and Hispanics and with a high proportion of girls who reported receiving free or reduced-price school lunches.⁴

Figure 1: Girls Participating in the Study, at Baseline

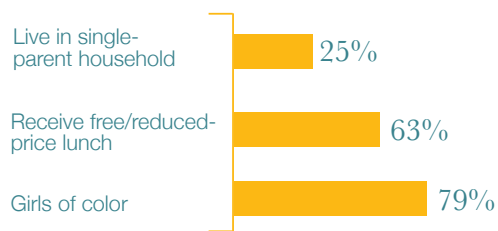
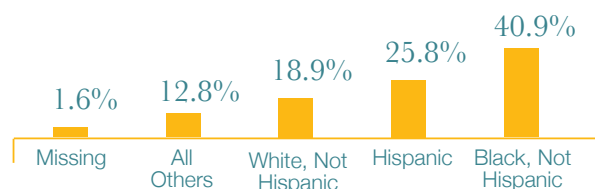


Figure 2: Girls Participating in the Study, at Baseline, Race/Ethnicity By Self-report

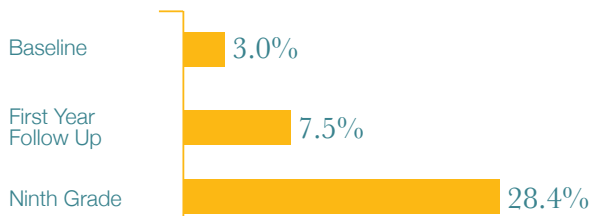


This population was an important focus for this study, as girls whose futures are considered at risk because of factors over which they have no control, such as their race, their family configuration, or their family's economic status, are often presumed by society—and especially by the media—to be at high risk for engaging in early sexual activity.

A Time of Changing Behaviors

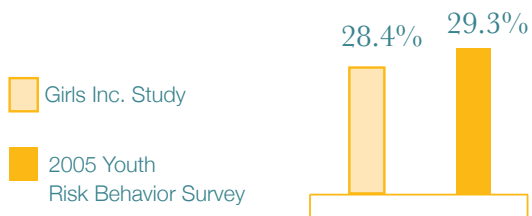
The study, for which MPR surveyed a cohort of over 800 girls at three points in time, at “baseline” (most girls were in the sixth grade), one year later, and at ninth grade,⁵ reaffirms our understanding that girls increasingly engage in sexual activity during this age period, as almost one in three girls reported engaging in sexual intercourse by ninth grade.

Figure 3: Percentage of Girls Who Have Ever Had Sexual Intercourse, By Survey Year



In fact, findings from the *Girls Shape the Future* study about the rate of sexual intercourse were comparable to findings from national surveys of the general population of girls. For example, in this study, 3 percent of sixth graders reported ever having had sexual intercourse, growing to 28 percent by ninth grade. This finding is very similar to that of the Youth Risk Behavior survey conducted by the Centers for Disease Control and Prevention, which found that 29 percent of ninth grade girls had engaged in sexual intercourse.⁶

Figure 4: Percentage of Girls at Grade 9 Who Had Ever Had Sexual Intercourse Compared to National Data



Girls in the *Girls Shape the Future* study were also asked to describe their feelings concerning their sexual experiences. Among the girls who had initiated sexual intercourse before the ninth-grade survey, girls were split evenly between those who said they regretted their experiences and those who expressed no regret. By contrast, among the girls who reported never having had sex, a large majority of girls (95 percent) said they

felt fine with their experiences, while only a small proportion (5 percent) said they regretted their experiences and wished they had had sex. These findings suggest that girls’ feelings toward their sexual experiences vary more among girls who have initiated sexual intercourse than among girls who are abstinent.

Most Girls Did Not Engage in Sexual Activities

The important news that emerged from the *Girls Shape the Future* study was that by the end of ninth grade, nearly three-quarters of the girls (72 percent) had not engaged in sexual intercourse, most of the girls (88 percent) had not engaged in oral sex, and over half of the girls (53 percent) had not engaged in heavy kissing or sexual touching. As noted above, the percentage of girls in this study who engaged in sexual intercourse in ninth grade was no higher than the national percentage.

Although the likelihood of a girl having sex increased significantly over this period, there were no significant differences in risk for early involvement in sexual activity by race/ethnicity or socioeconomic status. The chances of initiating sexual intercourse between the first follow-up and ninth-grade surveys were higher for African American girls (29 percent) than for whites (28 percent) and Hispanics (24 percent). However, these differences are not statistically significant.

Similarly, the chances of initiating intercourse were higher for girls who reported receiving free or reduced-price school lunches (28 percent) than for other girls in the study (26 percent), but the gap is not statistically significant. This may be because the girls in the study are a more homogeneous group than girls in the general population, coming from five communities that share similar interests and family backgrounds.

Most Girls Did Not Grow More Accepting of Teenage Sexual Intercourse

Considering the fact that 28 percent of the participants in the *Girls Shape the Future* study had already engaged in sexual intercourse by the ninth grade, it was surprising that the majority of ninth grade girls (70 percent) did not approve of teenage sexual intercourse, even for teens who had been dating for a long time. Furthermore, over 90 percent of girls in both seventh and ninth grades agreed that it was not acceptable to

be pregnant as a teenager or for teenagers to have babies.

In contrast to the findings of national studies on girls' sexual activity^{7,8}, the ethnicity, socioeconomic status, and household composition (e.g., who resided in the home) of girls in the *Girls Shape the Future* study were not associated with the girls' engagement in sexual activity. In other words, despite media and societal perceptions of "girls at risk," among the girls who participated in the study, being a girl of color or having limited family resources did not increase the likelihood of becoming involved in early sexual activity.

Risk Factors for Early Sexual Activity

The finding of the *Girls Shape the Future* study did clarify that girls with accepting attitudes toward sex and taking risks were more likely than other girls to initiate sexual intercourse. Three measures were created, grouping study questions, to clarify girls' attitudes.

The first measure focused on girls' acceptance of premarital sex by analyzing their responses to two statements:

- "It is against my values for me to have sex before I am married."
- "It is against one or both of my parents'/guardians' values for me to have sex before I am married."

A second measure focused on girls' acceptance of teenage sex, analyzing their responses to five statements:

- "It is okay for teens to have sex if they use birth control."
- "Teens who have been dating for a long time or going steady should have sex if they want to."
- "It is okay for teens to have sex if they use a condom to prevent disease."

- "It is okay to be pregnant as a teen."
- "It is okay for teens to have babies."

And a third measure focused on girls' support for taking risks, by analyzing their responses to five statements:

- "I would do almost anything on a dare."
- "I like to test myself sometimes by doing something a little risky."
- "I keep out of trouble at all costs."
- "I often act before I think."
- "Before I do something, I think about what my friends would think about it."

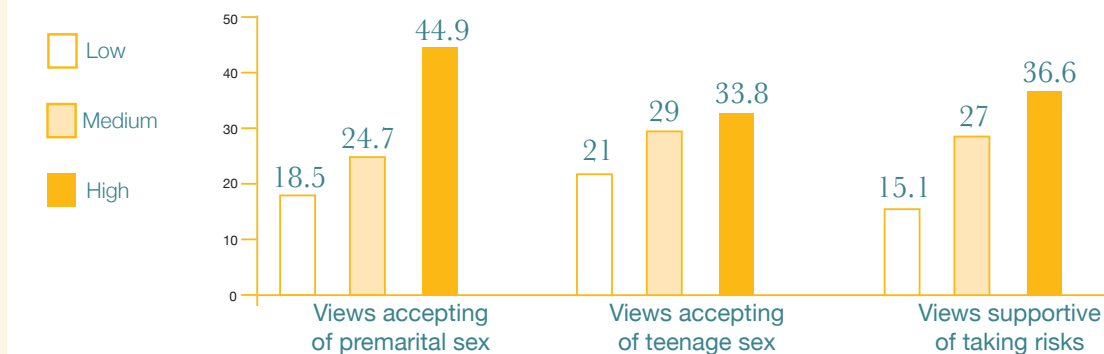
These measures were used to determine the likelihood of a girl having sexual intercourse by ninth grade, depending on her attitudes and views. All of the differences found are statistically significant.

Acceptance of premarital sex. For views accepting of premarital sex, the chances of initiating sexual intercourse were more than twice as great for girls with the most accepting attitudes (45 percent) than for those with the least accepting attitudes (19 percent).

Acceptance of teenage sex. Similarly, for views accepting of teenage sex, the chances of initiating intercourse ranged from 34 percent for girls with the most accepting attitudes to 21 percent for those with the least accepting attitudes.

Support for taking risks. Rates of sexual activity also differed according to girls' attitudes toward taking risks, with the chances of initiating intercourse more than twice as great for girls with the most accepting attitudes (37 percent) than for those with the least accepting attitudes (15 percent).

Figure 5: Probability of initiating sexual intercourse, by girls' attitudes toward sex and taking risks



The likelihood of initiating sexual intercourse was higher for girls who used drugs or alcohol, had friends who used substances, or received pressure from friends to have sex. In line with the findings of prior research, data from the study show that involvement in adolescent sexual activity tends to cluster with participation in other types of risky adolescent behaviors and with pressure from peers to engage in risky behaviors.

Prior substance use. In particular, there is a strong correlation between sexual activity and prior substance use, such that girls who reported having used any substances (alcohol, tobacco, or marijuana) in the month before the first follow-up survey were more than twice as likely as other girls to initiate sexual intercourse between the first follow-up and ninth-grade surveys (50 percent versus 24 percent).

Prior substance use by their peers. Similarly, girls' sexual activity is also correlated with substance use by their peers. Girls who reported that their friends used substances had a nearly 40 percent chance of initiating sexual intercourse, compared with 20 percent for girls who reported no peer substance use. This correlation between peer substance use and sexual behavior persists after adjusting for the girl's own substance use.

Pressure from friends to have sex. To measure another aspect of negative peer influences, girls were asked in the first follow-up survey whether they felt pressure from their friends to have sex. Results show that the chances of initiating sexual intercourse between the first follow-up and ninth-grade surveys were higher for girls who reported feeling pressure from their friends to have sex (45 percent) than for girls who did not report feeling this type of pressure (24 percent).

Protective Factors against Early Sexual Activity

The *Girls Shape the Future* study found factors that protected girls against early sexual activity even when considering the factors of the participants' socioeconomic status and household structure.

Relationship with mother. Previous studies of adolescent development have found large differences in rates of sexual activity between girls from single-parent families and those from two-parent families.⁹ However, data from the *Girls Shape the Future* study show that the quality of girls' relationships with their parents—and not their basic family structure—is a stronger predictor of their early involvement in sexual activity.

A set of questions about the girls' relationships with their mothers and with their fathers were used to create measures of the relationship. The survey statements include:

- “She/he is warm and loving toward me.”
- “When I do something seriously wrong, she/he helps me understand why it is wrong.”
- “I like the way she/he and I talk with each other.”
- “I like my relationship with her/him.”

For each scale, girls who scored in the bottom third of the scale were compared with those who scored in the middle or top thirds of the scale. Higher values indicate more positive relationships. When answering this series of survey questions, girls were asked to think of the one person they considered to be their mother and the one person they considered to be their father, which for most girls was a biological parent but for others was a stepparent, grandparent, or other relative or guardian.

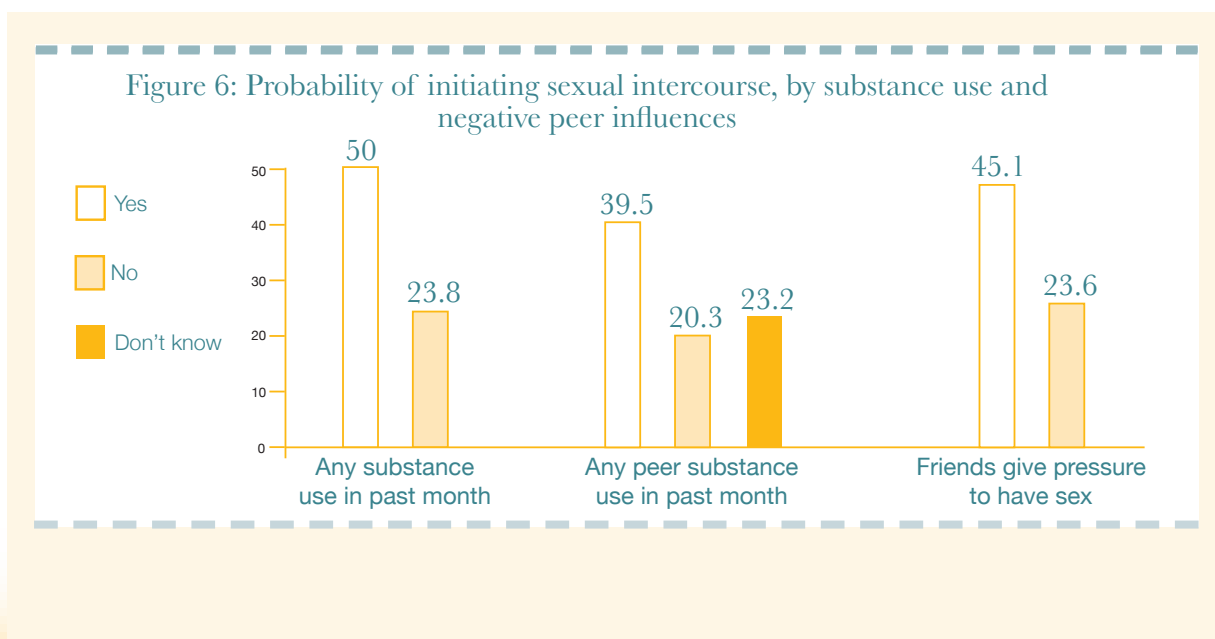
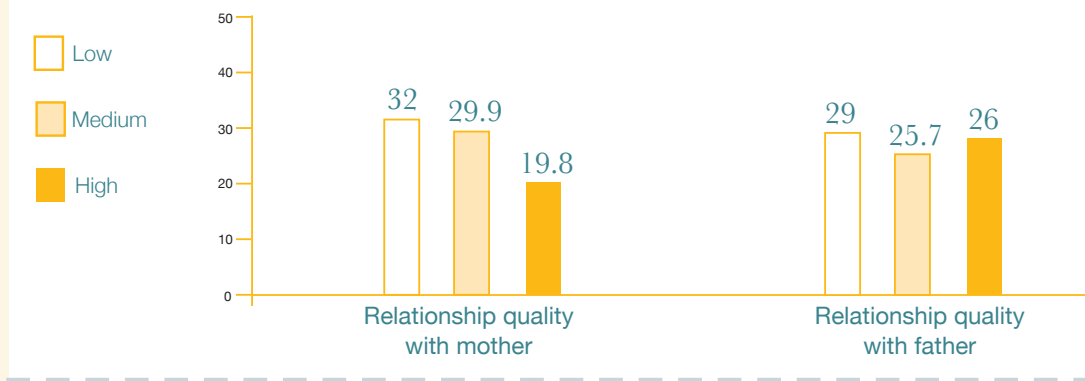


Figure 7: Probability of initiating intercourse, by relationship quality with mother & father



With respect to girls' relationships with their mothers, the likelihood of initiating sexual intercourse was significantly lower for girls who reported the most positive relationships (20 percent) than for those who reported the least positive relationships (32 percent). There are no significant differences in the chances of initiating intercourse between girls in the middle third of the scale (30 percent) and those in the bottom third (32 percent). The chance of initiating sexual intercourse was also lower for girls who reported the most positive relationships with their fathers (26 percent for girls in the top third of the scale, versus 29 percent for those in the bottom third), but the difference is not statistically significant. The finding of a stronger association for relationship quality with mothers is consistent with previous research on adolescent girls.^{10, 11}

By contrast, there were no significant differences in girls' sexual activity based on differences in family structure. The chances of initiating sexual intercourse between the first follow-up and ninth-grade surveys were similar regardless of whether girls lived with their mother figure or their father figure.

Reading proficiency: Girls who reported receiving an 'A' grade in reading on the first-year follow-up survey were significantly less likely to report first sexual intercourse between that survey and the ninth-grade survey than were their peers who earned 'C' or lower grades in reading. Specifically, there was a 21 percent chance for girls with 'A' reading grades engaging in sexual activity compared to a 38 percent chance for girls with 'C' or lower reading grades engaging in sexual activity. This finding suggests that girls who are more involved in school or are doing well in school are less likely to engage in early sexual activity.

Conclusion and Implications

The *Girls Shape the Future* study of girls in sixth through ninth grades demonstrated that most girls in this study, who are often described as "disadvantaged" and therefore are perceived as typically at risk for early initiation of sexual activity, displayed healthy and positive sexual attitudes and behaviors. The study participants reported similar rates of sexual activity as their peers did in national studies.

The study affirmed earlier learning about the relationship between girls engaging in sexual intercourse and substance use, as well as having friends who used substances.

In contrast, girls greatly benefited from protective factors within their families and in school. Girls who had close relationships with their mothers were less likely to engage in sexual activity. This finding was not related to family structure (two-parent or single-parent households) or whether the girls lived with their mothers or not. Family functioning—the quality of the relationships and the support for academic achievement—are more important than ascribed family status such as economic status, family structure, or race and ethnicity in influencing when girls begin to engage in sexual behaviors.

The findings reported here provide strong evidence for the need for sexuality education programming during the middle school and high school years, as girls' attitudes and experiences are evolving and close to a third of girls will engage in sexual intercourse by ninth grade. Most important, programming must be multifaceted, recognizing that sexuality education must be set in the context of academic achievement, peer relationships, and family relationships.

Implications:

- **Academics are important.** Building academic skills to ensure that girls stay focused on academic achievement, especially in reading, is critical.
- **Include parents,** especially mothers, in programming. A high-quality relationship with their mothers reduced the chance that girls would initiate sexual intercourse prior to the ninth grade. Programming that helps mothers and daughters learn to talk with each other, especially about sensitive topics, and demonstrate warm and loving attitudes toward each other, especially as the girls enter adolescence, is directly relevant.
- **Substance abuse prevention** and sex education are critical. Developing drug-refusal skills, sexual negotiation skills, and effective coping styles to deal better with peer pressure and life stressors may help girls delay sexual activity. Girls between the ages of 11 and 15 are continuing to develop the capacity for abstract thought and need to practice these skills in relevant contexts in order to understand how to apply them when needed.

¹ Goesling, B., & Rangarajan, A. (2008). *Early predictors of girls' adolescent sexual activity: Longitudinal findings from the Girls Shape the Future study*. Princeton, NJ: Mathematica Policy Research, Inc.

² American Psychological Association. (2002). *Developing adolescents: A reference for professionals*. Washington, DC: Author.

³ Simpson, A. Rae. (2001). *Raising teens: A synthesis of research and a foundation for action*. Boston: Center for Health Communication, Harvard School of Public Health.

⁴ In program year 2002 (the time of the baseline survey), according to information gathered from Girls Inc. affiliate organizations through the Annual Survey of Girls Incorporated Management and Program, 76 percent of girls served by Girls Incorporated affiliates were girls of diverse ethnicities and 77 percent came from families earning \$25,000 or less. Just over 50 percent of the girls lived in single-parent households, most of which were headed by women.

⁵ The Girls Incorporated *Girls Shape the Future* study, conducted by Mathematica Policy Research Inc., included girls at five sites within the United States (two in the Southeast, one in the Northeast, one in the Southwest, and one in the Central Region). The 832 girls recruited into the study were between the ages of 11 and 14. Surveys were administered upon entry into the study (baseline), with 757 responses (91 percent), one year after baseline, with 699 responses (84 percent), and in the ninth grade, with 494 responses (59 percent). For the examination of how rates of sexual activity changed among girls in the study, data were analyzed for the sample of 397 girls who completed all three rounds of surveys, in order to ensure that any changes we observed did not reflect differences in the sample of girls who responded to each survey.

⁶ Centers for Disease Control and Prevention (CDC). "Youth Risk Behavior Surveillance – United States, 2005." Surveillance Summaries. *Morbidity and Mortality Weekly Report*, vol. 55, no. SS-5, June 9, 2006. The 2005 survey was used because this survey was conducted around the same time as the ninth-grade Girls Incorporated® survey.

⁷ DiClemente, Ralph J., Crittenden, Colleen P., Rose, Eve, Sales, Jessica M., Wingood, Gina M., Crosby, Richard A., & Salazar, Laura F. (2008). Psychosocial predictors of HIV-associated sexual behaviors and the efficacy of prevention interventions in adolescents at risk for HIV infection: What works and what doesn't work? *Psychosomatic Medicine*, 70(5), 598–605.

⁸ Centers for Disease Control and Prevention. (2002, September). Trends in sexual risk behaviors among high school students – United States, 1991–2001. *Morbidity and Mortality Weekly Report*, 51(38), 856–859.

⁹ Kirby, Douglas. *Emerging Answers 2007: Research Findings on Programs to Reduce Teen Pregnancy and Sexually Transmitted Diseases*. Washington, DC: National Campaign to Prevent Teen Pregnancy, 2007.

¹⁰ Davis, Eric Calhoun, and Lisa V. Friel. Adolescent Sexuality: Disentangling the Effects of Family Structure and Family Context. *Journal of Marriage and Family*, vol. 63, 2001, pp. 669–681.

¹¹ McNeely, Clea, Marcia L. Shew, Trisha Beuhring, Renee Sieving, Brent C. Miller, and Robert Wm. Blum. Mothers' Influence on the Timing of First Sex Among 14- and 15-Year-olds. *Journal of Adolescent Health*, vol. 31, 2002, pp. 256–265.

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This study would not have been possible without the participation of five local Girls Inc. affiliates and their boards. They provided valuable assistance recruiting girls for the study and monitoring program attendance, and generously allowed the research team to visit their programs, meet with staff and participants, and observe program sessions. We also greatly appreciate the time and patience of the participating girls who responded to multiple surveys.

The study was conceived and managed by Heather Johnston Nicholson, former Girls Inc. Director of Research, and Kristin Adams, former Research Associate. Additional Girls Inc. officers and staff contributed in important ways to this effort, including Joyce M. Roché, President and CEO; Marcia Brumit Kropf, COO; Faedra Lazar Weiss, Research Associate; Aless Hall, Research Administrator; and Heidi Holmer, Librarian.

At Mathematica Policy Research, Inc., Brian Goesling and Anu Rangarajan authored the important report summarized here. In addition, the findings relied on Sheila Heaviside and Melissa Thomas, Survey Directors, for their diligent oversight of the data collection efforts and obtaining high survey response rates. Susan Zief provided expert advice on the data and study design. Nora Paxton and Patricia Seunarine constructed the data files and prepared the report analyses.

About Girls Inc.

Girls Incorporated® is a nonprofit organization that inspires all girls to be strong, smart, and boldSM through a network of local organizations in the United States and Canada. With local roots dating to 1864 and national status in the U.S. since 1945, Girls Inc. responds to the changing needs of girls and their communities through research-based programs and advocacy that empower girls to reach their full potential and to understand, value, and assert their rights. In 2008, Girls Inc. reached over 900,000 girls through Girls Inc. affiliates, our website, and educational publications.

About Mathematica Policy Research, Inc.

Mathematica, a nonpartisan research firm, provides a full range of research and data collection services, including program evaluation and policy research, survey design and data collection, research methods and standards, and program management/data system support, to improve public well-being. Its clients include federal and state governments, foundations, and private-sector and international organizations. The employee-owned company, with offices in Princeton, NJ; Ann Arbor, MI; Cambridge, MA; Chicago, IL; Oakland, CA; and Washington, DC, has conducted some of the most important studies of health care, education, family support, employment, nutrition, and early childhood policies and programs.

To download a copy of the full report of *Early Predictors of Girls' Adolescent Sexual Activity: Longitudinal Findings from the Girls Shape the Future Study*, please visit www.girlsinc.org.

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