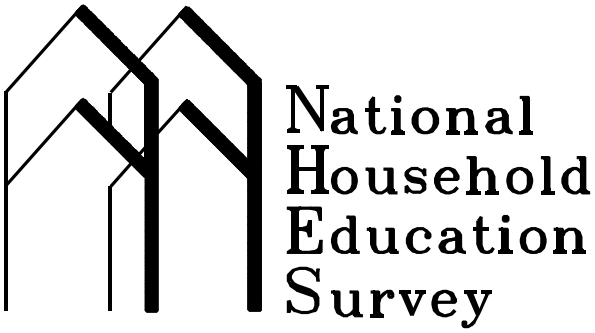
NATIONAL CENTER FOR EDUCATION STATISTICS

Statistical Analysis Report **September 1997**

National Household Education Survey

Fathers' Involvement in Their Children's Schools



U.S. Department of Education
Office of Educational Research and Improvement **NCES 98-091**

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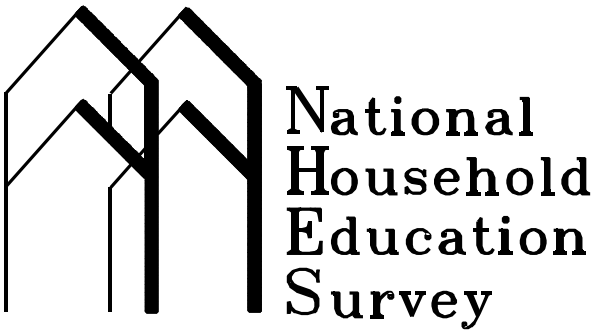

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EXECUTIVE SUMMARY

Policymakers and educators agree that family involvement in children's education is important in fostering children's school success. Indeed, two of the National Education Goals stress the important role of parents in their children's education. Goal 1 states that "By the year 2000, all children in America will start school ready to learn." The second objective under this goal expands upon it by stating that parents are to be their children's first teachers, devoting time each day to helping their preschool children learn. Goal 8, although aimed at schools and not directly at parents, highlights the widespread belief that parental involvement in schools is important. This goal states that "By the year 2000, every school will promote partnerships that will increase parental participation in promoting the social, emotional, and academic growth of children."

Extensive research exists on the importance of parental involvement in children's education, yet relatively few studies have examined the individual contributions that mothers and fathers make to their children's schooling. There is a great deal of interest, however, in the role of fathers in children's lives. This interest stems from the fact that until recently fathers were the hidden parent. They were assumed to be the breadwinners of two-parent families, but of limited importance in non-financial aspects of children's well-being and development. Reflecting this bias in research on child development, many federal agencies and programs that deal with family issues focused almost exclusively on mothers and their children. In 1995, President Clinton issued a memorandum requesting that all executive departments and agencies make a concerted effort to include fathers in their programs, policies, and research programs where appropriate and feasible. This new attention devoted to fathers is not intended to lessen the focus on the important role that mothers play in their children's lives, but rather to highlight the fact that fathers are important, too.

This report provides a broad overview of the extent to which resident (excluding foster) and nonresident fathers are involved in their children's schools and examines the influence their involvement has on how children are doing in school. Information on involvement in schools was obtained from the parents of 16,910 kindergartners through 12th graders. Parents were asked which adult in the household, if any, had participated in four types of school activities since the beginning of the school year: attending a general school meeting; attending a regularly scheduled parent-teacher conference with the child's teacher; attending a school or class event; and volunteering at the school. In addition, for children who had parents living elsewhere, respondents were asked about the children's contact with their nonresident parents and, among children who had seen their nonresident parents in the past year, whether the nonresident parents had participated in the activities since the beginning of the school year. Of the 6,908 children with nonresident parents, 5,440 had nonresident fathers. The data were collected from January to April of 1996 as part of the National Household Education Survey.

The report emphasizes fathers' involvement in their children's schools, but information on mothers' involvement is also provided. Throughout the discussion of resident fathers' involvement, a distinction is made between fathers in two-parent families and fathers who are heads of single-parent families. Two reasons prompted this approach. First, single-parent and two-parent families differ in many respects that can affect both how parents spend their time and how their children perform in school. Second, the NHES:96 data allowed the unusual opportunity to examine how parents in two-parent families share child-rearing responsibilities in one important realm: their children's schooling.

The major questions addressed by this report are listed below along with a brief summary of the results for resident and nonresident fathers.

Resident Fathers' Involvement

How do fathers compare with mothers in their level of involvement in their children's schools?

The answer to this question depends upon whether the focus is on two-parent or single-parent families. Fathers in two-parent families are much less likely than mothers in two-parent families to be highly involved in their children's schools, that is, to have participated in at least three of the four activities. On the other hand, fathers who head single-parent families show levels of high involvement very similar to those of mothers who head single-parent families. In two-parent families, the proportion of children with highly involved fathers is about half of the proportion with highly involved mothers, 27 percent and 56 percent, respectively. In single-parent families, however, children living with single fathers or with single mothers are about equally likely to have highly involved parents, 46 percent and 49 percent, respectively. Indeed, both fathers and mothers who head single-parent families have levels of involvement that are more similar to mothers in two-parent families than to fathers in two-parent families. This pattern is consistent with the roles that parents fill in two-parent and in single-parent families. In two-parent families, mothers generally assume primary responsibility for the children. In single-parent families, the lone parent must fill that role regardless of whether the parent is the father or the mother.

Does fathers' involvement increase or decrease as children grow older?

Fathers' involvement in their children's schools, like mothers' involvement, decreases as children grow older. The decline is due, in part, to schools offering fewer opportunities for parental involvement as children grow older. The pattern of decline, however, is not the same for mothers and fathers. The proportion of children with mothers who are highly involved in their schools declines steadily as the grade level of the children increases whether the children live in two-parent or in single-mother families. However, the proportion of children who have highly involved fathers does not decline steadily. In two-parent families, the proportion of children with highly involved fathers drops from 30 percent to 25 percent between elementary (grades K-5)

and middle school (grades 6-8), but then drops only slightly, to 23 percent, in high school (grades 9-12). Among children living in single-father families, there is no decrease in the proportion who have highly involved fathers between elementary and middle schools (53 percent at both grade levels), but a large decrease between middle and high school (to 27 percent). These results are based on simple tabulations of the data that do not take into account such factors as the parents' education or mothers' employment.

Is the involvement of fathers in schools associated with other parental behaviors at home that may enhance children's school success?

Parents who are highly involved in their children's schools are more likely to be involved at home, as well. Elementary school children with fathers or mothers who are highly involved in their schools are more likely to have participated in educational activities with their parents (e.g, to have been told a story by their parents in the past week or to have visited a museum or historical site with their parents in the past month) than children whose parents have low levels of involvement in their schools. Children in the 6th through 12th grade with mothers or fathers who are highly involved in their schools not only have shared more activities with their parents in the past week than children whose parents have low levels of involvement in their schools, but their parents are more likely to expect that they will graduate from a 4-year college and to have discussed future courses with them. Such children are also more likely than other children to have connections to their communities as measured by the proportion with parents who regularly attend religious services, belong to community or professional organizations, or regularly volunteer in the community. Thus, families with high parental involvement in their children's schools provide their children with multiple types of resources at home, as well.

What factors are associated with fathers' involvement after selected child, family, and school characteristics are taken into account?

In two-parent families, the strongest influence on fathers' involvement in their children's schools is mothers' involvement. Fathers are more likely to be highly involved in their children's schools if mothers are and vice versa. Other factors that are important are the fathers' education, the presence of a stepmother as opposed to a biological mother, and the number of activities that families share with their children at home. As fathers' education and number of activities increase so does fathers' involvement. Fathers are also more likely to be highly involved in their children's schools if there is a stepmother present. Some of the factors relating to high father involvement differ by the children's grade level. Among children in elementary school, fathers are more likely to be highly involved if the mothers are employed full time as opposed to part time and if the children attend a private school rather than a public school that is assigned to them. Among children in the 6th through 12th grades, fathers are more likely to be highly involved if the children are boys and if the children are in higher grades.

In single-father families, fewer factors influence high father involvement after controlling for selected child, family, and school characteristics. Among children in elementary school, the likelihood of having highly involved fathers increases as fathers' education increases. Among children in grades 6 through 12, fathers are significantly more likely to be highly involved in the schools of their 6th through 8th graders than in the schools of their children in high school. Fathers who have discussed future courses with their children are also more likely to be highly involved in their 6th through 12th graders' schools. There is some evidence that attendance at public schools of their choice or private schools increases the likelihood that single fathers will be highly involved in their 6th through 12th graders' schools, but this evidence is weak.

A positive school climate, measured by the parents' assessment of discipline in their children's classrooms and schools, whether students and teachers respect each other, how welcoming the schools are, and how easy the schools make it for parents to be involved, is significantly associated with high father and mother involvement in their children's schools. As school climate becomes more positive, mothers are more likely to be highly involved, regardless of two-parent or single-parent status or grade level of their children. Among fathers in two-parent families, there is a weak association between a positive school climate and fathers' high involvement at grades 1 through 5, which becomes stronger at grades 6 through 12. As with mothers, as school climate becomes more positive, the likelihood that fathers will be highly involved in their children's schools increases. Single fathers are also more likely to be highly involved in the schools of their elementary school children as school climate becomes more positive, but school climate has no influence on their involvement in their 6th through 12th graders' schools.

Is fathers' involvement in their children's schools linked to measures of children's school outcomes, such as their class standing, whether they enjoy school, whether they participate in extracurricular activities, whether they have repeated a grade, or whether they have ever been suspended or expelled?

Fathers' involvement in their children's schools has a distinct and independent influence on many of these outcomes, even after controlling for potentially confounding factors such as the parents' education, household income, and, in two-parent families, the mothers' involvement. The relationships often continue to be important after information on home activities and the parents' educational expectations for their children is added to the models. In two-parent families, involvement of both parents in school is significantly associated with a greater likelihood that their children in 1st through 12th grade get mostly A's and that they enjoy school and a reduced likelihood that they have ever repeated a grade. Fathers' involvement has a stronger influence on the children getting mostly A's than does mothers' involvement.

Among children living in single-father families, high father involvement is associated with a greater likelihood that children in grades 1 through 12 get mostly A's and is marginally associated with a greater

likelihood of their children enjoying school. High father involvement also reduces the likelihood that children in the 6th through 12th grade have ever been suspended or expelled from school.

In two-parent families, is there a gain from having both parents involved as opposed to only one? And, are there particular outcomes for which fathers' involvement appears to be especially important?

Results based on cross-tabulations suggest that children fare better when both parents are highly involved in their schools. Children experience a small, but significant, increase in the likelihood that they get mostly A's, enjoy school, and participate in extracurricular activities and a reduced likelihood that they have ever repeated a grade if both of their parents are highly involved in their schools compared to if only their mothers are highly involved. They do almost as well if only one parent is highly involved, regardless of whether that parent is the mother or father. Of course, the number of cases in which only the fathers are highly involved is small. Children fare the worst when neither parent is involved in their schools.

Although in a cross-sectional survey such as the NHES it is not possible to disentangle the direction of causality, it appears that fathers' involvement may be particularly important to children's academic standing, especially among children in the 6th through 12th grade. In two-parent families, fathers' involvement, but not mothers' involvement, is associated with an increased likelihood that children in the 1st through 5th grade get mostly A's. Among children in the 6th through 12th grade, after controlling for a variety of resources that parents offer at home, fathers' involvement, but not mothers' involvement, remains a significant influence on the likelihood that children get mostly A's. In single-parent families headed by a father, fathers' involvement in their children's schools is a significant influence on the likelihood that their 6th through 12th graders get mostly A's. However, the influence diminishes once fathers' educational expectations for their children and the number of activities they share at home with their children are included in the model.

Nonresident Fathers' Involvement

To what extent are nonresident fathers involved in their children's schools?

Nonresident fathers are much less likely than fathers in two-parent families to be involved in their children's schools. Of children in contact with their nonresident parents, 69 percent have fathers who have not participated in any of the school activities since the beginning of the school year. In contrast, 25 percent of children living in two-parent families have fathers who have not participated in any of the school activities. However, 31 percent of children who have had contact with their nonresident fathers in the past year have nonresident fathers who have participated in at least one of the four activities, 18 percent have nonresident fathers who have participated in at least two of the four activities, and 9 percent have nonresident fathers who have participated in three or more of the school activities. Like resident fathers in two-parent families,

nonresident fathers are most likely to attend school or class events, such as sports events, and general school meetings. The proportion of children whose nonresident fathers have participated in each of these activities is 22 percent and 18 percent, respectively, compared to just over half of children in two-parent families whose fathers have participated in each of these activities.

What factors influence the involvement of nonresident fathers in their children's schools?

Children's grade level, household income, mothers' education, family configuration (single-parent family or step family), mothers' level of involvement in their children's schools, and fathers' payment of child support in the previous year are all important influences on nonresident fathers' involvement in their kindergarten through 12th graders' schools. Nonresident fathers are more likely to be involved if their children are in kindergarten through 5th grade than if they are in grades 6 through 12. Nonresident fathers are also more likely to be involved as household income, mothers' education, and mothers' involvement in their children's schools increase and if the fathers have paid any child support. When influences on nonresident fathers' involvement are examined separately for children in kindergarten through 5th grade and those in 6th through 12th grade, the specific factors that are important differ somewhat by grade level. Among children in kindergarten through 5th grade, the strongest influences on the involvement of nonresident fathers are mothers' education and involvement in the children's schools. Involvement of nonresident fathers is also higher if the fathers have paid any child support in the last year. Among children in grades 6 through 12, the strongest influences on nonresident fathers' involvement are whether the children live in mother-only families, household income, and mothers' involvement in their schools.

Do children with an involved nonresident father do better in school than children with a less involved or uninvolved nonresident father?

The involvement of nonresident fathers in their children's schools appears to be particularly important for children in grades 6 through 12, reducing the likelihood that the children have ever been suspended or expelled from school or repeated a grade. This association remains even after controlling for resident mothers' involvement in the schools, education, household income, and other potentially confounding factors. Nonresident fathers' involvement is also associated with a greater likelihood that children in grades 1 through 5 and in grades 6 through 12 participate in extracurricular activities. There is also evidence that the involvement of nonresident fathers increases the likelihood that children in grades 6 through 12 get mostly A's and that they enjoy school, though these associations are weakened after controlling for the resident mothers' level of involvement in the children's schools.

Summary

This report provides additional support to the already large body of literature that suggests that parental involvement in their children's schools is beneficial for children's school success. First, it demonstrates that the involvement of both mothers and fathers is important in contributing to children's school success. Second, it shows that parents who are involved in school are involved in other ways that promote their children's school success. Third, it shows that single mothers and single fathers are involved in their children's schools, even though they do not have a second parent to help them with their other obligations. Fourth, it suggests that there may be certain aspects of children's school performance and certain stages in the children's academic careers where fathers' involvement is particularly important.

The report also adds to the large body of literature on nonresident fathers by demonstrating that nearly one-third of nonresident fathers who have had contact with their children in the past year continue to play an important role in their children's lives by participating in school activities. Moreover, their participation in school activities makes a difference in their children's lives. The analyses suggest that more discriminating measures of nonresident fathers' involvement in their children's lives are needed in order to more fully understand the relationship between nonresident fathers' involvement and children's well-being. Inconsistencies about the benefits of nonresident fathers' continued contact with their children in extant studies may be due in large part to the fact that the simple measure frequency of contact is often used to measure involvement. This report shows that it is not contact, per se, that is associated with student outcomes, but rather active participation in their children's lives through involvement in their schools that makes a difference in school outcomes.

INTRODUCTION

Policymakers and educators agree that family involvement in children's lives is closely linked to children's school success (Riley, 1994; U.S. Department of Education, 1994). Indeed, two of the National Education Goals stress the important role of parents in their children's education. Goal 1 states that "By the year 2000, all children in America will start school ready to learn." The second objective under this goal expands upon it by stating that parents are to be their children's first teachers, devoting time each day to helping their preschool children learn. Goal 8, although aimed at schools and not directly at parents, highlights the widespread belief that parental involvement in schools is important. This goal states that "By the year 2000, every school will promote partnerships that will increase parental involvement and participation in promoting the social, emotional, and academic growth of children."

Extensive research exists on the importance of parental involvement in children's education (see Henderson and Berla, 1994, and Henderson, 1987, for reviews of the research), yet relatively few studies have discussed the individual contributions that mothers and fathers make to their children's schooling. Psychologists, however, are increasingly reaching the conclusion that fathers, as well as mothers, influence children's social, emotional, and cognitive development. The contribution of fathers to children's development over and above that of mothers is not yet well documented (Parke, 1995), but it is known that the roles that fathers and mothers assume in the family are not identical, nor are the ways in which they interact with their children (Parke, 1995; Lamb, 1997; Lamb, 1981). The impact that these differences have on children's development and well-being needs further examination.

Why Focus on Fathers?

Although information on the involvement of both fathers and mothers will be presented in this report, the primary focus will be on the involvement of fathers. For several decades, researchers in children's issues have tended to focus on mothers and children. In a similar vein, many federal agencies and programs have also focused almost exclusively on mothers and their children. In 1995, President Clinton issued a memorandum requesting that all executive departments and agencies make a concerted effort to include fathers in their programs, policies, and research programs where appropriate and feasible (Clinton, 1995). The new attention devoted to fathers is not intended to lessen the focus on the important role that mothers play in their children's lives, but rather to highlight the fact that fathers are important, too.

One set of fathers has received a large amount of research attention: nonresident fathers (Nord and Zill, 1996; Furstenberg, 1988). Such research has tended to focus primarily on their payment or lack of payment of child support and on the extent to which they see their children. Much less is known about the types of activities that nonresident fathers share with their children and about their involvement in their children's schools.

This report describes in greater detail than heretofore has been possible fathers' involvement in their children's schools and examines the relationship between their involvement and each of five measures of how children are doing in school using a nationally representative

data set—the 1996 National Household Education Survey (NHES:96). Two main areas of research questions are addressed: resident fathers' involvement and nonresident fathers' involvement.

Resident Fathers' Involvement

- How do fathers compare with mothers in their level of involvement in their children's schools?
- Does fathers' involvement increase or decrease as children grow older?
- Is the involvement of fathers in school associated with other parental behaviors at home that may enhance children's school success?
- What factors are associated with fathers' involvement after related child, family, and school characteristics are controlled?
- Is fathers' involvement in their children's schools linked to measures of children's school outcomes, such as their class standing, whether they enjoy school, whether they participate in extracurricular activities, whether they have repeated a grade, and whether they have ever been suspended or expelled?
- In two-parent families, is there a gain from having both parents involved as opposed to only one? And, are there particular outcomes for which fathers' involvement appears to be especially important?

Nonresident Fathers' Involvement

- To what extent are nonresident fathers involved in their children's schools?
- What factors influence the involvement of nonresident fathers?
- Do children with involved nonresident fathers do better in school than children with less involved or uninvolved nonresident fathers?

Appendix A to this report contains detailed tables on the involvement of both mothers and fathers in their children's schools. These tables are intended to serve as a resource for persons interested in learning more about the extent of involvement of parents in their children's schools and the factors that are associated with such involvement for different grade levels. The tables provide data for all children in kindergarten through 12th grade as a group and by kindergarten through 5th grade, 6th through 8th grade, and 9th through 12th grade.

The Role of Fathers in Children's Lives

The role of fathers in children's lives varies over time and across cultures (Lamb, 1997).

During the colonial period, fathers were the primary parent and had ultimate say in matters of the child; in the rare case of divorce, the law awarded custody to the father (Demos, 1986). As the primary parent, fathers had multiple roles: provider, moral overseer, disciplinarian, companion, and teacher, to name a few. Although mothers were responsible for the day-to-day care of children, especially young children, they were assumed to be too emotional and too indulgent to properly raise children (Demos, 1986). The advent of urbanization and industrialization in the 19th century redefined the roles of mothers and fathers. The role of fathers became predominantly that of "provider," while the role of mothers expanded in some respects and narrowed in others. Mothers became the parent with primary responsibility for children, including their moral development, and for ensuring the smooth operation of the household (Demos, 1986). As "homemaker" she became increasingly isolated from life outside the family. The contributions that she had previously made to the economic well-being of the family through such activities as assisting in the raising of crops, weaving, and the production of household goods decreased (Scott and Tilly, 1975). This pattern survived through much of this century and was particularly evident during the 1950s (Cherlin, 1992).

In recent decades, shifts in our society are once again transforming the roles of fathers and mothers. Important forces in altering the roles have been the increasing labor force participation of mothers, including mothers with young children, and the high levels of divorce and nonmarital childbearing (Demos, 1986). The entry of a large number of mothers into the labor force has contributed to a marked decline in the strict gender division of labor within a family to an arrangement where the roles of mothers and fathers overlap to a great extent (Furstenberg, 1988). Nowadays, fathers, like mothers, have multiple roles: provider, protector, nurturer, companion, disciplinarian, teacher, and instiller of societal norms to name just a few (Lamb, 1997; Marsiglio, 1993). The term "co-parents" is often used to describe the situation where mothers and fathers share equally the responsibilities of maintaining a family. In reality, however, most families do not divide all household and child rearing tasks equally between mothers and fathers, but rather work out their own acceptable divisions of labor within the family (Pleck and Pleck, 1997). More often than not, this division of labor falls along traditional lines with mothers assuming more responsibility for raising the children and fathers taking primary responsibility for providing for the economic well-being of the family (Lamb, 1997; Parke, 1995; Becker, 1981). This division of labor may be due in large part to the fact that men continue to earn more than women in the labor force (U.S. Department of Commerce, 1996). It may also be due, in part, to societal pressures to conform to expected roles. Society in many ways dictates the roles that mothers play and has clear expectations about the appropriate behavior of mothers. Societal expectations of how fathers are supposed to behave, beyond being a good provider, are not as clear (Parke, 1995), and thus the pressure to behave in specific ways is not as strong.

The rise in divorce and nonmarital childbearing has meant that more and more children are spending at least part of their childhoods living with only one parent. Estimates are that at least half of all children today will spend some time in a single-parent family before they reach age 18 (Furstenberg and Cherlin, 1991). In most cases this parent is the mother, though the proportion of custodial fathers has increased over the last several decades (Meyer and Garasky, 1993). In 1994, 3.4 percent of all children under 18 lived in father-only families and 24.5 percent lived in mother-only families (Saluter, 1996), up from 1.1 percent and 10.7 percent, respectively, in 1970

(U.S. House of Representatives, 1983). The lone parent, of necessity, must often fill all roles within the family.[1] It has been suggested that the structural constraints of being the sole parent in the household diminishes traditional gender role differences, making single fathers and single mothers more similar when it comes to parenting than mothers and fathers in two-parent families (Thomson, McLanahan, and Curtin, 1992; Risman, 1987). Even with the need to assume aspects of the other parent's role, however, at least one study has found evidence that single fathers and single mothers behave differently in at least one respect: the types of resources that they invest in their children (Downey, 1994). Single fathers are more likely to provide economic resources, which may in part reflect their greater economic well-being compared to single mothers, while single mothers are more likely to provide what Downey termed "interpersonal" resources, including being involved in their children's schools, sharing in-home activities, and knowing their children's friends.

Because many divorced parents remarry, a large proportion of children also experience step families (Cherlin, 1992). Step families have an economic advantage over single-parent families, but it is not clear that the children in such families enjoy other advantages. Like children in single-parent families, children in step families show elevated risks of maladjustment and school failure compared to children living with both their biological parents (Zill, 1988). It may be that the stepparent is competing with the children for the biological parent's time and attention (McLanahan and Sandefur, 1994). It is also possible that stepparents are less committed to their stepchildren than are the children's biological parents or that they are actively discouraged by the biological parent or by the children from becoming very involved in the children's lives (McLanahan and Sandefur, 1994). Whatever the combination of reasons, there is no doubt that the relationship between stepparents and their stepchildren is different than the relationship between biological parents and their children.

The role of parents who do not live with their children has been a source of confusion to parents and policymakers alike. Because mothers are more likely than fathers to retain custody of the children when parents separate, most nonresidential parents are fathers. According to data from the 1990 Survey of Income and Program Participation, 88 percent of custodial parents are mothers and 12 percent are fathers (Nord and Zill, 1996). Policymakers have emphasized the provider role of nonresident fathers and have formulated laws and policies to encourage or enforce the payment of child support and, to a lesser extent, visitation. Increasingly, however, observers are arguing that like resident fathers, nonresident fathers have more roles than that of provider in their children's lives.

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[1]Some single parents may have another adult in the household who can assist them. In 1990, approximately 18 percent of children in mother-only families and 20 percent of children in father-only families also had a grandparent living with them (Hernandez, 1996). Some of these grandparents may need assistance, but others are probably able to contribute to raising the children. In addition, some single parents have unmarried partners living with them (Garasky and Meyers, 1996). It appears that single fathers are more likely than single mothers to have partners (Garasky and Meyers, 1996). The non-custodial parent may also provide help, such as doing home or car repairs, taking the child to a doctor's appointment, providing transportation, or helping with finances. Even with such assistance, however, the single parent remains the adult with primary responsibility for raising the children.

The Salience of Fathers to Children's Lives

For many years, research on children's development and well-being focused on the dynamics between mothers and their children. Fathers were usually omitted from the picture. This bias in the research was in part a reflection of the prevailing roles of mothers and fathers described above. Fathers were often assumed to be on the periphery of children's lives and, therefore, of little direct importance to children's development (Lamb, 1997). However, the same demographic forces that prompted changes in men's and women's roles also stimulated research on fathers (Marsiglio, 1993). Research, and the popular media, developed two images of fatherhood: what the sociologist Frank Furstenberg termed "Good Dads" and "Bad Dads" (Furstenberg, 1988). Such research, however, progressed unevenly. The Bad Dads received more and more attention as policymakers searched for ways to reduce childhood poverty and to increase children's well-being (Harris and Marmer, 1996; Crowell and Leeper, 1994). Recently, however, a portrayal of fathers incorporating more nuances has begun to emerge in the research (Lamb, 1997; Parke, 1996, 1995).

Existing research on the salience of fathers to children's lives has provided a mixed picture. The importance of the economic contribution of fathers is widely acknowledged. Numerous studies on single-parent families have highlighted the difficulties that children and families face when fathers fail to provide economic support (McLanahan and Sandefur, 1994; Crockett, Eggebeen, and Hawkins, 1993). Studies on the importance of fathers for children's lives, beyond their economic contributions, have not been as consistent (Amato, 1994). One reason for the mixed results about the importance of fathers to children is the focus of the research and the outcomes used differ across studies. One vein of research focuses on the well-being of children who do not live with their fathers. Two different approaches are often used. In one, children who do not live with their fathers are compared to children living in two-parent families. Differences between the two populations are assumed to be due to the influence of not living with fathers or to the process that led to the fathers not living with their children (e.g., McLanahan and Sandefur, 1994). In the second approach, only children who do not live with their fathers are studied. Information about the behavior of nonresident fathers (for example, whether they pay child support or the amount of contact they have with their children) is added to statistical models that examine the factors that are associated with children's well-being (e.g., King, 1994). If the variables measuring the behavior of the nonresident fathers are not statistically significant, the researchers conclude that the involvement of nonresident fathers is not important for children's well-being. Another vein of research focuses on the influence that *resident* fathers have on their children and the patterns of interaction between resident fathers and their children (see Lamb, 1987, and Radin, 1981, for reviews of this research). Studies that focus on what is often referred to as father absence yield the most ambiguous results, with some studies finding nonresident fathers important to children's well-being (Amato, 1994; Peterson and Zill, 1986), and others finding no influence of continued paternal involvement (King, 1994; Furstenberg, Morgan, and Allison, 1987). Studies based on resident fathers, on the other hand, often find that fathers are important for children's development and well-being (Lamb, 1987).

Researchers are in agreement that mothers and fathers interact differently with their children (Parke, 1995). Fathers spend proportionately more time playing with their children,

while mothers spend a greater proportion of their total time with their children in caretaking activities (Lamb, 1986). Because mothers spend a greater amount of time overall with their children, they may actually spend more time playing with them than do fathers, yet caretaking is still what best characterizes their time, while play best characterizes the fathers' overall time with their children. Fathers and mothers also play differently with their children, with fathers much more likely to be rough and tumble (Parke, 1995; Hetherington and Parke, 1993). Summarizing a wide range of studies, Parke concluded, "Fathers are tactile and physical and mothers tend to be verbal, didactic, and toy mediated in their play. Clearly, infants and young children experience not only more stimulation from their fathers, but a qualitatively different stimulatory pattern" (1995, p. 33). It is not only fathers' stimulation of their children, however, that influences them. Radin, in her review of the importance of fathers to children's lives, concluded that there are many channels through which a father may influence his children's cognitive development, including "through his genetic background, through his manifest behavior with his offspring, through the attitudes he holds about himself and his children, through the behavior he models, through his position in the family system, through the material resources he is able to supply for his children, through the influence he exerts on his wife's behavior, through his ethnic heritage, and through the vision he holds for his children" (1981, p. 419).

The extent of fathers' involvement with their children changes as the children grow older and also varies by whether the children are boys or girls. Regardless of the child's age, studies often find that fathers are more likely to be involved with their sons than with their daughters (Marsiglio, 1991; Lamb, 1986; Radin, 1981). It also appears that the nurturance of fathers is associated with the cognitive abilities of boys, but less so of girls (Radin, 1981). Close father-son relationships appear to encourage the development of analytic skills.

Fathers (and mothers) spend less time with their children as the children grow older, in part because children themselves desire to spend more time with peers. However, even though they spend less time together, the importance of fathers to children's development increases as children grow older, especially for sons (Thompson, 1986). There is tantalizing evidence from smaller scale and observational studies that children and youth rely upon their fathers to provide factual information and that children, at least in middle-class families, tend to believe that with respect to family goals, the most important one for fathers is that "every one learn and do well in school," while children are more likely to say that mothers think it is more important to make "everyone feel special and important" (Ramey, 1996). According to this research, fathers are "highly engaged" in providing information to their children. Mothers, on the other hand, tend to provide more day-to-day care and emotional support and companionship. Plausible hypotheses that stem from this research are that maternal involvement is beneficial for the social and emotional adjustment of children to school, particularly young children, but that paternal involvement may be most important for academic achievement.

It is evident that the roles of both resident and nonresident fathers in their children's lives are in flux. It is also evident that research on the contributions of fathers and mothers to their children's lives will continue. This report provides new information on how both resident and nonresident parents of school-aged children are sharing the important task of involvement in their children's schools. It also presents information on the contribution that fathers' involvement in

schools makes to children's school success net of the influence of mothers' involvement.

Factors Associated with Parental Involvement

Existing studies have identified a number of factors that are associated with parental involvement, many of which are also associated with how children do in school. Among these are a child's grade (or age), family structure, parental education and socioeconomic status, and maternal employment. Studies find that parental involvement in schools tends to decrease as children move from elementary to middle to high school (Zill and Nord, 1994; Vaden-Kiernan and Davies, 1993; Epstein, 1990). The decrease may be due to parents believing that involvement is not as important as children grow older. It may also be due to children and youth exerting their independence or discouraging the involvement of their parents, or to schools offering fewer opportunities for parents to become involved as children become older (Stevenson and Baker, 1987). Two-parent families tend to be more involved than single-parent families. The difference may be due partly to differences in socioeconomic status, but also because there is an extra parent available to become involved (Scott-Jones, 1984). More highly educated parents and parents with higher socioeconomic status are more likely to be involved in their children's schooling than less educated parents and parents with lower socioeconomic status (Zill and Nord, 1994; Vaden-Kiernan and Davis, 1993; Stevenson and Baker, 1987). It is possible that less educated parents feel more intimidated by the school setting or that they have had bad experiences with school that make them reluctant to become involved. Mothers who work full time and those who are looking for work tend to be less involved in schools than mothers who work part time (Zill and Nord, 1994), at least in part because maternal employment competes for time that could be used participating in school activities.

In addition to the above demographic factors, parental involvement in children's education is higher if parents are confident that they can be of assistance to the child, if they believe that the child is capable of doing well in school, and if they have high educational aspirations for the child (Eccles and Harold, 1996). School policies and teacher practices also have a strong influence on the level of parental involvement in children's education (Eccles and Harold, 1996; Epstein, 1990). Parental involvement also varies by other characteristics of the schools; for example, it tends to be higher in smaller as opposed to larger schools and in private as opposed to public schools (Loomis, Vaden-Kiernan, and Chandler, forthcoming; Zill and Nord, 1994).

One framework that can be used to draw these diverse factors together is to think of involvement as the result of resources available to the family. Drawing on the insights from psychology, economics, sociology, and education, these resources can be divided into social capital, human capital, and physical (or financial) capital (Lee, 1993; Coleman, 1991; Becker, 1981). Each of these forms of capital, in turn, has dimensions that can describe the capital of the family and the capital of the community in which the family resides.[2] Social capital encompasses the quality of the relationships within the family, the way that parents interact with their children

[2] The concept of community is difficult to pin down. The areas where family members live, work, and go to school may be separated by large physical distances and, in a real sense, represent different communities. Yet, in spite of this fact, each of these important realms (neighborhood, school, workplace) can influence individual family members and therefore the family as a whole, regardless of whether they occur in the same community.

and each other, the educational aspirations parents have for their children, the home environment (e.g., rules, routine, order, harmony of household), and even the time that family members have to devote to each other. In essence, social capital is the quality and the density of interpersonal relationships that families can draw upon. Parental involvement itself, whether in the home or in the school, is a form of social capital (Lee, 1993). It is facilitated by the presence of other forms of capital. Social capital outside the household includes the links that family members have with individuals and institutions outside the household such as neighbors, religious institutions, and schools. It also includes the extent of social capital within each of these institutions. For example, schools that are harmonious and that have a high level of student-teacher respect can be described as having greater levels of social capital than schools without these characteristics. Similarly, school policies and teacher practices that encourage parental involvement may be viewed as a form of social capital.

Human capital within the family includes parental education levels and the skills and abilities that parents and other family members have. Within the community, it encompasses the education, skills, and abilities of those in the community and of those who work in important institutions, such as schools.

Physical capital includes such things as family income, the assets in the home including computers and books, and the resources of the local community, including community institutions such as schools, libraries, parks, and recreation centers.

This framework is useful because it provides plausible explanations for why some of the factors described above may influence both parental involvement and children's outcomes. For example, parental education is probably a proxy for several forms of capital. It not only measures the acquired skills of an individual, but it also indicates something about the educational aspirations, expectations, and beliefs of that individual. Although those with lower educational levels do not necessarily value education less than those with higher educational levels, it is likely that those with higher levels of education have the wherewithal (such as more flexible jobs so that they can become involved and the confidence in their ability to help the child) to ensure that their expectations are met. Similarly, as income increases, it allows a family to live in a better neighborhood, to send their children to better schools, and to provide educational materials in the home. At the same time, if that income derives from long work hours, it may actually reduce some of the social capital available in the household even as it increases the physical capital.

Using the framework briefly described above, this report examines factors that are associated with fathers' and mothers' involvement in their children's schools and the influence of that involvement on selected children's outcomes.

Data Source

This report is based on data from the 1996 National Household Education Survey (NHES:96). The NHES is a random-digit-dial (RDD) telephone survey that uses computer-assisted telephone interviewing (CATI) technology to collect data on high priority topics that could not be addressed adequately through school- or institution-based surveys.

NHES:96 was conducted from January to April of 1996 and included interviews with parents and guardians of 20,792 children 3 years old through 12th grade. This report focuses on the involvement of parents of 16,910 kindergartners through 12th graders.[3] Included in this sample are 5,440 children in kindergarten through 12th grade who have a nonresident father and 7,651 children in the 6th through 12th grade with whom a youth interview was also completed. The results on the involvement of residential parents in their children's schools are generalizable to all U.S. children in kindergarten through 12th grade who have at least one biological, adoptive, or stepparent in the home.[4] The results on the recency of contact with nonresident fathers in their children's lives are generalizable to all U.S. children in kindergarten through 12th grade who have a biological or adoptive father living elsewhere.[5] The results on the involvement of nonresident fathers in their children's schools are generalizable to all children in kindergarten through 12th grade who have had contact with their nonresident father in the past year.

It should be noted that the unit of analysis in the NHES:96 is the child and not the parent. Thus, when parent-reported data are presented in this report, they are referenced to the children. Strictly speaking, "the percent of parents who are involved in their children's schools" is "the percent of children whose parents are involved in their schools." Though not technically equivalent, both phrases are used in this report.

Measuring Parental Involvement

Researchers have employed a variety of frameworks and measures to describe and discuss parental involvement. Epstein (1990), for example, described six types of involvement as a way to assist educators in developing programs of family-school partnerships: (1) basic obligations of families, such as providing for the health and nutrition of children; (2) basic obligations of schools to communicate with families; (3) parent involvement at school, such as volunteering and attending school events; (4) parent involvement at home, such as providing learning activities at home; (5) parent participation in school decision making; and (6) collaboration and exchanges with community organizations to increase family and student access to community resources.

Others have conceptualized involvement according to the extent to which the activities are directly related to teaching. Thus, for example, Kellaghan and his colleagues (1993) describe proximal, intermediate, and distal forms of involvement. Proximal forms of involvement include such activities as supervision of homework by the parent or the parent serving as a teacher's aide in the school. Intermediate forms of involvement include involvement in school workshops or doing education activities in the home such as visits to the library that do not directly involve instruction. Distal forms of involvement include fulfilling the basic obligations of a family such as

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[3] Parents of children not yet in kindergarten were excluded because those with preschool children were asked a slightly different set of school involvement questions than parents of older children and because not all young children are enrolled in preschool. Parents of children who were home-schooled were also excluded because they were not asked questions about "in school" involvement.

[4] Children living with only foster parents or non-parent guardians were not included in the analyses of residential parent involvement in this report.

[5] Children living with only foster parents or non-parent guardians were included in the analyses of the involvement of nonresident fathers if the foster parent or non-parent guardian reported that the child had a nonresident father.

providing for the health and general well-being of their children.

Still others have simply divided involvement according to where it occurs: at home, at school, or in the community. In addition, some researchers distinguish activities from attitudes or expectations. This report focuses on parental involvement in schools, though some information on involvement in the home is also presented.[6]

The NHES:96 asked about four types of school activities that parents could participate in during the school year. The activities are fairly typical of those available in most schools: attendance at a general school meeting,[7] attendance at a regularly scheduled parent-teacher conference, attendance at a school or class event, and serving as a volunteer at school.[8] Parents are said to have low involvement in their children's schools if they have done none or only one of the four activities. They are categorized as having moderate involvement if they have done two of the activities. Those who said that they have done three or more of the activities are said to be highly involved in their children's schools.[9] Not all schools offer parents the opportunity to be involved in each of these activities. Particularly as children grow older, schools offer parents fewer opportunities for involvement. Low involvement can result because parents do not or cannot take advantage of available opportunities for involvement or because schools do not offer them opportunities for involvement.[10]

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[6] Some have pointed out that involvement in schools need not always be positive (Coleman, 1991). Examples of negative involvement include parents who attempt to influence teachers or the administration in ways that could have a negative effect on other students or who attempt to gain special favors for their own children at the expense of others. Such negative involvement is not discussed in this report.

[7] In the 1996 NHES, two question formats were used to ask respondents about attendance at a school meeting. Half of the sample were asked a single question, whereas the other half were asked two questions about different types of school meetings. The single question asked about attendance at a general school meeting, for example, an open house, a back-to-school night, or a meeting of a parent-teacher organization. The two questions asked about attendance at an open-house or back-to-school night and attendance at a meeting of a PTA, PTO, or parent-teacher-student organization. To create a single variable about attendance at a school meeting, the two items asked in the second set were combined. Multiple regression analyses were used to examine whether the question format used to ask parents about attendance at school meetings explained any of the variance in attendance at school meetings after taking into account other potentially mediating factors such as family income, race/ethnicity, family structure, maternal education, and maternal employment. The findings of these analyses indicated that the question format that was used did not account for differences in attendance at school meetings. Consequently, the data obtained from the two question formats were combined for the analyses performed in this report.

[8] Although it would have been interesting to examine the frequency with which parents participated in each of these four activities, the NHES:96 did not collect that information.

[9] A similar indicator appeared in Zill and Nord, 1994. That indicator, however, was based on data from the 1993 NHES, School Safety and Discipline component. The 1993 NHES contained only three activities that the parents could have participated in at school: a general school meeting; a school or class event; or serving as a volunteer. The parents were not asked about attendance at a regularly scheduled parent-teacher conference. Thus, the information on levels of involvement that appear in the current report are not comparable to those that appeared in the 1994 report. Specifically, levels of involvement, because there are more activities, will appear higher in the current report.

[10] The NHES:96 collected information about whether the children's schools had held general school meetings or parent-teacher conferences since the beginning of the school year. About 5 percent of the children in grades K-12 attended schools that did not offer general school meetings and about 14 percent attended schools that had not held regularly scheduled parent-teacher conferences. Children in grades 6 through 12 were much more likely than those in K through 5 to attend schools that did not offer regularly scheduled parent-teacher conferences (22 percent versus 6 percent). Most schools offered general school meetings: only 8 percent of

The NHES:96 is unusual in that it not only asked about parental involvement in their children's schools, but it also asked which parent participated in the activities or whether both parents participated. Moreover, resident parents were asked a parallel set of questions about the involvement of the nonresident parent (if there was one). Thus, it is possible with the NHES:96 to describe the school involvement of resident mothers and fathers and of nonresident parents. For 75 percent of the cases of the full NHES:96 file, the mother was the respondent. An important issue is whether mothers accurately report the involvement of fathers in their children's schools. It is generally believed that mothers are better reporters than fathers about factual matters regarding children, such as when they last saw a doctor. Given that the items in the NHES:96 that measure involvement in school are essentially factual (attended a meeting or not), mothers' reports are probably quite good. Whether resident mothers are good reporters about the actions of nonresident fathers is less certain. Other research indicates that there are discrepancies between the reports of resident and nonresident parents on the amount of child support monies that have been paid by the nonresident parents and on the extent of contact between nonresident parents and their children (Braver et al., 1991; Schaeffer, Seltzer, and Klawitter, 1991).

Organization of the Report

In the remainder of the report, the findings of the NHES:96 concerning the involvement of fathers in their children's schools are presented. The first section of findings provides a detailed description of the involvement of resident fathers in their children's schools by selected characteristics of children, families, and schools. Many of these characteristics are viewed as different types of resources that are available to the families. Parallel information on the involvement of mothers in their children's schools is also provided as a contrast. Selected child, family, and school factors are then examined together in multivariate models so that the net influence of each on high father and mother involvement in their children's schools can be determined. Finally, the influence of fathers' involvement on five student outcomes is examined.

Throughout the discussion of resident fathers' involvement, a distinction is made between fathers in two-parent families and fathers who are heads of single-parent families. Two reasons prompted the decision to examine fathers in single-parent and two-parent families separately. First, single-parent and two-parent families differ in many respects that can affect both how parents spend their time and how their children perform in school. Second, the NHES:96 allows the unusual opportunity to examine how parents in two-parent families share child-rearing responsibilities in one important realm: their children's schooling.

The second major section of the findings describes nonresident fathers' involvement in their children's schools and the link between that involvement and measures of how children are doing in school. The influences on the likelihood that nonresident fathers have had contact with their children in the past year are first examined. Then, among children who have had contact with their nonresident fathers, the influences on the likelihood that their fathers are moderately to highly involved in their schools are examined. Descriptive information on nonresident mothers is

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children in grades 6 through 12 and 3 percent of students in grades K-5 attended schools that did not.

presented to serve as a contrast to nonresident fathers.[11]

In this report, two-parent families consist of children who live with two biological or adoptive parents or with a biological parent and a step or adoptive parent.[12] Single-parent families consist of children who live with their biological or adoptive mother or father or, in a few cases, with only a stepparent. Table 1 shows the percentage of children living in these different family types. Most children live with two biological or two adoptive parents (57.7 percent). Nine percent of the children live with a biological mother and a step or adoptive father and 2.1 percent live with a biological father and a step or adoptive mother. Nearly a quarter of the children (24.2 percent) live with only their mother. Three percent live with only their father. Four percent live with foster parents or with other persons who are not their biological, adoptive, step, or foster parents. Many of these children may be living with grandparents or other relatives.

Only children who live with at least one biological, adoptive, or stepparent are included in the analyses that examine the involvement of resident parents in their children's school. However, all children who have a nonresident parent, including children living in non-parental arrangements, are included in the analyses that examine whether nonresident parents have had contact with their children in the past year, and among those who have had contact, their involvement in their children's schools.

[11]The NHES:96 obtained information about 5,440 nonresident fathers, of whom 4,118 had seen their children in the past year. Information was also obtained about 1,468 nonresident mothers, of whom 1,343 had seen their children in the past year.

[12]The NHES:96 collects information on the relationship of other household members to the child but not to each other. Although marital status information is collected for all household members age 16 and older, the spouse is not identified. The parents' marital status was not used in defining two-parent families, only the relationship of the parents to the child.

Table 1.— Living arrangements of children: Students in grades K-12, 1996

Living arrangement	Number of students (thousands)	Percent
Two biological or adoptive parents	**28,495**	**57.7**
Two biological	27,963	56.6
Two adoptive	532	1.1
Biological mother/step or adoptive father	**4,460**	**9.0**
Biological mother/stepfather	4,055	8.2
Biological mother/adoptive father	405	0.8
Biological father/step or adoptive mother	**1,025**	**2.1**
Biological father/stepmother	986	2.0
Biological father/adoptive mother	38	0.1
Mother only	**11,935**	**24.2**
Biological mother	11,730	23.8
Adoptive mother	177	0.4
Stepmother	29	0.1
Father only	**1,499**	**3.0**
Biological father	1,404	2.8
Adoptive father	58	0.1
Stepfather	37	0.1
Other arrangement	**1,970**	**4.0**
Two foster parents	67	0.1
Foster mother only	154	0.3
Foster father only	15	0.0
Other non-parental arrangement	1,721	3.5

NOTE: Because of rounding, details may not add to total.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1996 National Household Education Survey.

FINDINGS

Involvement of Resident Parents

Types of Activities in Which Fathers and Mothers Participate

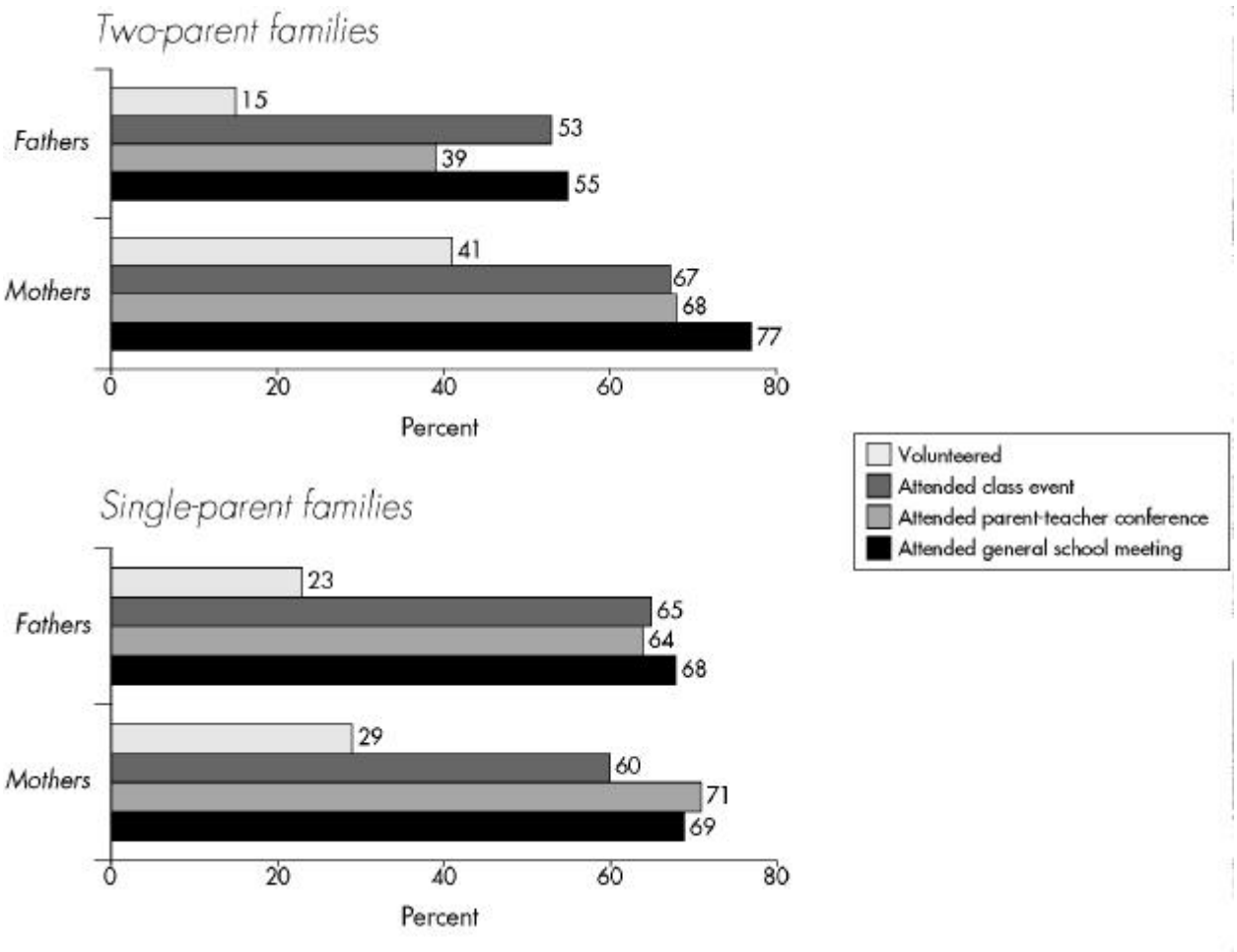
Figure 1 shows the percentage of children in kindergarten through 12th grade whose fathers and mothers participated in each of the four activities inquired about in the NHES:96. Several observations can be made from this figure. First, in two-parent families, the most common activity in which parents participate is attending a general school meeting, such as a back-to-school night. Although single fathers also appear more likely to attend a general school meeting than they are to participate in the other activities, the proportion who do so is not significantly[1] different from the proportion who attend conferences or school or class events. The least common activity that parents participate in, regardless of family type, is volunteering at their children's schools, the most time-intensive of the four activities.

Second, fathers in two-parent families are substantially less likely than mothers in either type of family or fathers in single-parent families to participate in each of the activities. For example, 55 percent of fathers in two-parent families attended at least one general school meeting compared to 77 percent of mothers in two-parent families, 69 percent of mothers in single-parent families, and 68 percent of fathers in single-parent families. This pattern fits the notion that parents in two-parent families divide their labor to more efficiently allocate their resources, in this case, their time. According to economic theorists, efficiency in a family is increased by specialization in both the allocation of time and human capital (Becker, 1981). The finding that single fathers are more involved than fathers in two-parent families is consistent with existing research. A study based on the National Survey of Families and Households found that with the exception of the time spent sharing meals, single fathers spend more time with their children than biological fathers in two-parent families (Cooksey and Fondell, 1996).

Third, fathers who head single-parent families have school involvement patterns that are very similar to that of mothers who head single-parent families. The pattern of participation for both fathers and mothers in single-parent families is more similar to the participation of mothers in two-parent families than it is to fathers in two-parent families. The one activity that is substantially lower in single-parent families than it is for mothers in two-parent families is that of volunteering at the school. This result is consistent again with the roles that parents fill in two-parent and in single-parent families. In two parent

[1]The words significant and significantly when used in this report always indicate *statistical* significance (at 0.05 level, unless noted otherwise).

Figure 1. — Percent of children whose fathers and mothers participated in each school activity, by family type: Students in grades K-12, 1996



SOURCE: U.S. Department of Education, National Center for Education Statistics, 1996 National Household Education Survey.

families, mothers generally assume primary responsibility for the children. In single-parent families, the single parent must fill that role regardless of whether that parent is the mother or the father. However, because involvement requires a certain amount of time, single parents generally experience greater constraints on their ability to participate than do mothers in two-parent families, who can share with their husbands some of the other demands on their time. It is precisely the activity that requires the most time, volunteering, in which the greatest difference between single parents and mothers in two-parent families is seen.

Fourth, in two-parent families, there are two activities for which fathers' involvement approaches that of mothers: attendance at general school meetings and attendance at school or class events, such as sports events. For these activities, the ratios of the proportion of fathers who have participated to the proportion of mothers who have participated are 71 percent (55/77) and 79

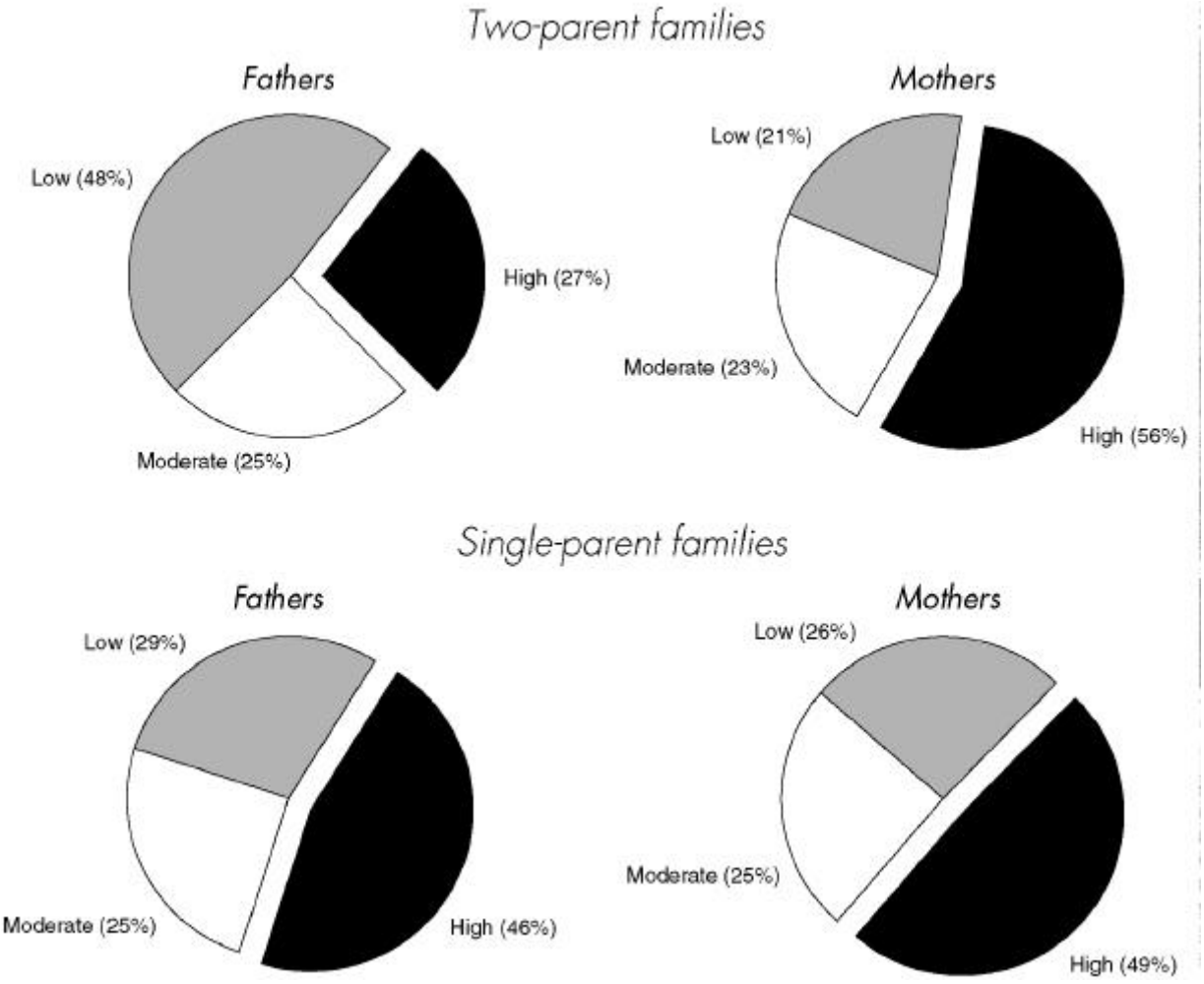
percent (53/67), respectively, whereas the ratios of the proportion of fathers to mothers who have attended a parent-teacher conference or volunteered at their children's schools are 57 percent (39/68) and 37 percent (15/41), respectively. Fathers may find it easier to attend general meetings and school events, such as sports events, because such activities are more likely than the others to occur during nonschool and nonwork hours, thus increasing the ability of fathers to attend without missing work.

Levels of Involvement in School Activities by Fathers and Mothers

Thus far, participation in specific activities has been examined. It is also of interest to know the extent to which parents participate in multiple activities. Figure 2 tells a similar story to figure 1: Mothers in two-parent families are the most likely to show high levels of involvement in their children's schools (56 percent), while fathers in two-parent families are the least likely to show high levels of involvement (27 percent). Fathers who head single-parent families show similar levels of involvement to mothers who head single-parent families (46 percent versus 49 percent). This pattern adds further support to the notion that there is a division of labor in two-parent families, with mothers taking more responsibility for participating in school activities, whereas in single-parent families the lone parent assumes that responsibility. It also supports research that finds single fathers and mothers are more similar in their parenting behavior than are mothers and fathers in two-parent families.

Another observation that can be made from figure 2 is that most parents participate in at least some of the activities in their children's schools. Although in two-parent families nearly half the children have fathers who participate in none or only one of the four activities, 79 percent of the children have mothers who participate in two or more activities in their schools. In single-parent families, 72 percent of children living with their fathers and 74 percent living with their mothers have a parent who participated in two or more activities in their schools.

Figure 2. — Level of fathers' and mothers' involvement* in school, by family type: Students in grades K-12, 1996



* Low involvement is participation in none or only one activity; moderate involvement is participation in two activities; and high involvement is participation in three or four activities.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1996 National Household Education Survey.

Changes in Involvement with Grade Level

Research on parental involvement in schools has shown that involvement in schools decreases as children grow older (Zill and Nord, 1994). As noted earlier, part of the decrease is due to schools offering parents fewer opportunities for involvement as children grow older.[2] As can be seen in figure 3, mothers and fathers in both two-parent and single-parent families tend to decrease their involvement as children move from elementary to middle to high school. Fathers in single-parent families behave very much like mothers in single-parent families with respect to involvement in school activities. At each grade level, their involvement patterns remain at similar levels. In two-parent families, however, mothers' involvement starts out higher but decreases more than fathers' involvement so that by the high school years, though mothers still show higher levels of involvement, the differences are not as large. This pattern can also be seen by comparing the ratio of the proportion of fathers in two-parent families with high levels of involvement to the proportion of mothers in such families with high levels of involvement at each school level. In elementary school, this ratio is 43 percent (30/69). It increases to 49 percent (25/51) by middle school and to 59 (23/39) percent by high school.

The convergence of mothers' and fathers' involvement in two-parent families occurs because mothers show a steeper decline than fathers in two of the activities: attendance at a school or class event and volunteering. Figure 4 shows how mothers' and fathers' participation in these two activities change with grade level.[3] Mothers' participation in school or class events declines steadily as children move from elementary to middle to high school. Fathers' participation, on the other hand, remains steady and even increases somewhat between grade school and middle school. The pattern is somewhat different with respect to volunteering. The proportion of mothers in two-parent families who volunteer in their children's school declines sharply between grade school and middle school and then levels off. Among fathers in two-parent families, the proportion who volunteer also declines between elementary and middle school, but then increases again between middle and high school. Approximately 12 percent of fathers in two-parent families with children in grades 6 through 8 volunteered in their children's schools. This figure increased to 17 percent of fathers with children in grades 9 through 12.

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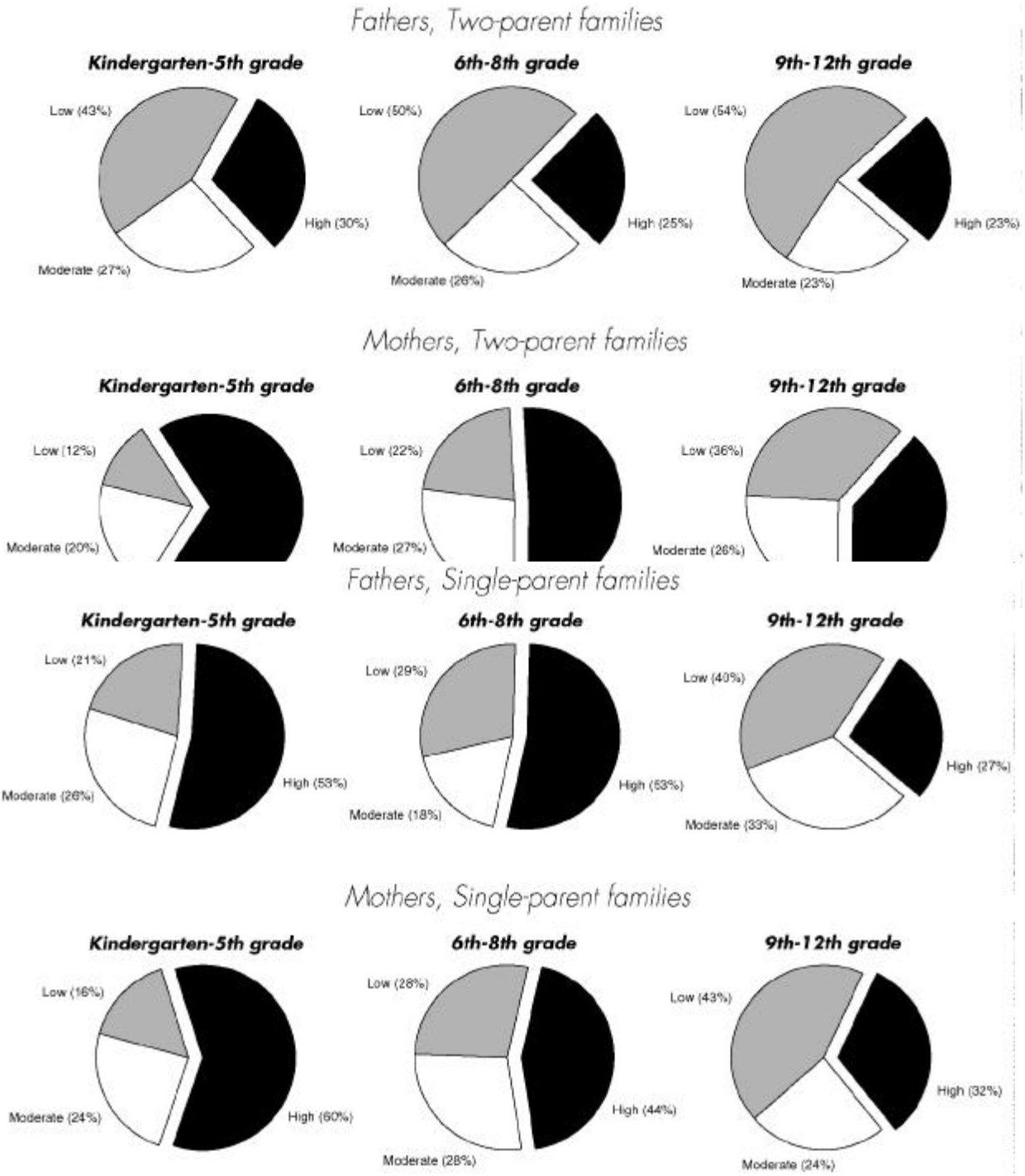
[2]The NHES:96 asked parents whether their children's schools had general school meetings or parent-teacher conferences since the beginning of the school year. Tabulations of these data for important subgroups such as two-parent, single-mother, and single-father families revealed no systematic differences in their opportunities for involvement. Moreover, when the analyses are restricted to only those children whose schools offer the opportunity for involvement, declines in parental involvement are still observed as children move from elementary to middle to high school. The declines, however, are less pronounced.

[3]The pattern of decline for mothers and fathers is similar for attending a general school meeting or a conference, so these data are not shown. Data are also not shown for single-parents because the pattern of decline for mothers and fathers is similar for all the activities.

Figure 3. — Level of fathers' and mothers' involvement* in school, by grade grouping and family type: Students in grades K-12, 1996

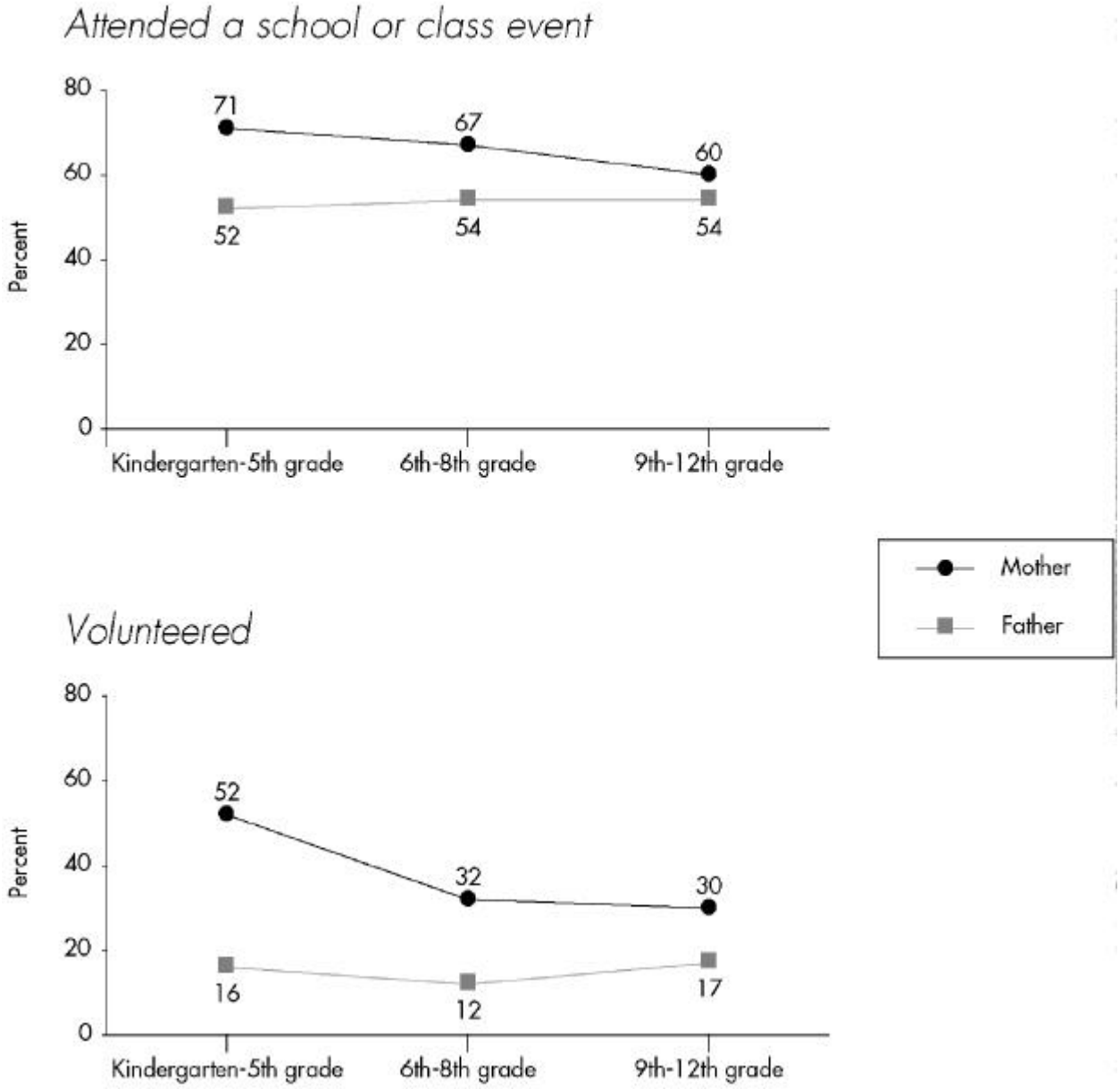


* Low involvement is participation in none or only one activity; moderate involvement is participation in two activities; and high involvement is participation in three or four activities.

NOTE: Because of rounding, percents may not add to 100.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1996 National Household Education Survey.

Figure 4. — Percent of children in two-parent families whose fathers and mothers attended a school or class event and volunteered at school, by grade level: Students in grades K-12, 1996



SOURCE: U.S. Department of Education, National Center for Education Statistics, 1996 National Household Education Survey.

Familial Resources and Parental Involvement in Schools

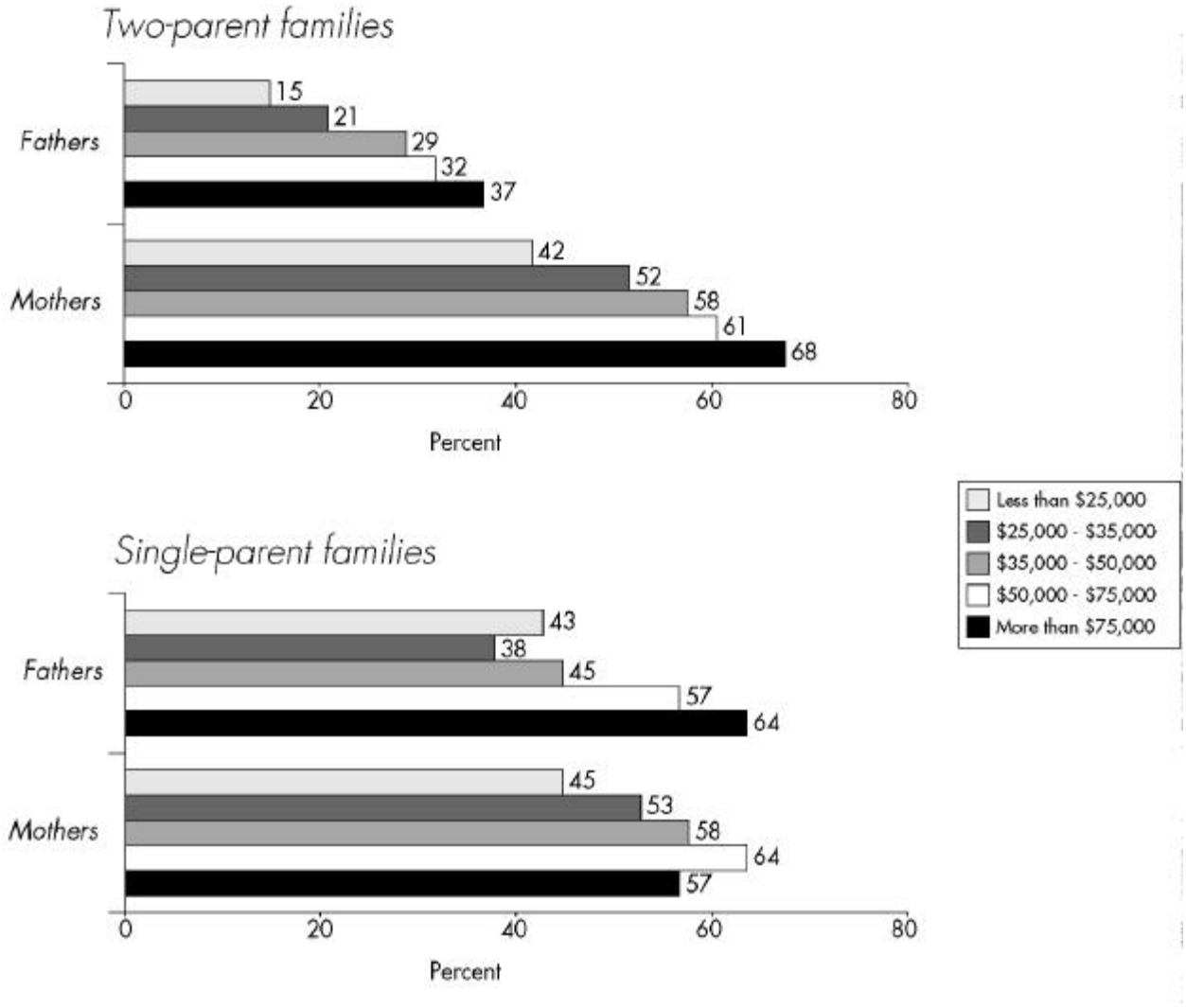
Parental involvement in children's education involves an investment of time and other resources. In order to be able to invest these resources, it is necessary to have them available. Much existing research on parental involvement in schools has shown the association between involvement in schools and social and demographic characteristics of the family such as the number of parents present, the education level of the parents, and maternal employment. As noted previously, these factors are markers for different types of capital available to the family: financial (or physical), human, and social.

Financial and human capital. As others have found, parental involvement in school is associated with the amount of financial capital that families have available to them. In general, families with more financial resources show greater levels of involvement. For example, the proportion of fathers and mothers in two-parent families who are highly involved in their children's schools increases as household income rises (figure 5). The same is true of single fathers and single mothers, though it appears that single mothers earning the highest incomes may be somewhat less involved. This pattern could be due to demands placed on the mothers' time by their work, which interferes with their ability to be involved in their children's schools. However, the difference between the top two income categories for single mothers is not significant, so not too much emphasis should be placed on the apparent decrease in high involvement.

Parental involvement in schools is higher for children in families living above the poverty threshold and not receiving federal assistance[4] compared to those that experience economic difficulties (figure 6). This is true in both two-parent and single-mother families, though the differences are larger in two-parent families. This pattern of results is probably due, in part, to the fact that there is a wider disparity in the household incomes of families experiencing and not experiencing economic difficulties in two-parent families than in single-mother families (Baugher and Lamison-White, 1996). To the extent that income and income-related factors are linked to involvement in school, the greater disparity in two-parent families could account for the more marked difference in high involvement by these economic indicators. Single fathers are also more likely to be highly involved if they do not receive federal assistance, but there is no significant difference in the proportion who are highly involved by whether their household incomes are above or below the poverty threshold.

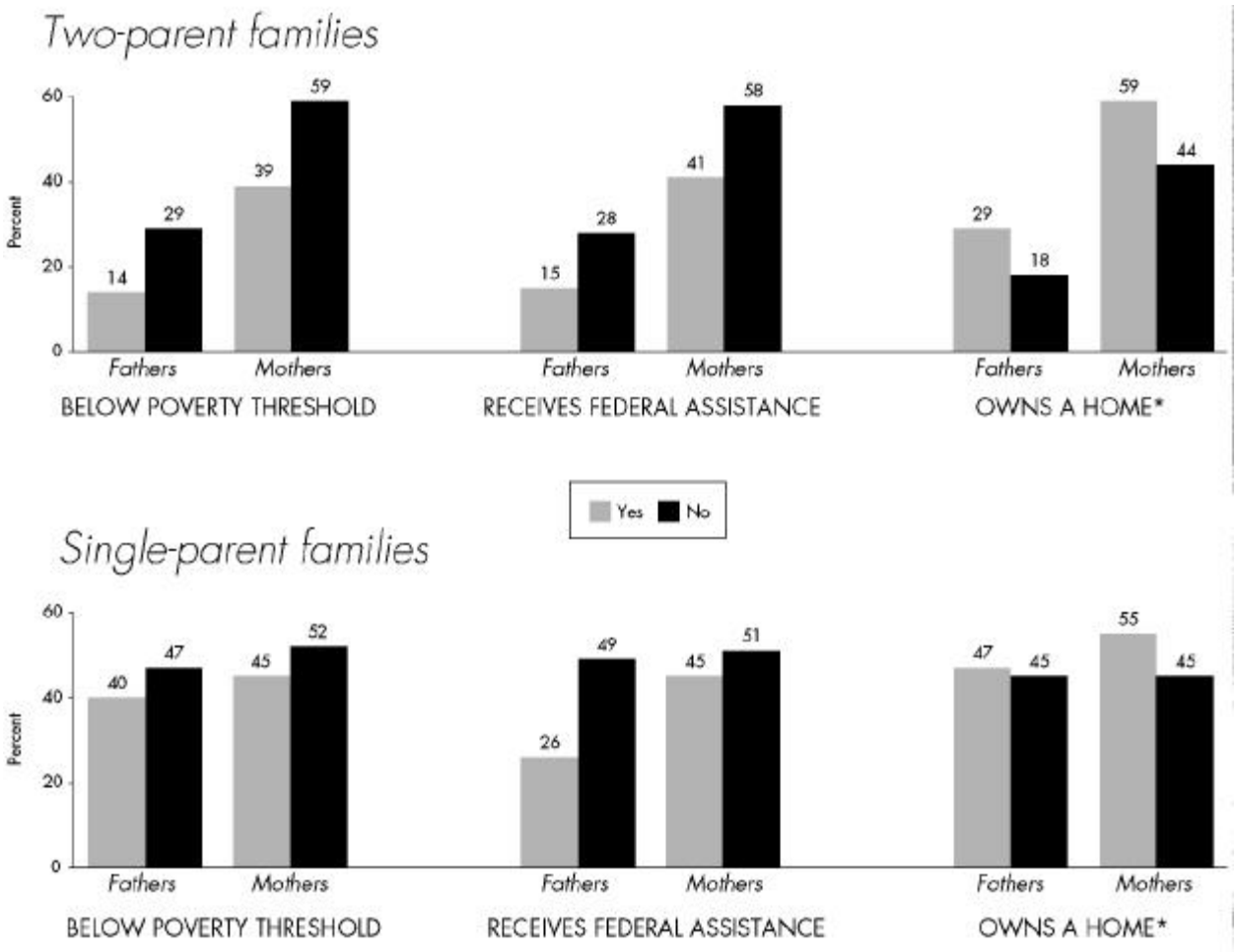
[4]Families were said to have received Federal assistance if they had received funds or services from any of the following programs in the past 12 months: Women, Infants, and Children (WIC), Food Stamps, or Aid to Families with Dependent Children (AFDC).

Figure 5. — Percent of children whose fathers and mothers have high involvement in school, by household income and family type: Students in grades K-12, 1996



SOURCE: U.S. Department of Education, National Center for Education Statistics, 1996 National Household Education Survey.

Figure 6. — Percent of children whose fathers and mothers have high involvement in school, by poverty status, receipt of federal assistance, home ownership, and family type: Students in grades K-12, 1996



* "No" category consists of renters.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1996 National Household Education Survey.

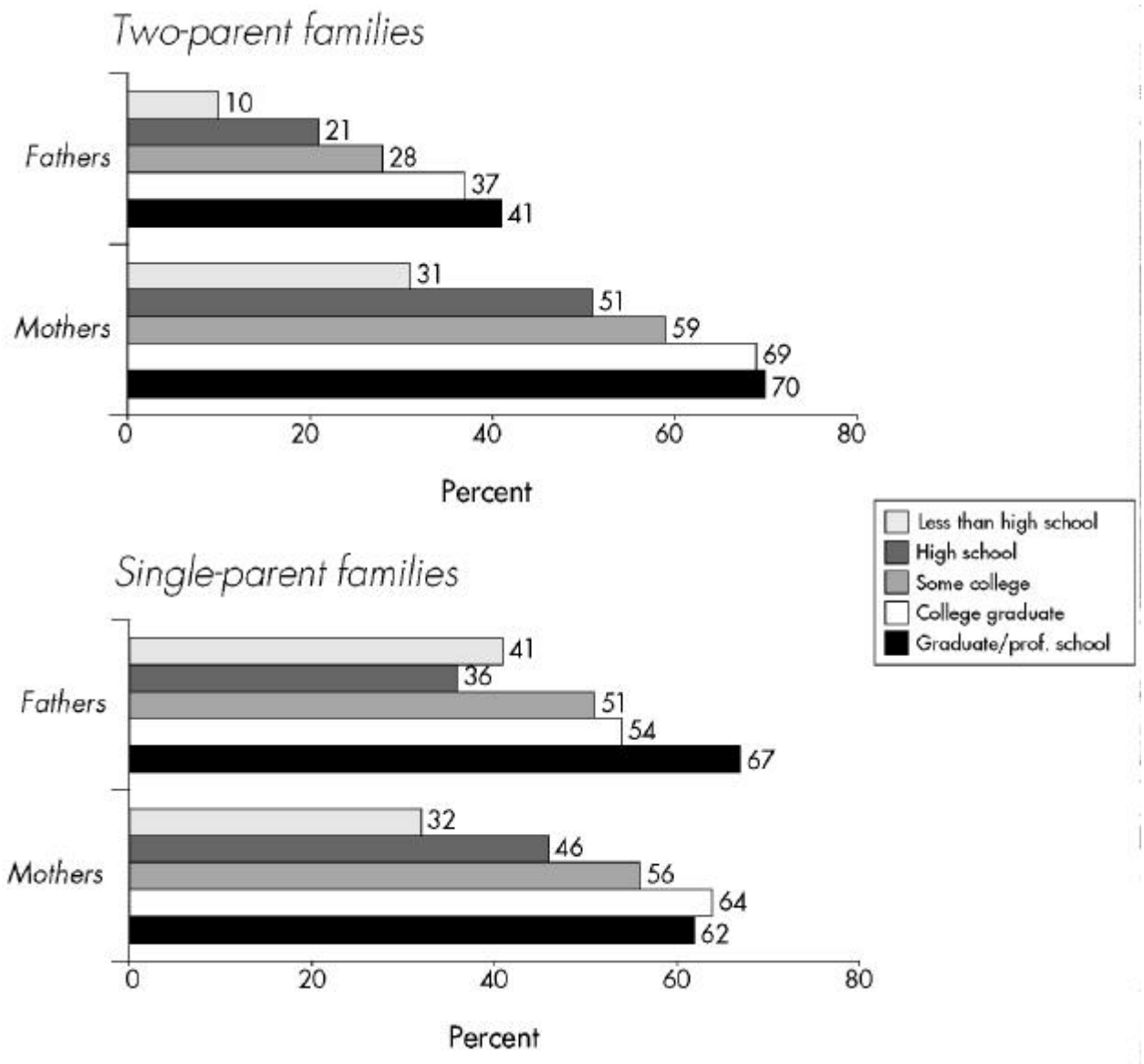
Home ownership is also associated with high parental involvement in two-parent families and in mother-only families, but not in single-father families. Home ownership is not only a measure of economic well-being, but it also is an indicator of stability in family life. Families who own their own homes tend to move less often than families who rent (Hansen, 1995). This stability, in turn, allows for the establishment of more ties to individuals and institutions in the community, reflecting a greater level of social capital (Coleman, 1988).

Parental involvement in schools increases with the amount of human capital in the home, as measured by parents' education (figure 7). This is true of parents in both single-parent families and in two-parent families. Income and education, however, are highly correlated. People with greater levels of education have higher incomes than those with less. To determine the unique influence of education and income on parental involvement, they both need to be included along with other potentially confounding factors in multivariate models.

It is also interesting to note that figures 5 through 7 show that mothers and fathers in single-parent families are more similar to each other in their levels of high involvement than mothers and fathers in two-parent families. Thus, even controlling for the financial circumstances of the families and the education levels of the parents, mothers and fathers in single-parent families are more similar in their tendency to be highly involved in their children's schools than are mothers and fathers in two-parent families.

Social capital. Numerous studies have shown that parental involvement in schools promotes school success (Henderson and Berla, 1994; Henderson, 1987). It seems likely that it is not attendance at school activities, per se, that leads directly to improved school outcomes, but rather that such attendance is a marker for other important factors that contribute to children's school success (Zill and Nord, 1994). For example, parents who are involved may be more familiar with the school and with their children's teachers. This familiarity may lead to better parent-teacher relations and more personal attention for their children. It may also enable the parents to intervene earlier if problems in their children's behavior or academic work should arise. Attendance at school functions also shows children that their parents believe school is important. However, it is also likely that parents who are highly involved at school also hold certain beliefs and attitudes and exhibit behaviors at home that foster the academic success of their children. Thus, at least part of the positive benefit of involvement in the schools may be due to the types of parents that become involved, including not only their demographic characteristics such as income and education, but also their own behaviors outside the school building and their attitudes and expectations regarding education.

Figure 7. — Percent of children whose fathers and mothers have high involvement in school, by education of parents and family type: Students in grades K-12, 1996



SOURCE: U.S. Department of Education, National Center for Education Statistics, 1996 National Household Education Survey.

The NHES:96 asked a series of questions about the types of activities that families did with their children in kindergarten through grade 5 and those in grades 6 through 12 in the past week and in the past month. In addition, parents of children in grades 6 through 12 were asked about their educational expectations for their children, whether they discussed future school courses with their children, and about their own involvement in community activities and attendance at religious services. Although the NHES did not ask which parent in the household did each of the activities with the child, these items can still be used to characterize the households of children whose fathers and mothers exhibit high or low levels of involvement in their schools.

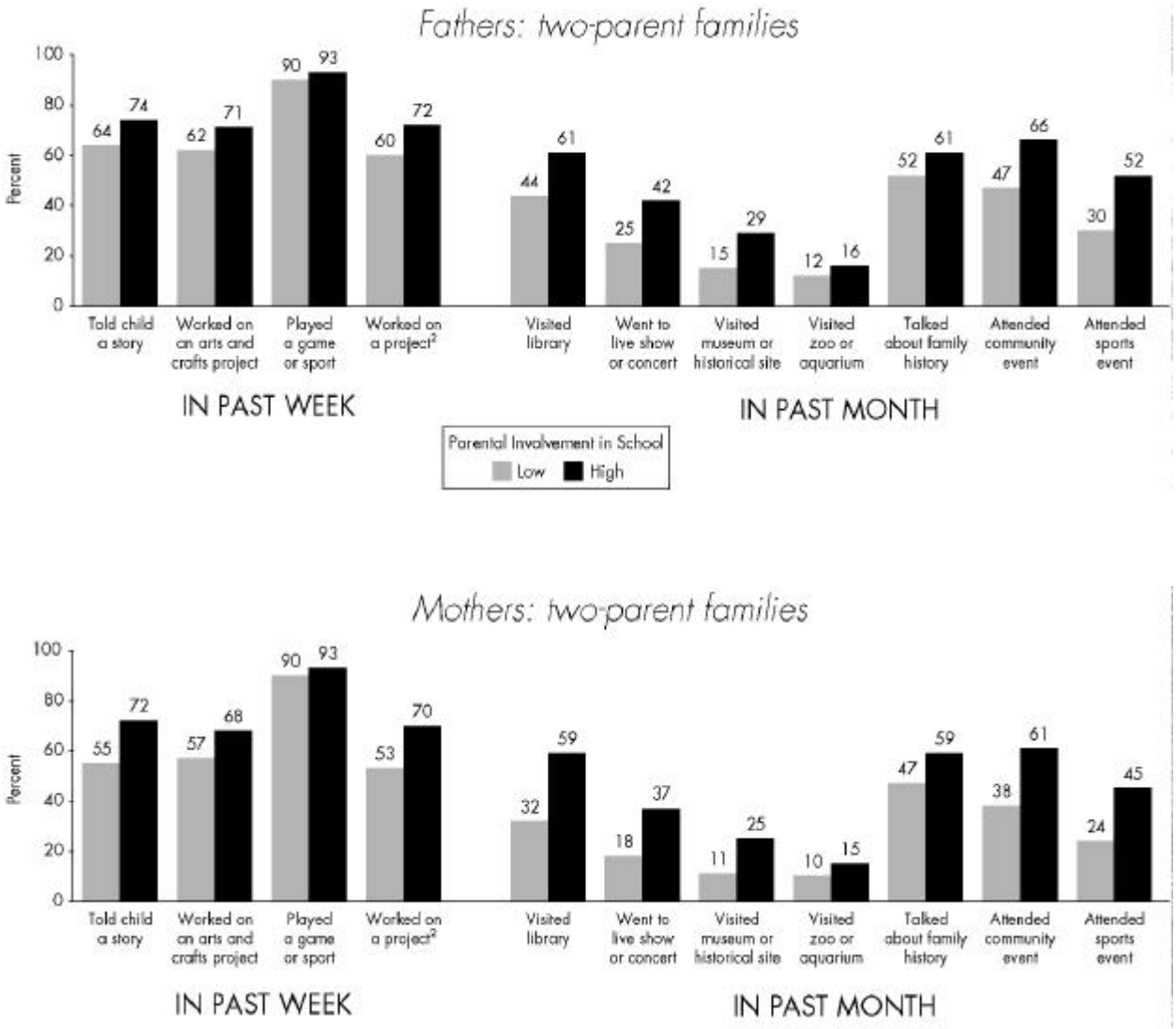
These data reveal that parents who are highly involved in their children's schools are generally more likely to be involved at home, as well. Single fathers, especially those with children in elementary school, are an exception, and they will be discussed separately. Children in kindergarten through grade 5 who live in two-parent families in which their fathers or mothers are highly involved in their schools are more likely to participate in educational activities with their parents (e.g., were told a story by their parents or in the past week or visited a museum or historical site with their parents in the past month) than are children whose parents have low levels of involvement in their schools (figure 8a).[5] The same patterns are observed for children living in mother-only families (figure 8b). Single mothers who are active at school tend to be active at home, as well.

It is not only elementary school children who appear to have a richer home life if their parents are highly involved in their schools. Children in grades 6 through 12 whose fathers or mothers have high levels of involvement in their schools are also more likely than children whose parents have low levels of involvement to have played a game or sport or to have worked on a project with their parents in the past week (figures 9a and 9b). They are also more likely than children whose parents have low levels of involvement in their schools to have discussed how to manage their time with their parents in the past week or to have talked about future courses in the past month. Parents who are highly involved in their children's schools are also more likely than those who are less involved to believe that their children will attend school after high school and that the youth will graduate from a 4-year college. These statements are true of children living in two-parent families and those living in mother-only families.

The story is somewhat different for single fathers. Single fathers who are highly involved in their children's schools are more likely than those with low levels of involvement to participate in some

[5] In figure 8a and several other figures, mothers and fathers with moderate levels of involvement in their children's schools are not shown. They were omitted to conserve space and to highlight the difference between parents with high and low levels of involvement.

Figure 8a. — Percent of children with selected types of social capital,[1] by level of fathers' and mothers' involvement in school: Students in grades K-5 in two-parent families, 1996

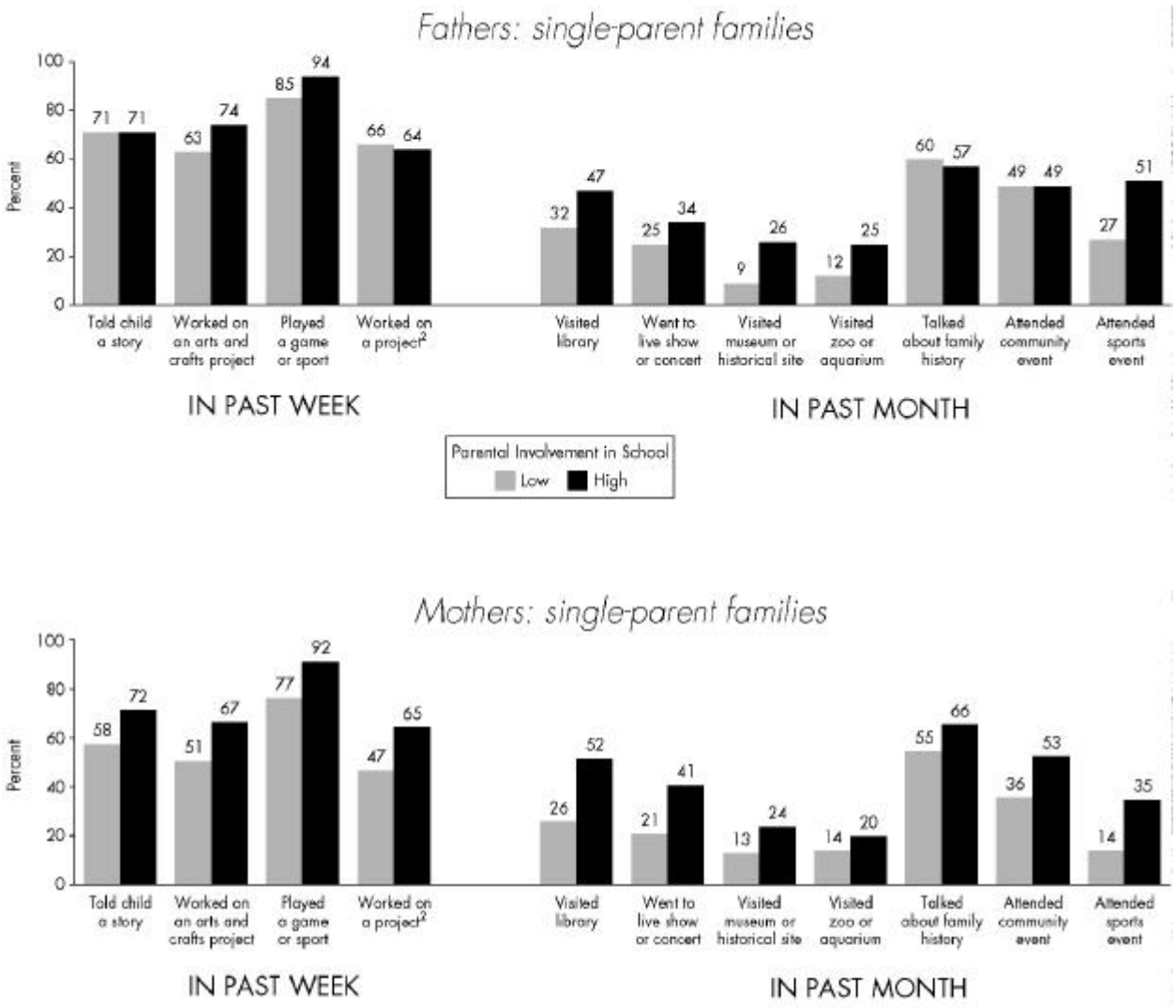


[1] Social capital activities were engaged in by either parent.

[2] Not asked about kindergartners.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1996 National Household Education Survey.

Figure 8b. — Percent of children with selected types of social capital,[1] by level of fathers' and mothers' involvement in school: Students in grades K-5 in single-parent families, 1996

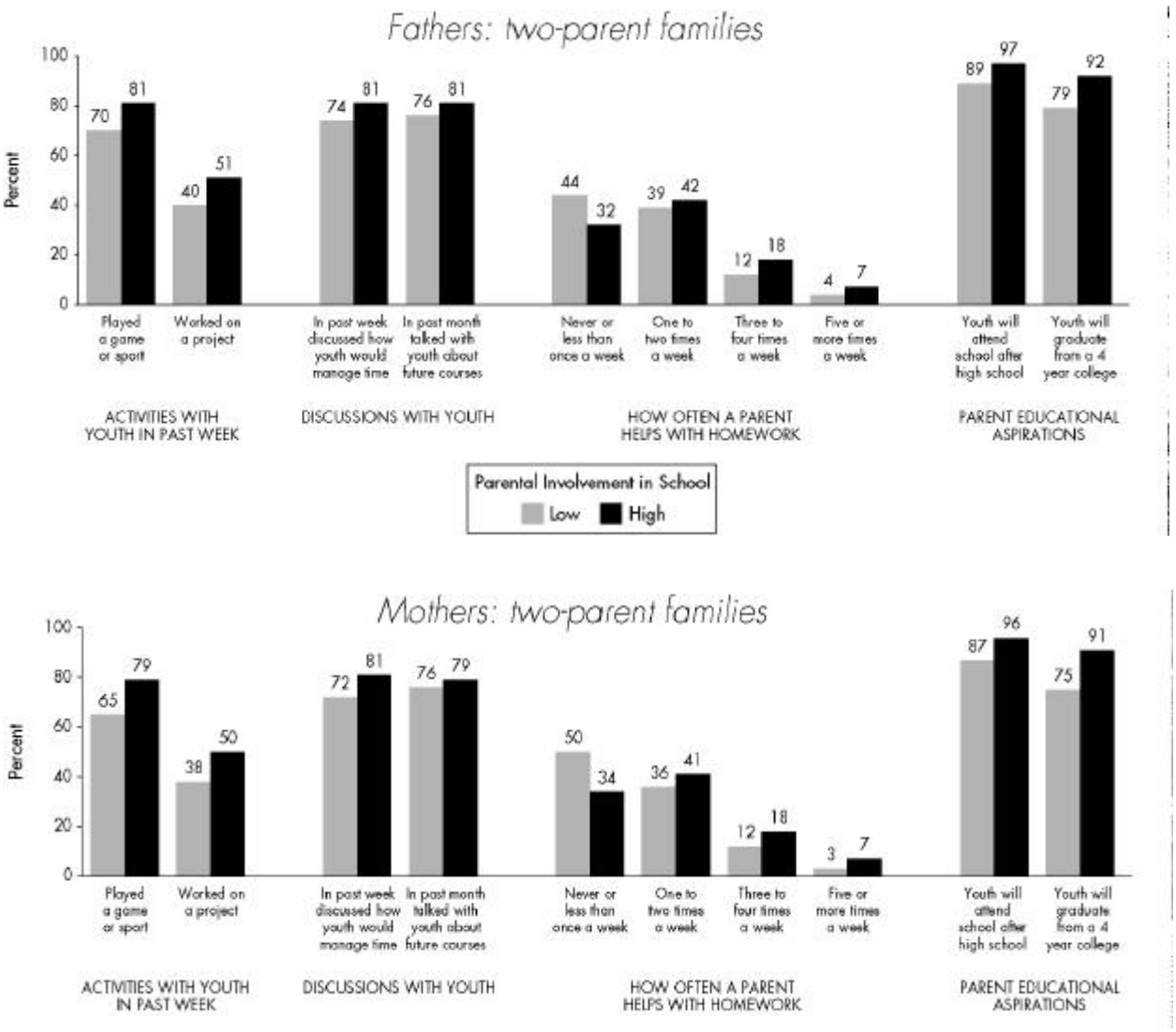


[1] Social capital activities were engaged in by either parent.

[2] Not asked about kindergartners.

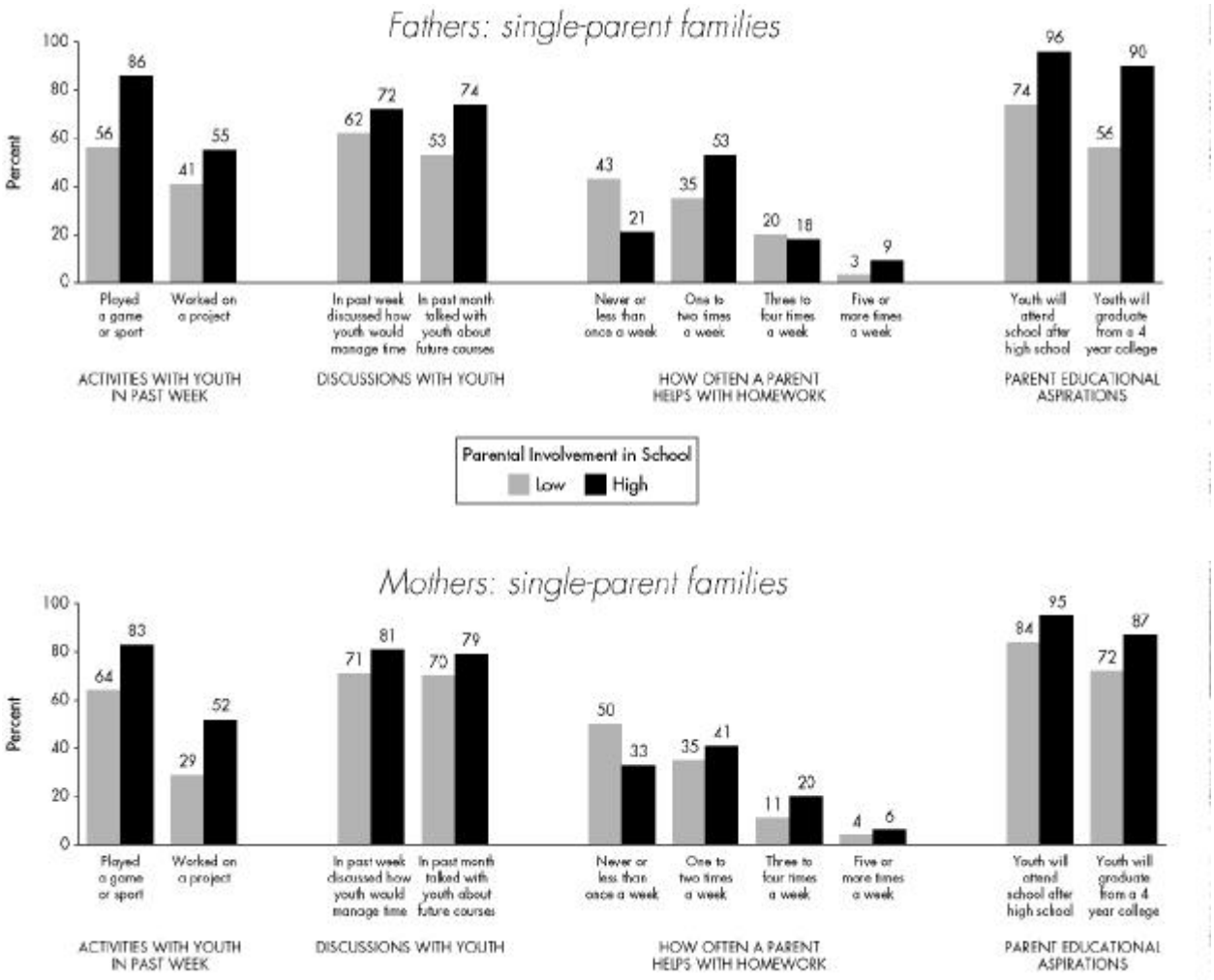
SOURCE: U.S. Department of Education, National Center for Education Statistics, 1996 National Household Education Survey.

Figure 9a. — Percent of children with selected types of social capital, by level of fathers' and mothers' involvement in school: Students in grades 6-12 in two-parent families, 1996



SOURCE: U.S. Department of Education, National Center for Education Statistics, 1996 National Household Education Survey.

Figure 9b. — Percent of children with selected types of social capital, by level of fathers' and mothers' involvement in school: Students in grades 6-12 in single-parent families, 1996



SOURCE: U.S. Department of Education, National Center for Education Statistics, 1996 National Household Education Survey.

activities with their elementary school children, such as having visited a museum or historical site and having attended a sports event in the past month. However, for many of the other activities there is no significant difference between single fathers with high and with low levels of involvement in their children's schools (figure 8b). What is striking about the single fathers with children in grades 1 through 5 is how highly involved at home the fathers are who have low levels of involvement in their children's schools. The proportion of elementary school children living in single-father families who have been told a story or worked on a project in the past week with their fathers is virtually the same for those whose fathers have high levels and those whose fathers have low levels of involvement in their schools.

Among single fathers of children in grades 6 through 12, the contrasts between those with high and those with low involvement in their children's schools are greater, more like those seen in two-parent and in mother-only families. Children in grades 6 through 12 living in father-only families are more likely to have played a game or sport with their fathers in the past week and to have talked with their father about future high school courses in the past month if the fathers have high levels as opposed to low levels of involvement in their children's schools. Similarly, fathers with high levels of involvement are more likely than those with low levels of involvement to expect that their children will attend school after high school and that they will graduate from a 4-year college.

These figures yield another interesting observation upon close inspection: With a few exceptions, children whose parents are highly involved in their schools are almost equally likely to have shared in any given activity with their families outside of school, regardless of whether it is their fathers or mothers who are highly involved or whether they live in two-parent or in single-parent families. For example, 74 percent of children in kindergarten through 5th grade who live in two-parent families were told a story in the past week if their fathers were highly involved in their schools, compared to 72 percent if their mothers were highly involved and to 71 percent of children living in father-only families whose fathers were highly involved and 72 percent of children in mother-only families whose mothers were highly involved (figures 8a and 8b). When differences occur, they tend to be differences between two-parent and single-parent families rather than between mothers and fathers. For example, 61 percent of children in grades 1 through 5 who live in two-parent families and whose fathers were highly involved in their schools went to the library with a parent in the past month, as did 59 percent of children in such families whose mothers were highly involved (figure 8a). In contrast, 47 percent of children in father-only families and 52 percent of children in mother-only families whose parents were highly involved had visited the library with their parents in the past month. These patterns suggest that regardless of family type, families who are involved in their children's schools tend to share other activities with their children as well. However, the constraints of being the only parent in the household may limit the ability of

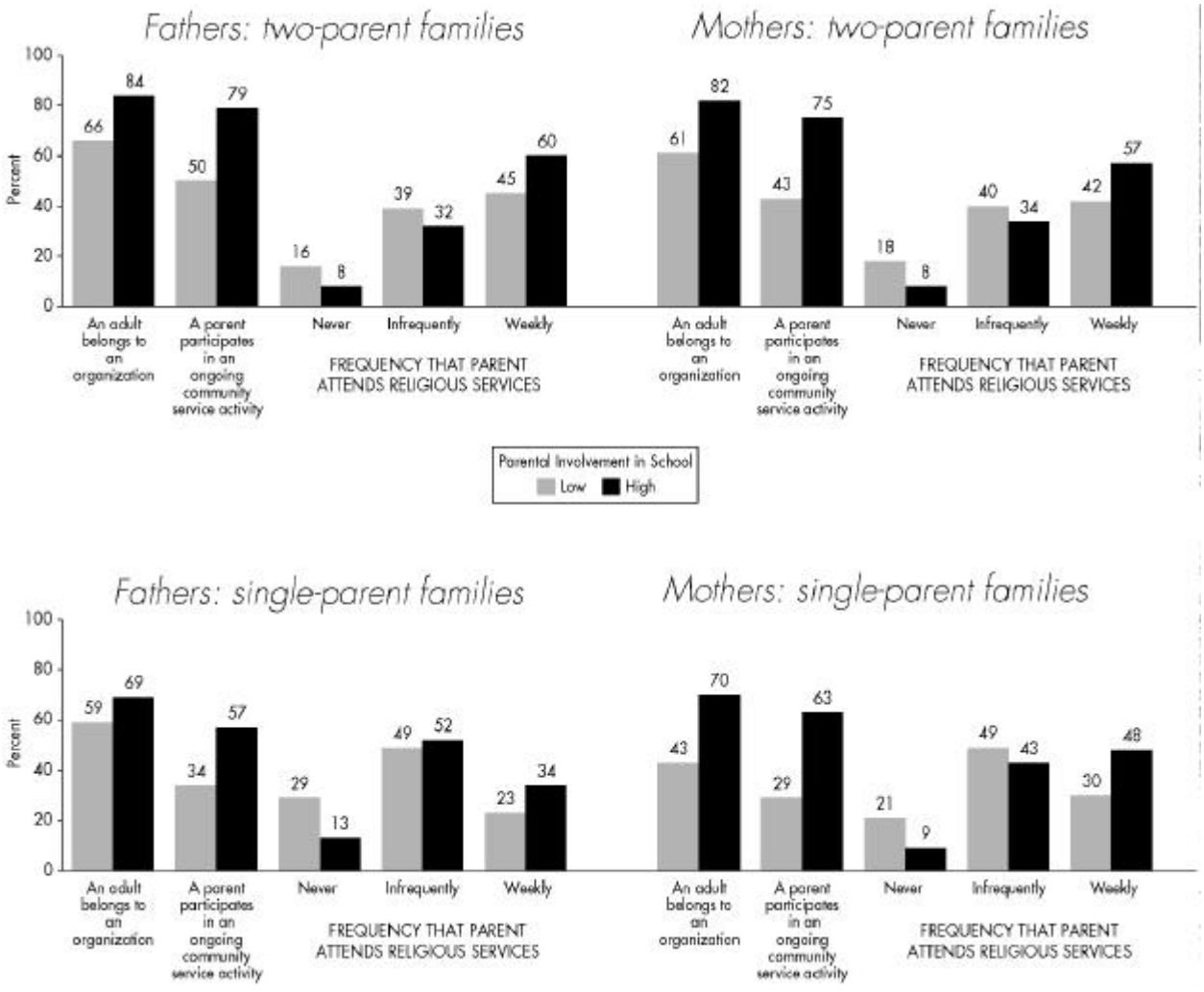
single parents to be as involved as they might wish.

There is another form of social capital that highly involved mothers and fathers offer their children: greater connections to the larger community. For children living in two-parent families or in mother-only families, their fathers or mothers are more likely to belong to an organization such as a community group, church or synagogue, union, or professional organization and to participate in an ongoing service activity if the parents have high levels rather than low levels of involvement in their schools (figure 10). For children living in father-only families, their fathers are significantly more likely to participate in an ongoing service activity, but are not significantly more likely to belong to an organization, if their fathers have high levels of involvement in their schools as opposed to low levels of involvement. Similarly, for children living in two-parent families or in mother-only families, their parents are more likely to attend religious services on a weekly basis if the mothers or fathers have high levels of involvement in their schools. The differences are not significant for children living in father-only families, though children whose fathers never attend religious services are significantly less likely to have fathers who are involved in their schools than are children whose fathers attend religious services at least occasionally.

School Resources and Parental Involvement

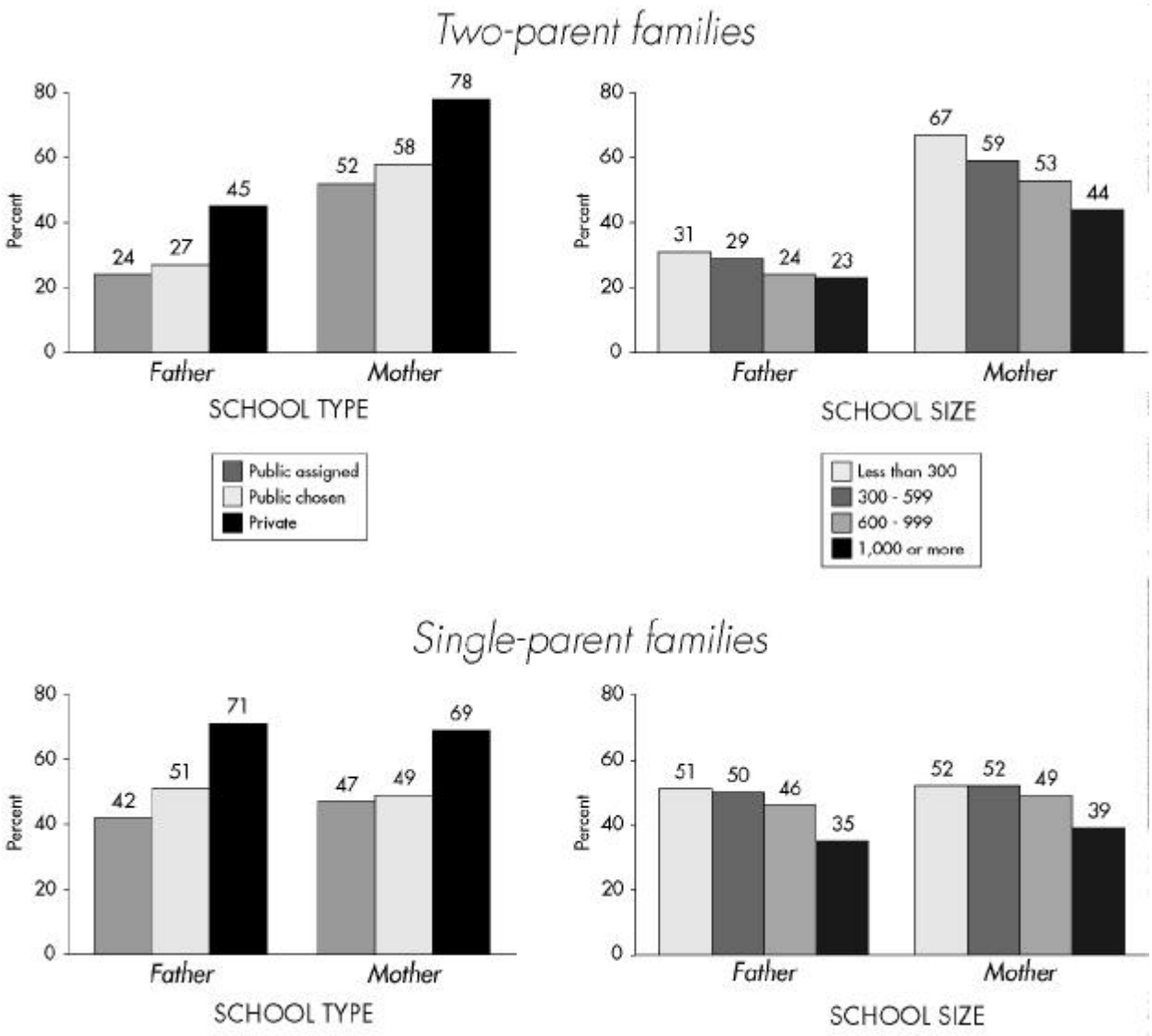
As noted previously, existing research has found that school factors exert a strong influence on parental involvement in their children's education (Eccles and Harold, 1996; Epstein and Dauber, 1991). Important school factors include whether the school is a public or private school, the size of the school,the school environment or climate, school policies and practices, and teacher attitudes and practices (Epstein and Dauber, 1991; Coleman and Hoffer, 1987). Although not all of these factors can be examined using NHES:96 data, several can. As can be seen in figure 11, fathers and mothers in both two-parent and in single-parent families are more likely to be highly involved if their children attend private as opposed to public schools. There are no significant differences in parental involvement between attending a public school that is assigned and one that is chosen. Private schools often make parental involvement a requirement, and thus, part of the higher involvement may be due to school policies. However, Coleman and others have argued that private schools, particularly private, religiously affiliated schools, have greater amounts of social capital due to the greater sense of community present in these schools (Bryk, Lee, and Holland, 1993; Coleman and Hoffer, 1987). Parents may be more willing to become involved when they know and are friendly with other parents in the school.

Figure 10. — Percent of children whose parents have ties to the community, by level of fathers' and mothers' involvement in school: Students in grades 6-12, 1996



SOURCE: U.S. Department of Education, National Center for Education Statistics, 1996 National Household Education Survey.

Figure 11. — Percent of children whose fathers and mothers have high involvement in school, by school characteristics and family type: Students in grades K-12, 1996



SOURCE: U.S. Department of Education, National Center for Education Statistics, 1996 National Household Education Survey.

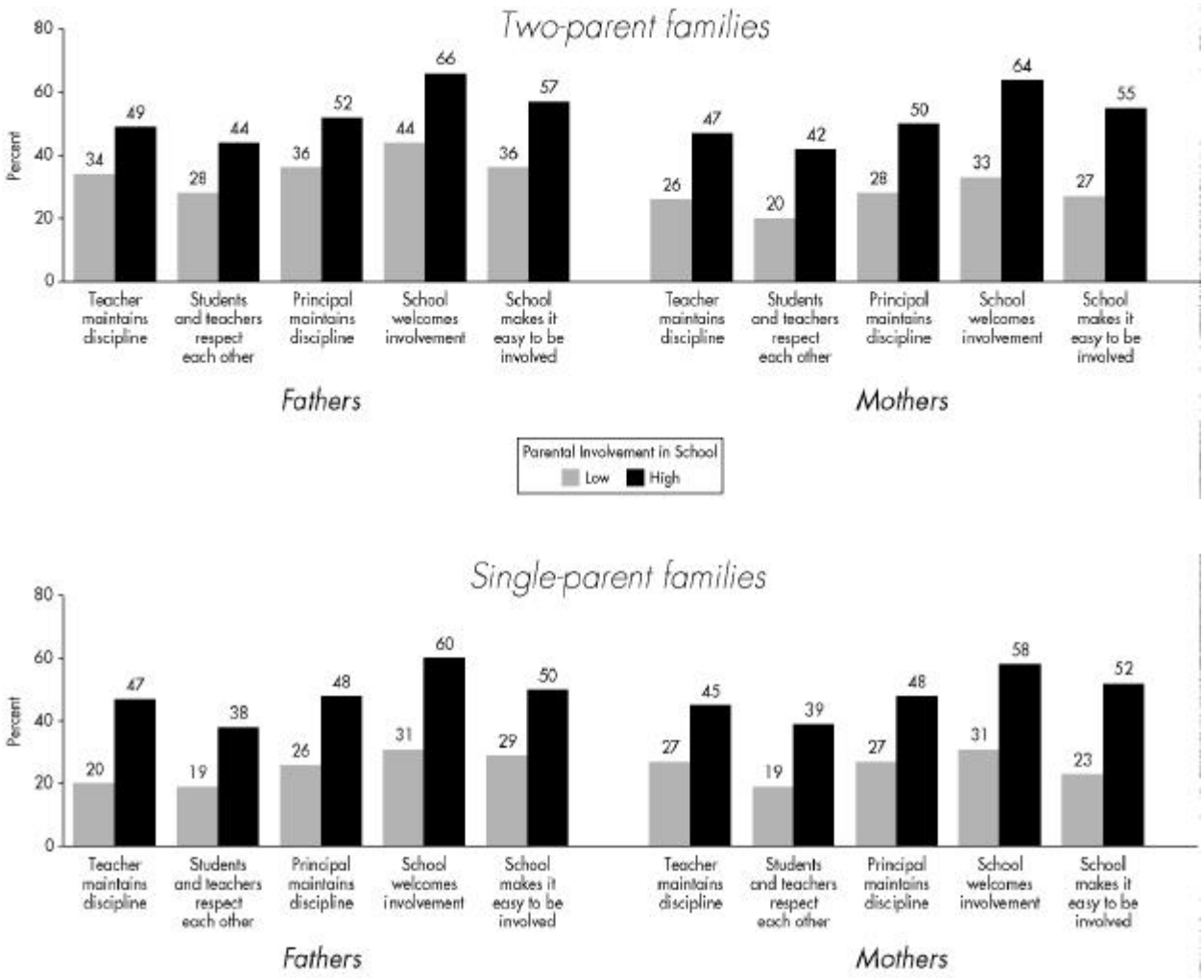
One reason for expecting that school size may be an important influence on parental involvement is that it may be easier to establish ties with administrators, teachers, and other parents when schools are not very large. If that is the case, parents may feel more comfortable and more welcomed by smaller schools. Figure 11 shows that high involvement in schools does tend to decrease as school size increases. However, the decreases are not uniform and are often not significant. High involvement by fathers and mothers in two-parent families is greater in smaller (less than 300 or 300-599 students) as opposed to larger schools (600-999 or 1,000 or more students) (figure 11). In mother-only families, mothers are significantly less likely to be involved if the school is very large (1,000 or more students) as opposed to smaller (less than 1,000 students). There are no significant differences in single mothers being highly involved in schools by the size of the school in schools smaller than 1,000 students. None of the differences in father-only families by school size are significant. It should be noted, however, that broad categories of size were used to classify schools. There may be threshold sizes, which differ for mothers and fathers and by grade of the children, after which high involvement decreases.

The notion that social capital within schools encourages parental involvement gains support by examining the association between fathers' and mothers' involvement in schools and several measures of the school environment. The NHES:96 asked parents of children enrolled in grades 1 through 12 about how strongly they agreed with the following statements:

- Child's teachers maintain good discipline in the classroom.
- In child's school, most students and teachers respect each other.
- The principal and assistant principal maintain good discipline at child's school.
- Child's school welcomes my family's involvement with the school.
- Child's school makes it easy to be involved there.

Respondents are more likely to strongly agree with these statements if the parents have high involvement in their children's schools than if they have low involvement (figure 12). For example, among two-parent families in which fathers have high involvement, nearly half strongly agree that the children's teachers maintain good discipline in the classroom compared to about a third of respondents in families in which fathers have low involvement. It is not possible to establish the causal linkage in the outcomes from a cross-sectional survey such as the NHES. It may be that greater school efforts to promote involvement lead to greater parent involvement. Conversely, it may be that highly involved parents have the skills to establish cooperative relationships with their children's schools, and thus view the schools more positively and see them as more welcoming.

Figure 12. — Percent of children whose parents strongly agree with statements about school climate, by level of fathers' and mothers' involvement in school: Students in grades 1-12, 1996



SOURCE: U.S. Department of Education, National Center for Education Statistics, 1996 National Household Education Survey.

Influences on Parent Involvement in School

From the foregoing discussion, it is apparent that high levels of parent involvement in schools are correlated with other variables such as education, economic status, family environment, and school characteristics. Many of these same factors are also correlated. For example, parents with more education are more likely to have higher incomes. To obtain a sense of the relative importance of these different factors in contributing to high parental involvement, it is necessary to examine them together in a single model. Because it is of interest to examine the association between social capital in the home and high parental involvement in schools, separate models were estimated for children in grades 1 through 5 and in grades 6 through 12.[6] As noted earlier, the social capital items that are available in the NHES:96 differ by the grade level of the children.

Logistic regression models were used to examine the influence of selected child, family, and school characteristics on high father and mother involvement in schools.[7] To simplify the discussion, the results are presented separately for two-parent and single-parent families. Not all factors in the models are discussed. This section describes some of the major results of the models.[8]

[6]Kindergartners were excluded from the models for two reasons. First, the items that were used to create the school climate scale were not obtained for children in kindergarten. Second, of the five student outcomes examined, only grade repetition was asked of kindergartners. Separate reduced models that limited the regressors to child and family characteristics were estimated for children in kindergarten through 12th grade and for children in 1st through 12th grade to explore whether the exclusion of kindergartners affected the results. The dependent variables examined were high father involvement, high mother involvement, and grade repetition in two-parent and in single-parent families. Only one result changed when kindergartners were included: in two-parent families, fathers were less likely to be highly involved in their children's schools when the mother was not working.

[7]The logistic regression results in this report are presented as adjusted odds ratios. See the *Methodology and Data Reliability* section, p. 93 for details on adjusted odds ratios and how to interpret them. In the discussion, the results are expressed as percent changes in the odds. The percent change is calculated as (odds ratio -1)*100, with a negative result indicating a percent decrease and a positive result indicating a percent increase in the odds.

[8]None of the models shown in the following pages include information on whether schools offered general school meetings or had held parent-teacher conferences since the beginning of the school year. In response to a reviewer's comments, additional models were estimated that included this information to determine whether it altered any of the results presented. As expected, parents are more likely to be highly involved in their children's schools if the schools offer them opportunities for involvement compared to if the schools do not. The addition of information on opportunities for involvement, however, does not materially alter the observed associations between the other factors in the models and high parental involvement. The three instances where results are affected are noted in the discussion.

Two-parent families. Because parents divide their time so as to best meet the needs of their own households, it is instructive to examine the models estimating high father and high mother involvement at the same time.

Involvement of the other parent. The levels of involvement of both parents in their children's schools are closely associated. Fathers are more likely to be highly involved as mothers' involvement increases and vice versa, though mothers' involvement exerts a somewhat stronger influence on fathers' involvement than the other way around. According to the results shown in table 2, there is an 84 percent increase in the adjusted odds that fathers of children in the 1st through 5th grade are highly involved in their children's schools with each unit increase in mothers' involvement, that is, with each additional activity that the mothers participate in. Similarly, with each unit increase in fathers' involvement there is a 65 percent increase in the adjusted odds that mothers of elementary school children are highly involved in their schools. The results also indicate that the association between mothers' and fathers' involvement grows stronger as children move from elementary school into the higher grades. Among children in the 6th through 12th grades, the adjusted odds that their fathers are highly involved in their schools increases by 175 percent with each additional activity that mothers participate in (table 3). The close association between the involvement levels of the two parents is probably indicative of shared values concerning the importance of education. That is, when parents share strong educational values, they tend to work in concert to support their children's educations by means of direct involvement. The stronger association between the involvement levels of parents of 6th through 12th graders may be due to a selection process whereby parents who value education the most are the most likely to remain involved in their children's schools as their children grow older.

Presence of a stepparent. Stepmothers are significantly less likely than biological or adoptive mothers to be highly involved in their children's schools, regardless of the children's grade level. The adjusted odds that the mothers are highly involved in their 1st through 5th graders' schools are 56 percent less if the mothers are stepmothers (table 2). Among children in grades 6 through 12, the adjusted odds are 57 percent less if the mothers are stepmothers (table 3). Fathers, on the other hand, are more likely to be highly involved in their children's schools if the mother in the household is a stepmother. The presence of stepmothers increases the adjusted odds that children's fathers are highly involved in their schools by 194 percent among children in grades 1 through 5 and by 197 percent among children in grades 6 through 12 relative to if the mothers are their biological or adoptive mothers. Thus, in families with stepmothers, fathers appear to assume a greater share of child-related responsibilities than they do when the children's biological or adoptive mothers are present.

Table 2.— Adjusted odds ratios of fathers' and mothers' high involvement in their children's schools, by child, family, and school characteristics: Students in grades 1-5 living in two-parent families, 1996

Characteristic	Fathers	Mothers
Child's race and ethnicity		
Black, non-Hispanic vs. white, non-Hispanic	0.80	0.70 *
Hispanic vs. white, non-Hispanic	1.05	0.85
Child's sex (male)	1.09	0.92
Mother's education	0.99	1.12 *
Father's education	1.19 *	1.08
Household income	1.02	1.06 *
Family type		
Mother, stepfather vs. two bio/adopt. parents	0.82	0.84
Father, stepmother vs. two bio/adopt. parents	2.94 *	0.44 *
Mother's employment		
Full time vs. part time	1.40 *	0.49 *
Looking for work vs. part time	1.15	0.84
Not working vs. part time	0.82	0.88
Family social capital		
Number of in-home activities shared with child	1.17 *	1.16 *
Number of out-of-home activities shared with child	1.25 *	1.38 *
Told a story in past week or family history in past month	1.14	1.35 *
School characteristics		
School type		
Public, chosen vs. public, assigned	1.26	1.20
Private vs. public, assigned	1.48 *	1.34
School size		
Small (under 300) vs. medium (300-599)	1.05	1.16
Large (600-999) vs. medium (300-599)	0.79 *	1.01
Very large (1,000+) vs. medium (300-599)	0.92	1.25
School climate	1.04	1.08 *
Other parent's involvement in school	1.84 *	1.65 *
	F(21.60)=15.91	F(21,60)=23.19

*p<.05

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1996 National Household Education Survey.

Table 3. — Adjusted odds ratios of fathers' and mothers' high involvement in their children's schools, by child, family, and school characteristics: Students in grades 6-12 living in two-parent families, 1996

Characteristic	Fathers	Mothers
Child's race and ethnicity		
Black, non-Hispanic vs. white, non-Hispanic	0.79	0.87
Hispanic vs. white, non-Hispanic	0.90	0.94
Child's sex (male)	1.22 *	0.86
Child's grade level		
Grades 6-8 vs. grades 9 - 12	0.72 *	1.65 *
Mother's education	1.02	1.11 *
Father's education	1.23 *	0.91
Household income	1.04	1.03
Family type		
Mother, stepfather vs. two bio/adopt. parents	0.61 *	1.26 *
Father, stepmother vs. two bio/adopt. parents	2.97 *	0.43 *
Mother's employment		
Full time vs. part time	1.20	0.79 *
Looking for work vs. part time	0.75	0.74
Not working vs. part time	0.88	0.87
Family social capital		
Child will graduate from 4-year college (yes vs. no)	1.25	1.43 *
Confidence that someone can help with homework	1.04	0.98
Discussed education plans with child (yes vs. no)	1.12	1.19
Number of activities participated in with child	1.16 *	1.12
Frequency with which a parent helps with homework	1.15 *	1.08 *
Child gets homework (no homework vs. any homework)	1.68	0.63
Family ties to the community		
Frequency with which parent attends religious services	1.03	1.06 *
A parent regularly participates in community service activity (yes vs. no)	1.28 *	2.01 *
School characteristics		
School type		
Public, chosen vs. public, assigned	0.91	1.27 *
Private vs. public, assigned	1.16	1.93 *
School size		
Small (under 300) vs. medium (300-599)	0.84	1.31 *
Large (600-999) vs. medium (300-599)	0.90	0.91
Very large (1,000+) vs. medium (300-599)	0.91	0.84 *
School climate	1.04 *	1.07 *
Other parent's involvement in school	2.75 *	2.29 *
	F(27,54)=21.58	F(27,54)=43.48

*p<.05

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1996 National Household Education Survey.

Stepfathers also tend to be less involved in children's schools than biological or adoptive fathers, though the differences are only significant among children in grades 6 through 12. The adjusted odds that fathers are highly involved in their 6th through 12th graders' schools are 39 percent less if the fathers are stepfathers relative to if they are biological or adoptive fathers (table 3). Mothers of children in grades 6 through 12, like fathers, are significantly more likely to be highly involved in school if the father in the household is the children's stepfather. Thus, at least among older children, mothers assume even more of the child-related responsibilities when stepfathers are present. However, the increasing involvement of mothers of older children and of fathers, regardless of the children's ages, does not make up for the lower involvement of stepparents. A study that used NHES:93 data found that parental involvement in stepfamilies is, on average, lower than in families with two biological or adoptive parents (Zill and Nord, 1994).

From the data in the NHES:96, it is not possible to determine why stepparents tend to be less involved in children's schools. It is possible that stepparents, or the biological parents themselves, believe it is the biological parents' responsibility. It is also possible that children, particularly older children, discourage the involvement of their stepparents. These results are consistent with other research. A study based on the National Surveys of Families and Households found that biological fathers reported spending more time with their children when the mother in the household was a stepmother instead of the biological mother and that stepfathers reported spending less time with children than biological fathers (Cooksey and Fondell, 1996).

Household income and parents' education. Although the tabulations presented in figures 5 and 7 showed that household income and parents' education are both associated with high involvement of fathers and mothers in their children's schools, after controlling for other factors in the models the importance of household income is reduced. It remains a significant influence on high involvement in schools only among mothers of children in the 1st through 5th grades. Income has no influence on involvement in schools among mothers of older children or fathers of children in any grade level. On the other hand, education remains an important influence on high parental involvement in schools even after controlling for income and the other factors in the models.[1] As fathers' and mothers' education increases, the adjusted odds that they are highly involved in their children's schools also increase. Among children in grades 1 through 5, there is a 19 percent increase in the adjusted odds that their fathers are highly involved in their schools with

[1]When information on whether schools offered general school meetings and parent-teacher conferences is added to the model, the association between mothers' involvement in their children's schools and maternal education becomes insignificant (p=.11) among children in grades 1-5 living in two-parent families.

each unit increase in fathers' education.[2] These results parallel those found in other studies, that is, that parental education is a more important influence on parental involvement than is income (Zill and Nord, 1994).

The NHES:96 data also reveal that it is fathers' education that influences fathers' involvement and mothers' education that influences mothers' involvement. Many studies use the education level of the most educated parent in the household or the mother's education when examining parental involvement in schools. Because the education of mothers and fathers are highly correlated, substituting one for the other is probably a good proxy.

Maternal employment. Mothers who work 35 or more hours per week are significantly less likely to be highly involved in their children's schools, regardless of the grade level, than are mothers who work part time. Among children in grades 1 through 5, there is a 51 percent reduction in the adjusted odds that their mothers are highly involved in their schools if their mothers work full time relative to if they work part time. However, these analyses also reveal that fathers whose wives work full time increase their involvement in their children's schools. Among children in grades 1 through 5, the adjusted odds that their fathers are highly involved increases by 40 percent if the mothers work full rather than part time. Among children in grades 6 through 12, fathers also appear more likely to be highly involved if the mothers work full time instead of part time, but the difference is only significant at the 0.10 level. These results suggest that families in which mothers work full time establish a different division of labor, with fathers sharing more of the child-related responsibilities, than families in which mothers work part time or not at all.

Children's age and sex. Whether children in grades 1 through 5 are boys or girls has no significant impact on the adjusted odds that either their fathers or their mothers are highly involved in their schools. However, among children in grades 6 through 12, the adjusted odds that children have highly involved fathers increase by 22 percent if the children are boys relative to if they are girls. This outcome suggests that fathers are more likely to increase their involvement if they have sons. Mothers of 6th through 12th graders, on the other hand, are somewhat less likely to be highly involved if the children are boys, though the association is only significant at the 0.10 level.

In a similar vein, fathers are less likely to be highly involved with middle school children (6th through 8th grade) than with high school children (9th through 12th grade). Recall from figure 4 that the

[2] A unit increase indicates the amount of additional schooling that fathers have obtained (e.g., no high school degree, a high school graduate, some college or vocational school experience, a college graduate, and graduate or professional school experience).

proportion of children whose fathers volunteered at their schools increased between middle and high school. Mothers, on the other hand, are more likely to be highly involved with their 6th through 8th graders than with their 9th through 12th graders—a finding that also matches the results obtained earlier that showed mothers' involvement in their children's schools decreases steadily as the grade level of their children increases. This pattern of associations suggests a division of labor within two-parent families, with mothers focusing on younger children and on girls and with fathers spending somewhat more time with older children and with boys.

Family social capital. Even after controlling for the other factors in the models, the results confirm that parental involvement in schools and parental involvement at home are closely linked. Three measures of social capital were included in the models for children in grades 1 through 5. These were the number of in-home activities the children have shared with their parents in the past week, the number of out-of-home activities that the children have shared with their parents in the past month, and an indicator of whether the children have been told a story in the past week or have talked with their parents in the past month about family history. Among mothers of children in grades 1 through 5, all three measures of social capital are associated with high mother involvement in schools, even after controlling for the level of involvement of fathers and the other factors in the model. The adjusted odds that mothers are highly involved in their children's elementary schools increase by 16 percent with each additional activity participated in at home in the past week and increase by 38 percent with each additional outing that the family has gone on with the children in the past month.

Among fathers of children in grades 1 through 5, the number of activities in the home that their families have shared with the children in the past week and the number of outings that the families have shared with the children in the past month are significantly associated with high father involvement in the children's schools. With each additional activity the families have shared with the children in the past week, the adjusted odds that fathers are highly involved in their children's elementary schools increase by 17 percent. Similarly, with each additional type of outing the families have gone on with their children, the adjusted odds that fathers are highly involved in their children's schools increase by 25 percent.

More questions were available to measure social capital in the families of older children. Seven factors were included: parents' belief that the children will graduate from a 4-year college; parents' confidence that someone in the household can help the children with their homework; whether a parent has discussed future courses with the children in the past month; how often a parent helps the children with their homework; the number of activities shared with children in the past week; how often a parent attends

religious services; and whether a parent regularly participates in an ongoing community service activity. Among children in grades 6 through 12, several of these items are significant influences on the odds that mothers and fathers are highly involved in their children's schools, though the specific social capital measures that are associated with parental involvement differ somewhat for mothers and fathers. Among mothers, expecting that the children will graduate from a 4-year college, the frequency with which parents help with homework, the frequency with which parents attend religious services, and having a parent who regularly participates in an ongoing community service activity are all significantly associated with high mother involvement in schools after controlling for the involvement of fathers and the other factors in the model (table 3).[3] The adjusted odds that mothers are highly involved in their children's schools are 43 percent higher among mothers who expect their children will graduate from a 4-year college compared to those who do not. Similarly, the adjusted odds that mothers are highly involved in their children's schools are doubled if a parent regularly participates in an ongoing service activity. However, it is possible that the ongoing service activity is involvement in their children's schools.[4]

Among fathers, the number of activities the families have participated in with the children, the frequency with which a parent helps with homework, and whether a parent regularly participates in an ongoing community service activity are associated with high father involvement. With each unit increase in the number of activities participated in with the children, the adjusted odds that fathers are highly involved in their 6th through 12th graders' schools increase by 16 percent. Similarly, with each unit increase in helping with homework, the odds that fathers are highly involved in their children's schools increase by 15 percent.[5] There is a 28 percent increase in the odds that fathers are highly involved in their 6th through 12th graders' schools if a parent in the household regularly participates in an ongoing service activity.

School characteristics. The measure of school climate[6] is more consistently related to the odds of

[3]When information on whether schools offered general school meetings and parent-teacher conferences was added to the model, the association between high mother involvement and frequency with which a parent helps with homework became insignificant.

[4]The correlations between high mother involvement and high father involvement in schools and regularly participating in an ongoing service activity are 0.28 and 0.21, respectively.

[5]Frequency of helping with homework is measured as follows: never, less than once a week, 1 to 2 times per week, 3 to 4 times a week, or 5 or more times a week. Children who did not receive homework were included in the never category. A variable that took the value of 1 when no homework was given and 0 otherwise was added to the model to remove the influence of those who did not receive homework from the estimate of the influence of homework frequency.

[6]A scale of school climate was created by summing the responses to the five statements about children's schools shown in figure 12: teachers maintain good discipline in the classroom; most students and teachers respect each other; the principal and assistant principal maintain good discipline at the school; the school welcomes my family's involvement with the school; and the school makes

mothers and fathers being highly involved in their children's schools than any of the other school characteristic factors. Although school climate has no significant influence on the adjusted odds that fathers of children in grades 1 through 5 will be highly involved in their children's schools, it is significantly associated with high father involvement among children in grades 6 through 12 and with high mother involvement at all ages. With each unit increase in the scale, the adjusted odds that fathers of children in grades 6 through 12 are highly involved in their children's schools increase by 4 percent. Although 4 percent may not seem large, consider that the adjusted odds that fathers are highly involved in their children's schools are 20 percent higher if respondents strongly agree (a value of 4 on each of the 5 items) compared to if they agree (a value of 3 on each of the 5 items) with each statement.

Whether a school is public or private is also associated with parental involvement. The adjusted odds that fathers of children in the 1st through 5th grades are highly involved in their children's schools are 48 percent greater if their children attend private as opposed to public schools that they were assigned to. Whether a school is public or private has no effect on the odds that mothers of elementary school children are highly involved in their schools. This is probably due to the fact that the majority of mothers of elementary school children are highly involved in their children's schools, as shown earlier in the report. However, the odds that mothers are highly involved in the schools of their 6th through 12 graders increase by 93 percent if the children attend private rather than public schools that they were assigned to. There is evidence that mothers are more involved if their 6th through 12th graders are enrolled in a public school of their choice compared to if they are enrolled in a public school that they were assigned to. The odds that mothers of children in the 6th through 12th grades are highly involved in their schools are 27 percent higher if the children attend a public school of their choice as opposed to one that they were assigned to.

Children get mostly A's. Because some researchers have noted that parent involvement is higher if parents have a high assessment of their children's abilities (Eccles and Harold 1996), additional models were estimated that included parents' reports of their children's usual grades (data not shown). The result of these models suggest that fathers are more likely to be highly involved in their 6th through 12th graders' schools if their children are doing well academically. The adjusted odds that fathers are highly involved in their 6th through 12th graders' schools are 30 percent higher when parents report that their children get mostly A's than when they do not. Because the NHES is a cross-sectional survey, it is not possible to determine the direction of causation. It is equally possible that children are more likely to do well in school because their fathers are involved in their schools. It is quite likely that causation runs in both directions,

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it easy to be involved there. The response categories were assigned a value from 1 (strongly disagree) to 4 (strongly agree). Thus, the scale ranges from 5 to 20 with higher scores indicating a more positive school climate.

with fathers more likely to be involved when their children are doing well and children doing better when their fathers are involved. There is no association between children getting mostly A's and mothers' involvement among younger or older children or fathers' involvement among children in elementary school.

Single-parent families. Fewer factors are important influences on high father or mother involvement in single-parent families after controlling for the other factors in the models.

Household income and parents' education. Once education and the other factors are controlled, household income has no influence on whether single fathers or mothers are highly involved in their children's schools. Parents' education, on the other hand, remains a significant influence on the likelihood that mothers and fathers are highly involved in their children's schools, except among fathers of children in grades 6 through 12. The adjusted odds that fathers of 1st through 5th graders are involved in their children's schools increase by 67 percent with each unit increase in the education measure (table 4). Similarly, the adjusted odds that mothers are highly involved in their children's elementary schools increase by 42 percent and the adjusted odds that they are involved in their 6th through 12th graders' schools increase by 15 percent with each unit increase in education (tables 4 and 5).

Children's age and sex. Unlike fathers in two-parent families, single fathers are more likely to be highly involved in their 6th through 12th graders' schools if the children are in the 6th through 8th grade rather than high school. However, when information on whether schools offered general school meetings or parent-teacher conferences is added to the model (not shown), this association becomes insignificant. There is no association between the children's grade level and mothers' involvement in their schools. There is also no association between the sex of the children and the involvement of either single mothers or single fathers in their schools.

Family social capital. Several of the social capital measures are important influences on the adjusted odds that single mothers are highly involved in their children's schools. Fewer of them influence the adjusted odds that single fathers are highly involved. Among children in grades 1 through 5, the odds that their mothers are highly involved in their schools increase by 30 percent with each additional activity they have shared with their mothers in the past week, by 60 percent with each additional outing they have gone on with their mothers in the past month, and by 73 percent if their mothers have told them a story in the past week or have discussed their family history in the past month. None of the social capital measures are significant influences on high father involvement among children in grades 1 through 5.

Among children in grades 6 through 12, the adjusted odds that mothers are highly involved in their schools are greater as the number of activities the mothers have participated in with their children in the past week increases, as the frequency with which they attend religious services increases, and if they regularly participate in community service activities (table 5). The adjusted odds that single fathers are highly involved in their 6th through 12th graders' schools are significantly greater if they have discussed future high school courses or plans after high school with their children in the past month. Fathers also

Table 4. — Adjusted odds ratios of fathers' and mothers' high level of involvement in their children's schools, by child, family, and school characteristics: Students in grades 1-5 living in single-parent families, 1996

Characteristic	Fathers	Mothers
Child's race and ethnicity		
Black, non-Hispanic vs. white, non-Hispanic	2.56	0.59 *
Hispanic vs. white, non-Hispanic	0.44	0.89
Child's sex (male)	1.09	0.99
Parent's education	1.67 *	1.42 *
Household income	1.17	1.04
Mother's employment		
Full time vs. part time	NA	0.78
Looking for work vs. part time	NA	1.31
Not working vs. part time	NA	0.95
Family social capital		
Number of in-home activities shared with child	1.49	1.30 *
Number of out-of-home activities shared with child	1.16	1.60 *
Told a story in past week or family history in past month	0.82	1.73 *
School characteristics		
School type		
Public, chosen vs. public, assigned	0.85	1.15
Private vs. public, assigned	0.99	1.52
School size		
Small (under 300) vs. medium (300-599)	0.99	0.84
Large (600-999) vs. medium (300-599)	0.70	1.05
Very large (1,000+) vs. medium (300-599)	0.82	1.17
School climate	1.35 *	1.15 *
	F(14,67)=2.36	F(17,64)=6.77

*p<.05

NA=Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1996 National Household Education Survey.

Table 5. — Adjusted odds ratios of fathers' and mothers' high level of involvement in their children's schools, by child, family, and school characteristics: Students in grades 6-12 living in single-parent families, 1996

Characteristics	Fathers	Mothers
Child's race and ethnicity		
Black, non-Hispanic vs. white, non-Hispanic	0.81	0.76
Hispanic vs. white, non-Hispanic	1.45	0.85
Child's sex (male)	0.71	0.95
Child's grade level		
Grades 6-8 vs. grades 9 -12	3.25 *	1.36
Parent's education	0.91	1.15 *
Household income	1.01	1.01
Mother's employment		
Full time vs. part time	NA	1.26
Looking for work vs. part time	NA	1.51
Not working vs. part time	NA	0.90
Family social capital		
Child will graduate from 4-year college (yes vs. no)	2.61	1.42
Confidence that someone can help with homework	1.03	1.07
Discussed education plans with child (yes vs. no)	2.69 *	1.32
Number of activities participated in with child	1.67	1.52 *
Frequency with which a parent helps with homework	1.19	1.11
Child gets homework (no homework vs. any homework)	2.20	0.36 *
Family ties to the community		
Frequency with which parent attends religious services	1.19	1.15 *
A parent regularly participates in community service activity (yes vs. no)	1.49	2.51 *
School characteristics		
School type		
Public, chosen vs. public, assigned	2.53	0.71 *
Private vs. public, assigned	4.01	1.63
School size		
Small (under 300) vs. medium (300-599)	0.80	1.13
Large (600-999) vs. medium (300-599)	0.91	1.05
Very large (1,000+) vs. medium (300-599)	1.11	0.99
School climate	1.11	1.15 *
	F(20,61)=1.81	F(23,58)=8.59

*p<.05

NA=Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1996 National Household Education Survey.

are more likely to be highly involved in their 6th through 12th graders' schools if they expect that their children will graduate from a 4-year college and as the number of activities they have participated in with their children in the past week increases. However, these factors are only significant at the 0.10 level.

School characteristics. As in two-parent families, school climate is an important influence on the involvement of single mothers and single fathers in their children's schools, especially when their children are in elementary school. The odds that single fathers and single mothers are highly involved in their 1st through 5th graders' schools increase by 35 percent and 15 percent, respectively, with each unit increase in the school climate scale, after controlling for measures of social capital in the family, whether the schools are public or private, and other factors in the model (table 4).

Among children in grades 6 through 12, school climate only influences whether single mothers are highly involved in their children's schools. It has no influence on single fathers. The odds that single mothers are highly involved in their children's schools increase by 15 percent with each unit increase in the school climate scale.

There is some evidence that single fathers are more likely to be highly involved in their 6th through 12th graders' schools if the schools are private or are public schools of their choice as opposed to public schools that they were assigned to. However, the relationships between these factors and high father involvement are only significant at the 0.10 level. There is also weak evidence that single mothers are more likely to be highly involved in their 6th through 12th graders' schools if the schools are private (significant at the 0.10 level). However, it appears that single mothers may be somewhat less likely to be highly involved in their children's schools if the children attend public schools of their choice.

Children get mostly A's. Children making mostly A's only has a significant influence on the adjusted odds that single mothers are highly involved in their 6th through 12th graders' schools (data not shown). It has no association with single fathers' involvement at any grade level or with single mothers' involvement in elementary school. As noted earlier, the causal relationship between children doing well in school and high parental involvement is unclear, though it is likely that the two influence each other.

Parental Involvement and Student Outcomes

Much of the research on parental involvement in schools has focused on its influence on students' academic success (Henderson, 1987). Academic success can be measured in a variety of ways. This

report uses a measure of academic success and a measure of academic difficulties: getting mostly A's [7] and having ever repeated a grade. Other facets of children's school lives are also important to their social and emotional development. Among these are the extent to which they enjoy school and their involvement in extracurricular activities. Children who enjoy school are more likely to perform better academically and to remain in school (Csikszentmihalyi, 1990). Participation in extracurricular activities reduces risky behaviors in adolescence, such as dropping out of school, becoming a teen parent, using drugs, or engaging in delinquent conduct (Zill, Nord, and Loomis, 1995). It also provides more opportunities to establish connections to other young people and adults. Children's behavior in school is another important school outcome. Parents of children in the 6th through 12th grade were asked if their child had ever been suspended or expelled.

School-aged children in both two-parent and single-parent families are more likely to get mostly A's, to enjoy school, and to participate in extracurricular activities and are less likely to have ever repeated a grade and to have ever been suspended or expelled if their fathers or mothers have high as opposed to low levels of involvement in their schools (figure 13). However, the differences in the proportion of children in father-only families who have repeated a grade is not significantly different for children whose fathers have high and low levels of involvement.

Of course, in two-parent families in which fathers show high levels of involvement, it is likely that mothers also have high levels of involvement. Thus, the association between fathers' involvement and children's outcomes may be due in part to high levels of involvement by the mother. Figure 14 shows these same child outcomes by whether neither parent, only the mother, only the father, or both have high involvement. This figure reveals that it makes little difference whether it is only the mother or only the father who has high involvement; as long as one of them is highly involved, children have better outcomes than if neither have high involvement; as long as one of them is highly involved, children have better outcomes than if neither have high involvement. Moreover, children have the most favorable outcomes if both of their parents exhibit high involvement. Although the advantage is relatively small, the differences between having both parents highly involved in the children's schools and having only the mothers highly involved are evident for participation in extracurricular activities, getting A's, enjoying school, and having ever repeated a grade. The question of whether mothers and fathers make independent contributions to these outcomes is explored in multivariate models below.

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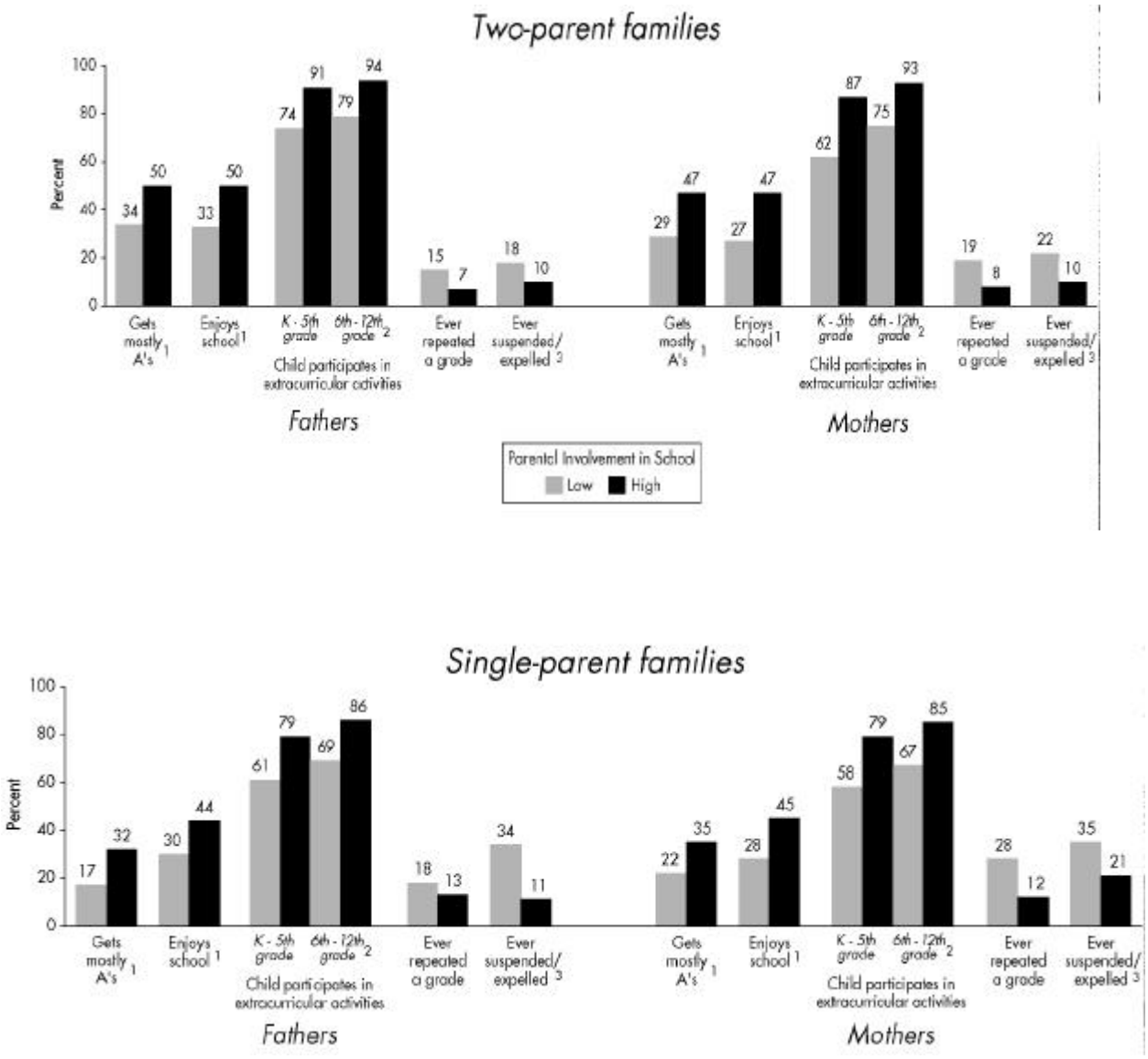
[7] The student outcomes are based on parent reports, and parents tend to provide positive assessments of their children. For example, 38 percent of children in 1st through 12th grade get mostly A's, according to the report of the parents. It is likely that if school records were used to obtain this information instead, the proportion would be lower.

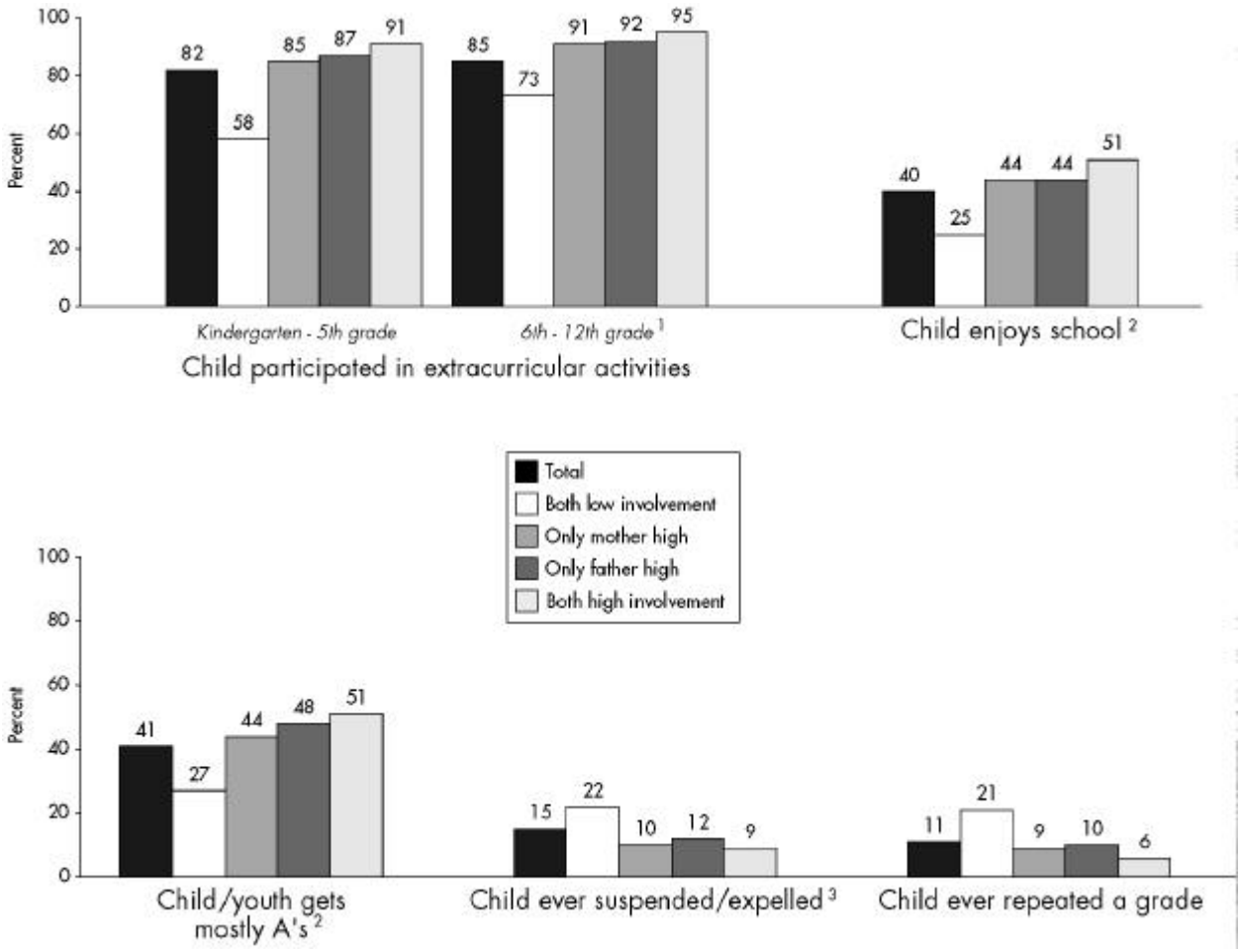
Figure 13. — Student outcomes, by fathers' and mothers' involvement in school and family type: Students in grades K-12, 1996



[1] Children in 1st through 12th grade.
[2] Youth report.
[3] Children in 6th through 12th grade.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1996 National Household Education Survey.

Figure 14. — Student outcomes, by level of parental involvement in school and which parent is involved: Students in grades K-12 in two-parent families, 1996



[1] Youth report.
[2] Children in 1st through 12th grade.
[3] Children in 6th through 12th grade.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1996 National Household Education Survey.

In order to understand the contribution of fathers' involvement in their children's schools to student outcomes, it is important to control for other factors that also influence how students do in school. Logistic regression models were estimated to examine the influence of mothers' and fathers' involvement on the five student outcomes after controlling for related child and family characteristics. In the tables presented below, only the adjusted odds of the outcomes by mothers' and fathers' involvement are shown. The adjusted odds ratios for all the factors contained in the models are contained in Appendix B. To simplify the discussion, results are presented separately for children living in two-parent and in single-parent families.

Two-parent families. Table 6 presents the adjusted odds that children in two-parent families get mostly A's, enjoy school, participate in extracurricular activities, have ever repeated a grade, and have ever been suspended or expelled from school as categorized by their fathers' and mothers' involvement in their schools, after controlling for a variety of related factors. Among the factors that were also included in the models are the children's race and ethnicity, sex, and grade level, mothers' and fathers' education, household income, family type, and maternal employment. In addition, models 3 and 5 also control for different measures of social capital within the families .[8]

Get mostly A's. Children are more likely to get mostly A's if their fathers are involved in their schools. Among children in grades 6 through 12, the adjusted odds that children get mostly A's increase by 46 percent if fathers are highly involved in their schools and by 21 percent if fathers are moderately involved in their schools compared to if the fathers have low levels of involvement (model 4). Even after controlling for measures of social capital in the family, the odds that children get mostly A's are 43 percent higher if their fathers are highly involved in their schools compared to if they are not very involved (model 5). Mothers' involvement in their children's schools also influences the odds that the children get mostly A's, but mainly among children in grades 6 through 12. Once measures of social capital are entered into the models, mothers' involvement is no longer a significant influence. These results indicate that fathers' involvement in their children's schools exerts a distinct and independent influence on children making good grades and that the association is not due to the fact that mothers tend to be involved when fathers are involved. The results also suggest that for this particular outcome, fathers' involvement is more important

[8]For children in grades 1 through 5, three social capital measures are included in the models: the number of in-home activities parents have shared with their children, the number of out-of-home activities they have shared together, and whether the parents have told their children a story in the past week or shared family history with them in the last month. For children in grades 6 through 12, seven social capital measures are included in the models: expect children will graduate from a 4-year college, confidence that someone in the household can help children with homework, whether have discussed educational plans with children, the number of activities have shared with children in the past week, frequency with which parents help with homework, frequency with which parents attend religious services, and whether parents regularly participate in a community service activity.

than mothers’.

Table 6. — Adjusted odds ratios of selected student outcomes, by fathers' and mothers' level of involvement in their schools and grade level: Students in grades 1-12 living in two-parent families, 1996

Parental involvement	Grades 1-12 Model 1[1]	Grades 1-5 Model 2[1]	Grades 1-5 Model 3[2]	Grades 6-12 Model 4[1]	Grades 6-12 Model 5[2]
Father's involvement	Gets mostly A's				
Moderate vs. low	1.22*	1.22*	1.20	1.21*	1.17
High vs. low	1.42*	1.35*	1.30*	1.46*	1.43*
Mother's involvement					
Moderate vs. low	1.16	.88	.86	1.28*	1.25
High vs. low	1.21*	.98	.92	1.30*	1.16
Father's involvement	Enjoys school				
Moderate vs. low	1.30*	1.28*	1.26*	1.34*	1.26*
High vs. low	1.55*	1.48*	1.40*	1.63	1.51*
Mother's involvement					
Moderate vs. low	1.25*	1.23	1.21	1.23*	1.16
High vs. low	1.52*	1.39*	1.30*	1.58*	1.40*
Father's involvement	Participates in extracurricular activities[3]				
Moderate vs. low		1.30	1.16	1.48*	1.38*
High vs. low		1.58*	1.35	1.88*	1.70*
Mother's involvement					
Moderate vs. low		1.62*	1.48*	1.31*	1.25
High vs. low		2.39*	1.95*	2.46*	2.05*
Father's involvement	Ever repeated a grade				
Moderate vs. low	.75*	.65*	.64*	.79	.84
High vs. low	.72*	.66	.65	.76	.83
Mother's involvement					
Moderate vs. low	.73*	.50*	.50*	.83	.88
High vs. low	.71*	.55*	.55*	.76	.90
Father's involvement	Ever suspended or expelled[4]				
Moderate vs. low				.96	1.06
High vs. low				.91	1.02
Mother's involvement					
Moderate vs. low				.76	.81
High vs. low				.57*	.76*

*p<.05

[1] Odds ratios after controlling for children's race/ethnicity and sex, parents' education, household income, family type, and maternal employment.

[2] Odds ratios after controlling for factors listed in note 1 plus several measures of social capital.

[3] Information on participation in extracurricular activities for children in grades 1 through 5 were obtained from parents' reports. Parallel information for children in grades 6 through 12 were obtained from youths' reports. Thus, there is no combined estimate of participation in extracurricular activities for children in grades 1-12.

[4] Only parents of children in grades 6 through 12 were asked whether their children had ever been suspended or expelled.

NOTE: See Appendix B, tables B1-B3 for adjusted odds ratios of student outcomes for all factors included in the models.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1996 National Household Education Survey.

Enjoy school. Children, at least according to their parents' reports, enjoy school more when their fathers and mothers are involved. The adjusted odds that children in the 1st through 12th grade enjoy school are 30 percent higher if the fathers are moderately involved and 55 percent higher if they are highly involved relative to if they have low involvement in the schools (model 1). A similar increase in the adjusted odds occurs when mothers are involved in their children's schools (model 1). The association between fathers' and mothers' involvement and children's enjoying school is apparent at all grade levels.

Participate in extracurricular activities. Children are more likely to participate in extracurricular activities when their mothers and fathers are involved in their schools. Because it is not possible to determine the direction of causation, another interpretation is that parents are involved because their children are participating in sports teams, orchestras, or other extracurricular activities that draw the parents to the schools as spectators, coaches, or advisors. Among children in grades 6 through 12, the adjusted odds that they participate in extracurricular activities are 48 percent higher if their fathers are moderately involved in their schools and are 88 percent higher if their fathers are highly involved in their schools (model 4). The odds that they participate in extracurricular activities are 146 percent greater if their mothers are highly involved in their schools relative to if their mothers have low involvement (model 4). Adding information on social capital in the home to the models reduces somewhat the influence of parental involvement on the odds that children participate in extracurricular activities (model 5).

Ever repeated a grade. The involvement of mothers and fathers, particularly mothers, is also important in reducing the likelihood that children in elementary school have ever repeated a grade. Among children in grades 1 through 5, the adjusted odds that they have repeated a grade are 35 percent lower if fathers are moderately involved and 34 percent lower (significant at the 0.10 level) if they are highly involved. The odds that children have ever repeated a grade are 50 percent lower if mothers are moderately involved and 45 percent lower if they are highly involved in their children's schools relative to if the mothers have low involvement. Among children in grades 6 through 12, the odds that they have ever repeated a grade are lower if their fathers are moderately or highly involved in their schools or their mothers are highly involved. These associations, however, are only significant at the 0.10 level.

Ever suspended or expelled. Mothers' involvement in school, but not fathers' involvement, reduces the likelihood that 6th through 12th graders have ever been suspended or expelled from school. The adjusted odds that children have ever been suspended or expelled are 24 percent lower if their mothers are moderately involved in their schools (significant at the 0.10 level) and are 43 percent lower if their mothers are highly involved in their schools relative to if their mothers have low levels of involvement. The

lack of association between fathers' involvement and the likelihood that children have ever been suspended or expelled may be due to the fact that some fathers become involved because their children are having behavioral problems.

Single-parent families. Table 7 shows the adjusted odds that children get mostly A's, enjoy school, participate in extracurricular activities, have ever repeated a grade, and have ever been suspended or expelled from school by the involvement of their mothers or fathers, after controlling for a variety of child and family characteristics. The other factors that were included in the models are the child's race/ethnicity, sex, parents' education, and household income. The single-mother families also include information on maternal employment. Because most fathers are employed full time, information on fathers' employment was not included in the models. Models 3 and 5 include measures of social capital in the families.[9]

Get mostly A's. Children in the 6th through 12th grade who live in single-parent families are more likely to get mostly A's if their parents are involved in their schools. In single-father families, the adjusted odds that children get mostly A's are twice as high for children whose fathers are highly involved in their schools compared to children whose fathers show low levels of involvement. Much of the association is due to the fact that such fathers are also involved at home as well. Once the social capital measures are added to the models, the influence of fathers' involvement in schools on children getting mostly A's is no longer significant. The importance of mothers' involvement in schools to children getting mostly A's only becomes significant after measures of social capital are added to the model. The adjusted odds that children in the 6th through 12th grade living in single-mother families get mostly A's are 70 percent greater if their mothers are highly involved rather than having only low levels of involvement in their schools. For children in grades 1 through 5, parents' involvement is not associated with making mostly A's after controlling for the other factors in the models.

Enjoy school. Single fathers' involvement in their children's schools is not associated with whether the children enjoy school. However, there is an association between single mothers' involvement and children's enjoyment of school. The association, however, is not consistent. Among children in grades 1 through 5, it appears that children whose mothers are moderately involved have a reduced likelihood that they enjoy school after measures of social capital are entered into the model. Among children in grades 6 through 12, children are more than twice as likely to enjoy school if their mothers are highly involved, but

[9] See footnote 28 on page 56 for a listing of the social capital measures that are included in the models.

the relationship is no longer significant once measures of social capital are added to the model.

Table 7.— Adjusted odds ratio of selected student outcomes, by fathers' and mothers' level of involvement in their schools and grade level: Students in grades 1-12 living in single-parent families, 1996

Parental involvement	Grades 1-12 Model 1[1]	Grades 1-5 Model 2[1]	Grades 1-5 Model 3[2]	Grades 6-12 Model 4[1]	Grades 6-12 Model 5[2]
Father's involvement	Gets mostly A's				
Moderate vs. low	1.88*	1.35	1.36	1.99	1.60
High vs. low	1.84*	1.12	1.13	2.23*	1.58
Mother's involvement					
Moderate vs. low	1.07	.72	.68	1.36	1.28
High vs. low	1.57*	1.09	.95	1.99	1.70*
Father's involvement	Enjoys school				
Moderate vs. low	.87	.68	.68	1.11	.84
High vs. low	1.73	1.84	2.03	1.65	1.13
Mother's involvement					
Moderate vs. low	.99	.69	.64*	1.19	1.11
High vs. low	1.73*	1.15	1.05	2.23*	1.79
Father's involvement	Participates in extracurricular activities[3]				
Moderate vs. low		1.99	1.95	.64	.59
High vs. low		2.34	2.16	2.46	2.46
Mother's involvement					
Moderate vs. low		1.36	1.17	1.72*	1.65*
High vs. low		2.27*	1.62	2.46*	2.10*
Father's involvement	Ever repeated a grade				
Moderate vs. low	1.13	1.55	1.38	1.06	1.06
High vs. low	.95	2.39	1.99	.76	.68
Mother's involvement					
Moderate vs. low	.53*	.57	.53*	.50*	.53*
High vs. low	.51*	.42*	.43*	.58*	.75
Father's involvement	Ever suspended or expelled[4]				
Moderate vs. low				.84	1.04
High vs. low				.28*	.30*
Mother's involvement					
Moderate vs. low				.75	.82
High vs. low				.58*	.71

*p<.05

[1] Odds ratios after controlling for children's race/ethnicity and sex, parents' education, household income, family type, and maternal employment, if there is a mother in the household.

[2] Odds ratios after controlling for factors listed in note 1 plus measures of social capital.

[3] Information on participation in extracurricular activities for children in grades 1 through 5 were obtained from parents' reports. Parallel information for children in grades 6 through 12 were obtained from youths' reports. Thus, there is no combined estimate of participation in extracurricular activities for children in grades 1-12.

[4] Only parents of children in grades 6 through 12 were asked whether their children had ever been suspended or expelled.

NOTE: See Appendix B, tables B4-B8 for adjusted odds ratios of student outcomes for all factors included in the models.
SOURCE: U.S. Department of Education, National Center for Education Statistics, 1996 National Household Education Survey.

Participate in extracurricular activities. Single fathers' involvement has a weak association with whether their 6th through 12th graders participate in extracurricular activities (significant at the 0.10 level) and no influence on whether their 1st through 5th graders participate in extracurricular activities. The involvement of single mothers in their children's schools increases the likelihood that their 6th through 12th graders participate in extracurricular activities. Children in grades 1 through 5 are also more likely to participate in extracurricular activities if their mothers are highly involved in their schools (model 2).

Ever repeated a grade. The involvement of single mothers, but not single fathers, reduces the odds that children have ever repeated a grade among children at all grade levels. The adjusted odds for children in the 1st through 5th grade are 58 percent lower and the adjusted odds for children in grades 6 through 12 are 42 percent lower if their mothers are highly involved in their schools compared to if they have low levels of involvement.

Ever suspended or expelled. The involvement of both single fathers and single mothers reduces the adjusted odds that their 6th through 12th graders have ever been suspended or expelled from school, though the influence of mothers' involvement is no longer significant once the social capital measures are added to the models. If single fathers are highly involved in their children's schools, the odds that children have ever been suspended or expelled are 72 percent lower than if the fathers have low levels of involvement.

Involvement of Nonresident Fathers

Nowadays, with the high rates of non-marriage, separation, and divorce, many children spend part of their childhoods living apart from at least one of their biological parents (Zill, 1996). Extensive research has been conducted on the effects of divorce for children's well-being (Kelly, 1993; Furstenberg and Cherlin, 1991; Wallerstein, 1991; Chase-Lansdale and Hetherington, 1990; Hetherington, 1981, 1979) and the problems experienced by children growing up in single-parent families (McLanahan and Sandefur, 1994). Such research has found that children are better off financially, psychologically, and emotionally when they are raised by two parents. However, reviewers of the research also note that the effects of divorce should not be overstated. The majority of children whose families are disrupted by divorce show no adverse signs several years later. For a small proportion of children, however, the consequences may be longer lasting. Researchers have found effects of marital disruption 12 to 22 years later in such outcomes as poor relationships with parents, increased levels of problem behavior, increased likelihood of dropping out of school and receiving psychological help, and lower likelihood of attending college (McLanahan and

Sandefur, 1994; Zill, Morrison, and Coiro, 1993). Although the overall likelihood of these outcomes was relatively small, for some outcomes, such as dropping out of school, the risk was doubled.

It is not uncommon following the breakup of a family for one of the parents to become increasingly detached, paying little or no child support and visiting only infrequently, if at all (Seltzer, 1991; Furstenberg and Nord, 1985; Furstenberg et al., 1983). Because mothers are more likely than fathers to retain custody of the children in the event of divorce, most of the extant research has focused on noncustodial fathers and the consequences for children of living apart from their fathers (McLanahan and Sandefur, 1994; Amato, 1993). Existing research is mixed about whether the continuing involvement of nonresident fathers is important to children's lives. Several large-scale studies have found no association between the amount of contact a non-custodial father has with his children and an assortment of measures of child well-being (King, 1994; Furstenberg, Morgan, and Allison, 1987). Other studies, however, have found continued contact to be related to improved psychological scores, fewer behavioral problems, and better peer relationships (Peterson and Zill, 1986; Wallerstein and Kelly, 1980). Most of the studies that examine the influence of paternal contact on children examine the amount of contact that nonresident fathers have with their children. However, a simple count of days may not accurately reflect the role that fathers play in their children's lives. There is a need to consider other aspects of fathers' presence in children's lives, such as the quality of the relationship between fathers and their children, the types of activities that fathers share with their children, whether the visits are forced upon or welcomed by the children, whether the children's lives are disrupted by the contact (e.g., by having to travel long distances away from friends and family in order to visit their fathers), and whether the contact reflects the continuing presence of committed and involved fathers in their children's lives.

In this section, information on the involvement of nonresident fathers in their children's schools is presented and discussed. Some data on the involvement of nonresident mothers are also presented as a contrast to that of fathers. This section also examines factors that are associated with nonresident fathers' involvement and whether such involvement is linked to selected student outcomes. According to data from the NHES:96, approximately 16.8 million (34 percent) children in kindergarten through 12th grade have fathers who live apart from them. A much smaller number, 4.1 million (8 percent), have mothers who live outside the home.

Children's Contact with Nonresident Fathers and Mothers

According to the reports of the custodial parents, approximately one-quarter of the nonresident

fathers had not had contact with their children in kindergarten through 12th grade in more than a year. Similarly, 10 percent of nonresident mothers had had no contact with their children in more than a year. These figures indicate, however, that three-quarters of nonresident fathers and 90 percent of nonresident mothers did have contact with their school-aged children in the previous year. The finding that nonresident mothers are more likely than nonresident fathers to have had at least some contact with their children in the previous year is consistent with previous research (Nord and Zill, 1996).

The fact that 75 percent of the students in the NHES:96 have had contact with their nonresident fathers in the past year is notable. In the early 1980s, it was estimated that just over half of children ages 6 to 17 years with nonresident fathers had had contact with their fathers in the past year (Furstenberg et al., 1983). School-aged children in 1996 were more likely to have at least some contact with their nonresident fathers than were children 15 years ago.

Types of Activities in Which Nonresident Fathers and Mothers Participate

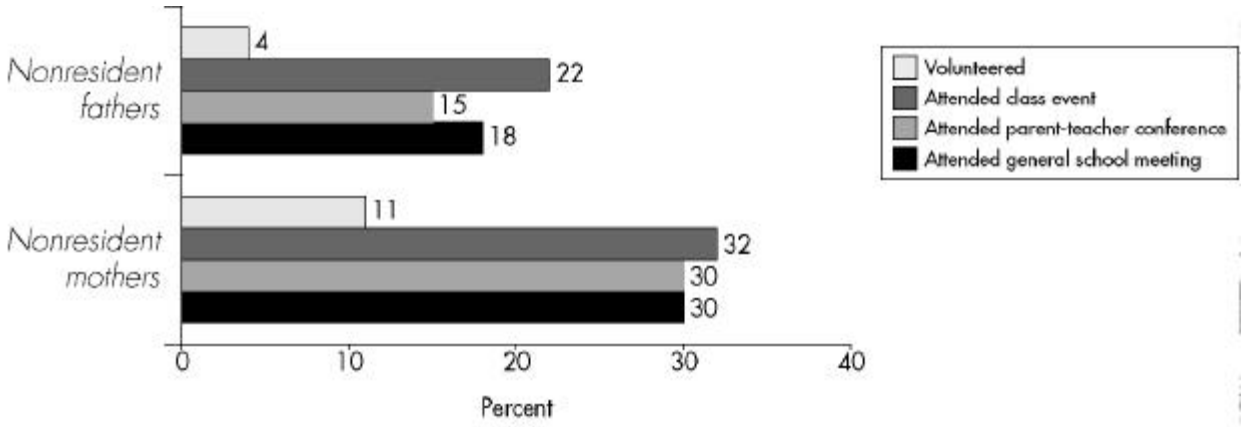
Custodial parents who reported that the nonresident parent has had contact with their children in the past year reported on the involvement of the nonresident parent in four school activities: attended a general meeting, attended a regularly scheduled parent-teacher conference, attended a class or school event, or volunteered at the school.

The most common activity of nonresident fathers is attending a school or class event (figure 15). Twenty-two percent of nonresident fathers who had seen their children in the last year attended at least one such event according to the reports of custodial mothers or the children's guardians. This compares with 53 percent of fathers in two-parent families. Approximately 18 percent of nonresident fathers attended a general school meeting and 15 percent attended a parent-teacher conference. In contrast, 55 percent of fathers in two-parent families attended a general school meeting since the beginning of the school year and 39 percent attended a parent-teacher conference. Clearly, involvement in schools by nonresident fathers is substantially lower than that of fathers in two-parent families; however, the proportion of nonresident fathers participating in school activities is by no means trivial.

Nonresident mothers are more likely than nonresident fathers to attend a class or school event, a parent-teacher conference, or a general school meeting. Just under one-third of nonresident mothers attended each of these events according to the reports of the custodial parent or guardian (figure 15). However, as with nonresident fathers, their participation in school activities is substantially lower than that

of resident mothers.

Figure 15. — Percent of children whose nonresident fathers and mothers participated in each school activity: Students in grades K-12, 1996*



* Questions on nonresident parents' involvement were only asked if children had seen their nonresident parents in the last year. According to the reports of custodial parents, 75 percent of nonresident fathers and 90 percent of nonresident mothers had had contact with their children in the last year.

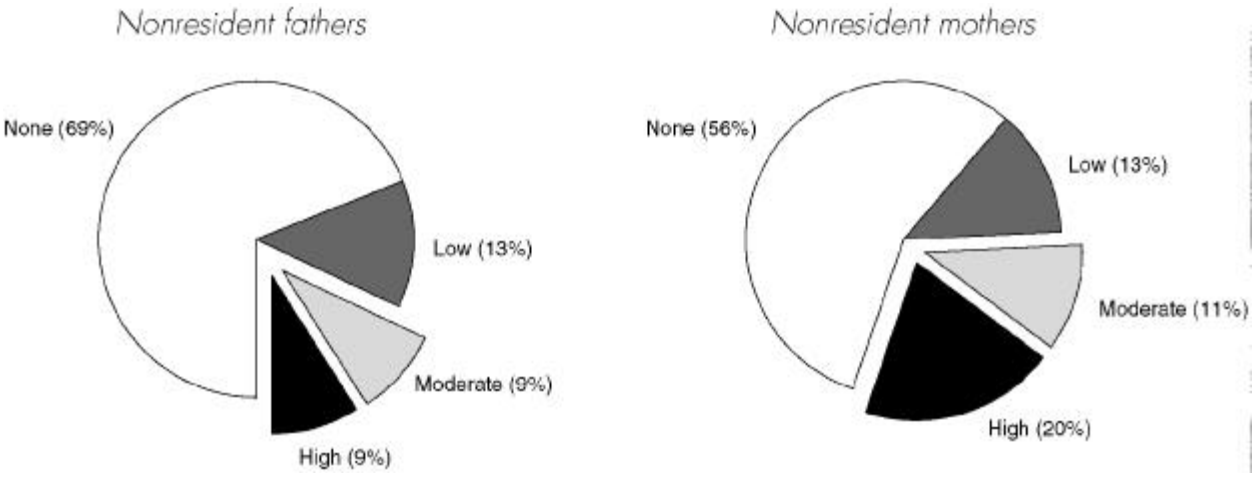
SOURCE: U.S. Department of Education, National Center for Education Statistics, 1996 National Household Education Survey.

Levels of Involvement in School Activities by Nonresident Fathers and Mothers

A large proportion of nonresident parents have not participated in any of the school activities, even though they have seen their children in the previous year. Approximately 69 percent of the nonresident fathers and 56 percent of the nonresident mothers had participated in none of the activities (figure 16). In contrast, only 25 percent of resident fathers and 8 percent of resident mothers in two-parent families had not participated in any of the school activities since the beginning of the school year. One explanation may be that some of these parents do not live nearby and, thus, find it difficult to participate. According to data from the 1990 Survey of Income and Program Participation conducted by the U.S. Bureau of the Census, 38 percent of nonresident parents live in the same city or county as their children (Nord and Zill, 1996). This same study found that contact decreased substantially as parents moved away from the city or county in which their children lived. Such information was not collected in the NHES:96, so it is not possible to determine the extent to which distance is interfering with the involvement of nonresident parents in their children's schools.

In spite of the large proportion of nonresident parents with no involvement in their children's schools, 31 percent of nonresident fathers and 44 percent of nonresident mothers who have had contact with their children in the past year have attended at least one of the four activities. Eighteen percent of

Figure 16. — Level of involvement[1] in school of nonresident fathers and mothers who have seen their children within the last year[2]: Students in grades K-12, 1996



[1] Low involvement is participation in one activity; moderate involvement is participation in two activities; and high involvement is participation in three or four activities.

[2] Questions on nonresident parents' involvement were only asked if children had seen their nonresident parents in the last year. According to the reports of custodial parents, 75 percent of nonresident fathers and 90 percent of nonresident mothers had had contact with their children in the last year.

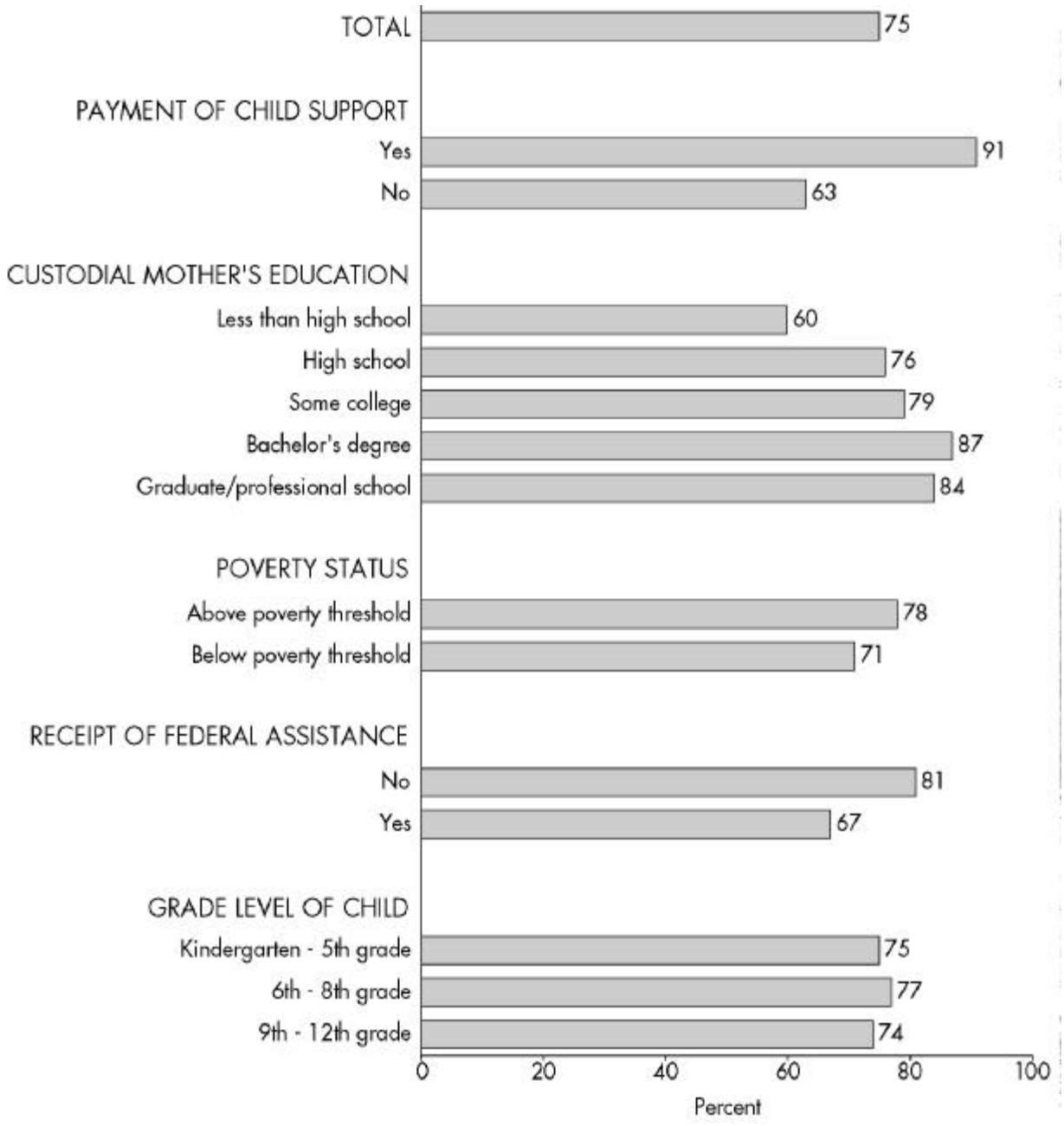
SOURCE: U.S. Department of Education, National Center for Education Statistics, 1996 National Household Education Survey.

nonresident fathers and 31 percent of nonresident mothers have participated in at least two of the four activities. And 9 percent of nonresident fathers and 20 percent of nonresident mothers have attended at least three of the school activities.

Influences on the Involvement of Nonresident Fathers

Several factors have been found to be associated with fathers' continued contact with their children following the disruption of families. These factors include whether fathers pay child support, the custodial mothers' education and household income, and ages of the children (Nord and Zill, 1996; Furstenberg and Cherlin, 1991; Seltzer, Schaeffer, and Charng, 1989). Previous studies have found that children who are younger, whose fathers pay child support, who have well-educated mothers, and who have higher family incomes are more likely to have seen their fathers within the past year than are other children. The results based on the NHES:96 are similar. Children are more likely to have had some contact with their fathers in the past year if their fathers have paid some child support, if the custodial mothers are more educated, and if their families are not experiencing economic difficulties (figure 17). There were no differences in

Figure 17. — Percent of children who have had contact with their nonresident fathers in the previous year, by payment of child support and selected family characteristics: Students in grades K-12, 1996



SOURCE: U.S. Department of Education, National Center for Education Statistics, 1996 National Household Education Survey.

NHES:96 in the proportion who had seen the children in the previous year by the grade level of the children.

These factors were entered together in multivariate models to determine whether their influence remained important after controlling for the other factors in the models (table 8). Three separate models are shown for nonresident fathers and for nonresident mothers. These models show the factors that are associated with the odds that nonresident parents have had contact in the past year with their children in grades K-12 (model 1), grades K-5 (model 2), and grades 6-12 (model 3). The results remain generally the same for children at all grade levels. The strongest influence on whether nonresident fathers have had contact with their children in the past year is whether they have paid any child support. Mothers' education and household income are also positively associated with continued father contact, as others studies have found. The one exception is among children in kindergarten through 5th grade. For these children, household income has no influence on whether their fathers have had contact with them or not in the last year. Children's grade level also has no significant influence on whether fathers have had contact with them. However, fathers are more likely to have had contact with their children if the mothers have not remarried.

These same factors are also associated with nonresident fathers being highly involved in their children's schools (figure 18). Nonresident fathers who have paid any child support are more likely than those who have paid none to be highly involved in their children's schools (10 percent versus 7 percent). High involvement by the nonresident fathers also tends to increase as the custodial mothers' education increases and if the custodial mothers are not experiencing economic difficulties. As with custodial parents, there is a tendency for nonresident fathers to decrease their involvement in their children's schools as the children move from elementary to middle to high school.

These factors were entered together in multivariate models to determine whether they remained important influences on nonresident fathers' involvement in their children's schools after controlling for the other factors in the models. Because only a small proportion of nonresident fathers are highly involved in their children's schools, for the multivariate models the dependent variable used was whether the nonresident fathers were moderately to highly involved in their children's schools, that is, whether they had attended two or more of the school activities since the beginning of the school year. In addition to the above factors, one set of models included the resident mothers' level of involvement in the children's schools.

Table 8. — Adjusted odds ratios of nonresident fathers' contact with their children in the last year, by child and resident family characteristics and whether nonresident fathers paid any child support in the last year: Students in grades K-12, 1996

Characteristic	All children with a nonresident father			Children living with their mothers		
	Grades K-12 Model [1]	Grades K-5 Model [2]	Grades 6-12 Model [3]	Grades K-12 Model [1]	Grades K-5 Model [2]	Grades 6-12 Model [3]
Child's race and ethnicity						
Black, non-Hispanic vs. white, non-Hispanic	1.11	1.31	0.94	1.20	1.58*	0.90
Hispanic vs. white, non-Hispanic	0.72*	1.02	0.54*	0.74*	1.06	0.54*
Child's sex (male)	0.97	1.04	0.90	0.90	0.96	0.84
Child's grade level						
Grades 6-8 vs. grades K-5	1.03			1.05		
Grades 9-12 vs. grades K-5	0.94			0.84		
Grade 6-8 vs. grades 9-12			1.12			1.25
Household income	1.06*	1.03	1.07*	1.06*	1.04	1.07*
Education of mother/guardian	1.20*	1.27*	1.14*	1.23*	1.32*	1.16*
Family type						
Single mother vs. stepfather family	1.88*	1.93*	1.80*	1.88*	1.90*	1.86*
Nonparent/guardian vs. stepfather family	1.13	1.03	1.21			
Paid any child support in last year	4.95*	5.31*	4.71*	5.10*	5.47*	4.85*
	F(10,71)=29.23	F(8,73)=21.41	F(9,72)=24.46	F(9,72)=33.46	F(7,74)=26.41	F(8,73)=24.42

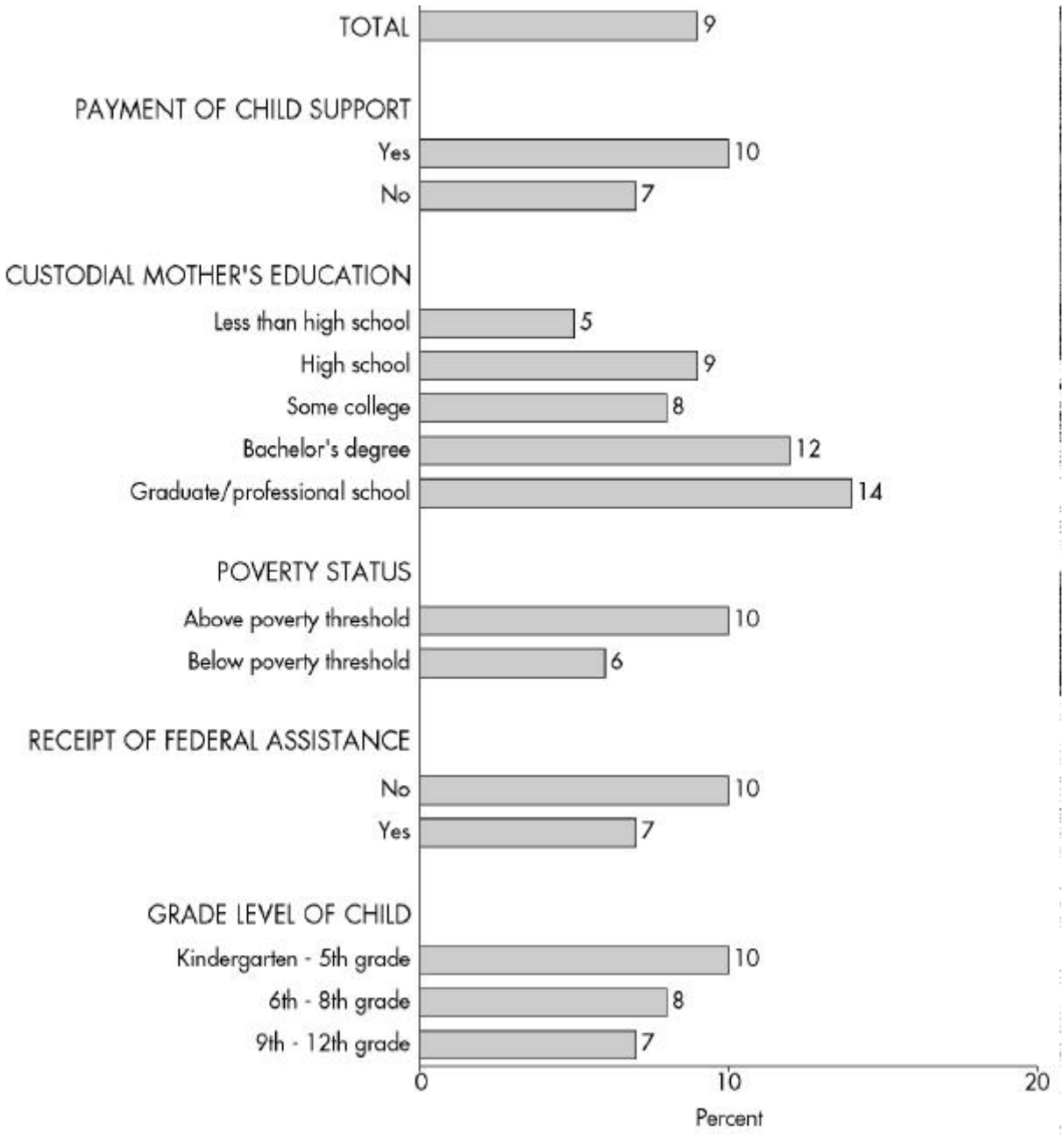
* $p < .05$

[1] Model 1 shows that factors that are associated with whether children in grades K-12 have had contact with the past year with their nonresident fathers and mothers.

[2] Models 2 and 3 show that same information for children in grades K-5 and 6-12, respectively.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1996 National Household Education Survey.

Figure 18. — Percent of children whose nonresident fathers have high involvement* in their schools, by payment of child support and selected family characteristics: Students in grades K-12, 1996



* Restricted to children who have had contact with their nonresident fathers in the past year.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1996 National Household Education Survey.

Even after controlling for the other factors in the model, the tendency for nonresident fathers to become less involved in their children's schools as the children grow older is evident. The adjusted odds that children's fathers are moderately to highly involved in their schools are 36 percent less if the children are in grades 6 through 8 and 46 percent less if they are in grades 9 through 12 compared to if they are in kindergarten through 5th grade (table 9). Household income, mothers' education, whether the children live in single-mother families or in stepfather families, mothers' involvement in their schools, and whether the nonresident fathers have paid any child support are all significant influences on nonresident fathers' involvement among children in kindergarten through 12th grade. The specific factors that are important influences on nonresident fathers' involvement, however, differ somewhat by the grade level of the children.

Children in kindergarten-5th grade. Child support remains an important influence on nonresident fathers' involvement in their children's schools among children in kindergarten through 5th grade, though it loses some of its influence when mothers' involvement in school is added to the model. Moreover, the influence of child support on nonresident fathers' involvement in their children's schools is considerably smaller than it was on nonresident fathers' contact with their children. Other important influences on nonresident fathers' involvement among children in these grades are mothers' education and mothers' involvement in the children's schools. The likelihood that nonresident fathers are moderately to highly involved in their children's schools is also higher if the mothers have not remarried (significant at the 0.10 level). Household income has no influence on whether nonresident fathers are involved in the children's schools.

Children in 6th-12th grade. Whether nonresident fathers pay child support has no influence on their level of involvement in the schools of 6th through 12th graders, nor does mother's education. However, nonresident fathers are more likely to be moderately to highly involved in their children's schools as the resident families' household incomes and mothers' involvement in the children's schools increase. The strongest influence on nonresident fathers' involvement in their 6th through 12 graders' schools, however, is mother's marital status. Nonresident fathers are much more likely to be moderately to highly involved in their children's schools if the mothers are single than if there is a stepfather present. It is not clear whether the reason for the association is due to the time elapsed since the mothers and fathers separated or to the presence of a stepfather.

Table 9. — Adjusted odds ratios of nonresident fathers' moderate to high involvement in their children's schools, by child and resident family characteristics and whether nonresident fathers paid any child support in the last year: Students in grades K-12, 1996[1]

Characteristic	Grades K-12			Grades K-5			Grades 6-12		
	All children	Children living with mothers		All children	Children living with mothers		All children	Children living with mothers	
	Model 1 [2]	Model 2 [3]	Model 3 [3]	Model 1 [2]	Model 2 [3]	Model 3 [3]	Model 1 [2]	Model 2 [3]	Model 3 [3]
Child's race and ethnicity									
Black, non-Hispanic vs. white, non-Hispanic	1.20	1.23	1.30	1.23	1.25	1.31	1.15	1.22	1.25
Hispanic vs. white, non-Hispanic	1.38	1.42*	1.46*	1.27	1.28	1.30	1.55	1.63*	1.72*
Child's sex (male)	0.98	0.99	0.99	1.12	1.15	1.14	0.84	0.83	0.86
Child's grade level									
Grades 6-8 vs. grades K-5	0.66*	0.67*	0.76*						
Grades 9-12 vs. grades K-5	0.54*	0.55*	0.74						
Grade 6-8 vs. grades 9-12							1.26	1.25	1.00
Household Income	1.07*	1.07*	1.06*	1.05	1.04	1.03	1.12*	1.12*	1.11*
Education of mother/guardian	1.21*	1.23*	1.16*	1.27*	1.28*	1.23*	1.14	1.17	1.11
Family type									
Single mother vs. stepfather family	1.93*	1.90*	1.86*	1.54	1.52	1.49	2.48*	2.44*	2.44*
Nonparent/guardian vs. stepfather family	1.40			1.28			1.63		
Paid any child support in last year	1.35*	1.35*	1.28*	1.42*	1.42*	1.36	1.26	1.28	1.21
Involvement of resident mother			1.45*			1.28*			1.63*
	F(10,71)=9.01	F(9,72)=10.64	F(10,71)=13.65	F(8,73)=5.46	F(7.74)=5.37	F(8.73)=4.86	(F9,72)=4.78	F(8,73)=6.49	(F(9,72)=15.18

* $p < .05$.

[1] All models are restricted to children who have had contact with their nonresident fathers in the past year.

[2] Model 1 shows the factors that are associated with whether the nonresident fathers of children in grades K-12 are moderately to highly involved in their schools.

[3] Models 2 and 3 show the same information for children in grades K-5 and 6-12, respectively.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1996 National Household Education Survey.

Involvement of Nonresident Fathers and Student Outcomes

In this section, the influence of nonresident fathers' involvement in their children's schools on five student outcomes is examined. All children with nonresident fathers are included so that contrasts can be made between children with and without any contact with their nonresident fathers and among those whose fathers show different levels of involvement in their schools. Results are presented for children in grades 1 through 12 and in grades 1 through 5 and grades 6 through 12 so that differences in the influence of nonresident fathers involvement on student outcomes can be examined for different grade levels. As described below, there is an association between nonresident fathers' involvement in their children's schools and all five outcomes, though the influence is stronger for some outcomes than for others and is more apparent among children in grades 6 through 12 than among children in grades 1 through 5.

Get mostly A's. As table 10 indicates, nonresident fathers' involvement in their children's schools is associated with increased odds that children in grades 1 through 12 get mostly A's (models 1 and 2). This influence is reduced somewhat when the resident mothers' involvement in school is included in the model (model 3). When looking at the association by grade level of the children, nonresident fathers' involvement is not associated with whether children in grades 1 through 5 get mostly A's. However, nonresident fathers' involvement in their children's schools is associated with increased odds that 6th through 12th graders get mostly A's. The adjusted odds that 6th through 12th graders gets mostly A's increase by 42 percent if their fathers have attended one school activity and by 54 percent if their fathers have attended at least two school activities compared to children who have had contact with their nonresident fathers but whose fathers have not participated in any of the school activities (model 1). These results pertain to all 6th through 12th graders with a nonresident father. Among such children who are living with their mothers (whether in a stepfamily or in a single-parent family), the adjusted odds that they get mostly A's are also greater if their nonresident fathers have participated in school activities compared to if they have not (model 2). However, once mothers' involvement in school is added to the model, the influence of nonresident fathers' involvement is reduced (model 3).

Enjoy school. Children in grades 1 through 12 are more likely to enjoy school if their nonresident fathers are moderately to highly involved in their schools than if their fathers have contact with them but do not participate in any of the activities. Children also appear to enjoy school more even if their fathers participate in only one activity than if they participate in none (significant at the 0.10 level). The relationship between nonresident fathers' involvement in their children's schools and children's enjoyment of school is weaker when the sample is restricted to children who live with their mothers. However, there is

still some evidence that children are more likely to enjoy school if their fathers are moderately to highly involved in their schools (significant at the 0.10 level). When looking at the association by children's

Table 10.— Adjusted odds ratios of selected student outcomes, by nonresident fathers' contact and level of involvement in their children's schools: Students in grades 1-12, 1996

Nonresident fathers' involvement	Grades 1-12			Grades 1-5			Grades 6-12		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
	Gets mostly A's								
Moderate/high	1.39*	1.38*	1.28	1.30	1.35	1.32	1.54*	1.42	1.25
One activity	1.31*	1.34*	1.30*	1.19	1.20	1.19	1.42*	1.45*	1.36
No contact in last year	0.90	0.85	0.86	1.00	0.90	0.91	0.79	0.80	0.80
Never contact with child	1.08	1.14	1.14	0.88	0.91	0.91	1.36	0.69	1.48
	Enjoys school								
Moderate/high	1.34*	1.25	1.15	1.07	1.01	0.99	1.70*	1.58*	1.31
One activity	1.22	1.16	1.12	1.27	1.13	1.11	1.22	1.22	1.14
No contact in last year	1.23	1.26	1.28	1.06	1.02	1.03	1.40	1.49*	1.52*
Never had contact with child	1.17	1.11	1.12	0.99	0.93	0.93	1.36	1.28	1.31
	Participates in extracurricular activities								
Moderate/high				1.51	1.55	1.40	2.46*	2.64*	2.10*
One activity				1.79*	1.80	1.70	2.12*	2.39*	2.18*
No contact in last year				1.38	1.46	1.55	1.68*	1.52*	1.52*
Never had contact with child				1.05	1.00	0.98	1.08	1.21	1.52
	Ever repeated a grade								
Moderate/high	0.52*	0.53*	0.59*	0.52	0.55	0.60	0.52*	0.50*	0.57*
One activity	0.61*	0.58*	0.61*	0.52	0.49	0.51	0.62	0.59*	0.62
No contact in last year	0.99	1.07	1.06	1.20	1.23	1.17	0.88	0.97	0.82
Never had contact with child	0.83	0.84	0.84	1.00	0.98	1.00	0.76	0.79	0.78
	Ever suspended or expelled								
Moderate/high							0.41*	0.42*	0.48*
One activity							0.50*	0.45*	0.47*
No contact in last year							0.83	0.71	0.71
Never had contact with child							0.62*	0.68	0.68

* $p < .05$.

NOTES: Contrast group is fathers who had contact with their children in the past year but did not participate in any school activities. Kindergartners were excluded because only two of the five outcomes (ever repeated a grade and participated in extracurricular activities) were asked about them.

Model 1 applies to all children in a given grade level with nonresident fathers.
Models 2 and 3 apply to all children in a given grade level who live with their mothers and have nonresident fathers.
All models control for the following variables: **Child characteristics** (race/ethnicity, sex); **Resident family characteristics** (mothers' or guardians' education, household income, family type—mother-only versus stepfather family, nonparent/guardian vs. stepfather family); **whether nonresident fathers paid any child support in the last year.**
Model 3 also controls for the **mothers' involvement in the children's schools.**

See Appendix B, tables B9-B11 for adjusted odds ratios of student outcomes for all factors included in the models.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1996 National Household Education Survey.

grade level, there is no association between nonresident fathers' involvement in their children's schools and the odds that children in grades 1 through 5 enjoy school. However, the odds that children in grades 6 through 12 enjoy school are greater among children whose fathers are moderately to highly involved in their schools compared to children who have had contact with their fathers, but whose fathers have participated in none of the activities. This association weakens when mothers' involvement is included in the model.

Participate in extracurricular activities. The information on participation in extracurricular activities for children in grades 1 through 5 was obtained from parents' reports. Parents were not asked about their 6th through 12th graders' participation in extracurricular activities. The information on such participation among the older children was obtained from the youth themselves. The results in table 10 indicate that nonresident fathers' involvement in their children's schools is associated with a greater odds that the children are involved in extracurricular activities, particularly among children in grades 6 through 12. Among older children, the association persists even after mothers' involvement in the schools is included in the model.

These models also indicate that children who have had no contact with their fathers in more than a year are more likely to be involved in extracurricular activities than children who have seen their fathers in the past year but whose fathers participated in none of the school activities. Part of the explanation for this pattern may be that children are spending time with their nonresident fathers instead of participating in extracurricular activities. However, it is not possible to determine with the NHES data whether this supposition is correct or not.

Ever repeated a grade. Nonresident fathers' involvement in their children's schools reduces the odds that children in grades 1 through 12 have ever repeated a grade, even after controlling for mothers' level of involvement and the other factors in the model. The odds that children in grades 1 through 12 have ever repeated a grade are 39 percent less if their nonresident fathers have participated in one activity at school and 48 percent less if their nonresident fathers have participated in at least two activities at their schools, as compared to their fathers' simply having had contact with them but not participating in any of the school activities (model 1). The pattern is similar when the sample is restricted to children living with their mothers (models 2 and 3). There is a weak association between the odds that children in grades 1 through 5 have ever repeated a grade and the involvement of their nonresident fathers (significant at the 0.10 level). Children in grades 6 through 12, however, are significantly less likely to have ever repeated a grade if their nonresident fathers are involved in their schools.

Ever suspended or expelled. The question on whether the children have ever been suspended or expelled from school was only asked of children in grades 6 through 12. Nonresident fathers' involvement in schools decreases the adjusted odds that children have ever been suspended or expelled from school even after controlling for mothers' involvement in school. The adjusted odds that children have ever been suspended or expelled among all children in grades 6 through 12 who have nonresident fathers' (model 1) are 50 percent less if the fathers have participated in only one activity and 59 percent less if the fathers have participated in two or more of the school activities.

Nonresident fathers with contact but no involvement in their children's schools. Another interesting pattern in the models is that children who have had no contact with their nonresident fathers in the last year are somewhat more likely to enjoy school than children who have had contact, but whose fathers have not participated in any of the school activities. This association is strongest among children in grades 6 through 12 and persists even after controlling for mothers' involvement in the schools. It may be that children with some contact with their fathers, but whose fathers are not as involved as the children might wish, face more ongoing psychological strain that also affects their attitude towards school than children who do not expect that their fathers are going to be involved because they have not seen them at all. There is some support for this speculation in the literature (Nord and Zill, 1996). There is other evidence that children who have not seen their fathers at all in the past year are somewhat better off than children who have seen their fathers but whose fathers have had no involvement in their schools. Even after controlling for mothers' involvement in their schools, the adjusted odds that children have ever been suspended or expelled are 29 percent less (significant at 0.10 level) if they have not seen their fathers at all in the past year compared to children who have seen their fathers, but whose fathers have not participated in any of the school activities. Moreover, for two of the outcomes, getting mostly A's and having ever repeated a grade, there is no difference in the outcomes among children whose fathers have had contact with them but did not participate in any of the school activities and children who have not had any contact with their fathers in more than a year or who have never had contact with their fathers.

Taken together, these results may offer a clue as to why existing studies yield mixed results on the importance of nonresident fathers' involvement in children's lives: The measures that are used to assess nonresident fathers' involvement may not be adequate. Often involvement is measured by the simple measure days of contact. The results in these models suggest that it is not contact, per se, that is important, but rather other dimensions of involvement that go along with contact that are beneficial to children's

lives.[10] Indeed, contact may be a mixed blessing if the contact is enough to tantalize children but not enough to satisfy. Although with the data in hand it is not possible to determine what it is about involvement in schools that is beneficial for children it seems likely that fathers who make the effort to attend school functions may be demonstrating to their children how much they care about them and the importance that they place on education. Their involvement may also reflect their level of commitment to their children. If future studies include more specific measures about what fathers do with their children and the circumstances under which contact occurs (e.g., is it regular, is it disruptive to the children, how do the children feel about it), then more consistency in the results might be found.

Overall, the results in this section provide strong evidence that nonresident fathers' involvement in their children's schools is important to children, particularly to older children.

[10]One reviewer noted that the models presented in table 10 do not include information on nonresident fathers' frequency of contact with their children. To address the reviewer's concerns, additional models were estimated that included information on both nonresident fathers' frequency of contact with their children and their level of involvement in their children's schools. Model 2 was re-estimated for three of the five outcomes shown in table 10 with information on frequency of contact added to the existing set of explanatory variables. The outcomes examined were the following: get mostly A's, ever repeated a grade, and ever suspended or expelled. The first two outcomes were examined for children in grades 1 through 12. The third outcome was examined for children in grades 6 through 12.

When both nonresident fathers' frequency of contact and their level of involvement in their children's schools are included in the same model, *it is their involvement in school, <u>not</u> their frequency of contact that is important.* Nonresident fathers' involvement in their children's schools remains a significant influence on all three outcomes, even after controlling for their frequency of contact. Nonresident fathers' frequency of contact with their children, on the other hand, is not a significant influence on any of the outcomes after controlling for their school involvement.

METHODOLOGY AND DATA RELIABILITY

Survey Methodology

The 1996 National Household Education Survey (NHES:96) is a telephone survey conducted by Westat for the U.S. Department of Education, National Center for Education Statistics (NCES). Data collection took place from January through April of 1996. The sample was selected using list-assisted, random-digit-dialing (RDD) methods. Data were collected using computer-assisted telephone interviewing (CATI) technology. The sample was drawn from the civilian, noninstitutionalized population in households in the 50 states and the District of Columbia.

The Parent/Family Involvement in Education (PFI) and Civic Involvement (CI) components of the NHES:96, which are the basis of this report, employed a sample of children and youth from age 3 through 12th grade. Up to three instruments were used to collect information included in this report. The first instrument was a set of household screening items (Screener) administered to an adult member of the household, which was used to determine whether any children of the appropriate ages lived in the household, to collect information on each household member, and to identify the appropriate parent/guardian to respond for the sampled child. For sampling purposes, children residing in the household were grouped into younger children, age 3 through grade 5, and older children, in grades 6 through 12. One younger child and one older child from each household could have been sampled for the NHES:96. If the household contained more than one younger child or more than one older child, one from each category was randomly sampled as an interview subject. For households with youth in 6th through 12th grade who were sampled for the survey, an interview was conducted with the parent/guardian most knowledgeable about the care and education of the youth, and following completion of that interview and receipt of parental permission, an interview also was conducted with the youth.

Response Rates

For the NHES:96 survey, Screeners were completed with 55,838 households, of which 19,337 contained one or more sampled children. The response rate for the Screener was 69.9 percent. A total of 20,792 PFI/CI interviews with parents of children age 3 through 12th grade were completed. The completion rate for this interview (the percentage of interviews completed with parents of sampled children) was 89.4 percent. Thus, the overall response rate for the PFI/CI interview with parents (i.e., the product of the Screener response rate and the parent interview completion rate) was 62.5 percent. A total of 8,403 interviews were conducted with youth in 6th through 12th grade. The completion rate for interviews with youth (i.e., the percentage of interviews completed with sampled youth) was 76.4 percent. Thus, the response rate was 53.4 percent (the Screener response rate times the youth completion rate).

For the NHES:96, item nonresponse (the failure to complete some items in an otherwise completed interview) was very low. For some items in the interview, a response of don't know or refused was accepted as a legitimate response. Using an imputation method called a "hot-deck procedure" (Kalton and Kasprzyk, 1986), responses were imputed for missing values (i.e., "don't know" or "refused" for items not specifically designated to have those legitimate response categories, or "not ascertained"). As a result, no missing values remain. Item nonresponse rates for variables in this report are generally less than 2 percent. The following items used in this report had nonresponse rates greater than 2 percent. For each item, the variable name, a description of the variable, number of eligible respondents, and item nonresponse rate are shown.

Variable	Label	Number eligible	Item nonresponse rate
SNUDSTUD	Number of students at child's school	17,536	7.11%
SETEADIS	Teachers maintain discipline in the classroom	16,151	2.02
SERESPCT	Students and teachers respect each other	16,151	2.15
SERPRIDIS	Principal maintains discipline in the school	16,151	2.77
SEAFTRHS	Child will attend school after high school	9,393	5.16
SECOLLEG	Child will graduate from a 4 year college	8,678	11.96
NRLIVEV1	Time since first nonresident parent lived in child's household	6,803	3.38
NRCONTA1	Child has had contact with first nonresident parent	6,736	2.29
NRLIVAR2	Child's living arrangements - second nonresident parent	733	3.55
NRLIVEV2	Time since second nonresident parent lived in child's household	624	8.97
N4CONTA2	Child has had contact with second nonresident parent	606	5.94
NRLSTCO1	Number given for time since first nonresident parent last saw child	2,138	4.96
NRLSTNU1	Time since first nonresident parent last saw child	1,817	5.61
NRMEET1	First nonresident parent attended a general school meeting	2,833	5.37
NRSPORT1	First nonresident parent attended a class event	5,526	5.01
NRVOLNT1	First nonresident parent volunteered at school	5,526	5.37
NRBAC1	First nonresident parent attended a back-to-school night	2,693	5.94
NRATTPT1	First nonresident parent attended a PTA meeting	2,477	6.22
NRSUPRT1	First nonresident parent paid child support in past year	7,240	3.26
NRLSTCO2	Number given for time since second nonresident parent last saw child	258	17.44
NRLSTNU2	Time since second nonresident parent last saw child	186	17.20
NRMEET2	Second nonresident parent attended a general school meeting	201	10.45
NRSPORT2	Second nonresident parent attended a class event	403	10.92
NRVOLNT2	Second nonresident parent volunteered at school	403	10.92
NRBAC2	Second nonresident parent attended a back-to-school night	202	12.87
NRATTPT2	Second nonresident parent attended a PTA meeting	193	14.51

Variable	Label	Number eligible	Item nonresponse rate
NRSUPRT2	Second nonresident parent paid child support in past year	681	7.20
HINCOME	Total household income, grouped	20,792	10.61
HINCMEXT	Exact household income to nearest $1,000	3,425	37.05

Data Reliability

Estimates produced using data from the NHES:96 are subject to two types of error, sampling and nonsampling errors. Nonsampling errors are errors made in the collection and processing of data. Sampling errors occur because the data are collected from a sample rather than a census of the population.

Nonsampling Errors

Nonsampling error is the term used to describe variations in the estimates that may be caused by population coverage limitations and data collection, processing, and reporting procedures. The sources of nonsampling errors are typically problems like unit and item nonresponse, the differences in respondents' interpretations of the meaning of the questions, response differences related to the particular time the survey was conducted, and mistakes in data preparation.

In general, it is difficult to identify and estimate either the amount of nonsampling error or the bias caused by this error. In the NHES:96, efforts were made to prevent such errors from occurring and to compensate for them where possible. For instance, during the survey design phase, focus groups and cognitive laboratory interviews were conducted for the purpose of assessing respondent knowledge of the topics, comprehension of questions and terms, and the sensitivity of items. The design phase also entailed CATI instrument testing and an extensive, multi-cycle field test.

An important nonsampling error for a telephone survey is the failure to include persons who do not live in households with telephones. About 93 percent of all students in kindergarten through 12th grade live in households with telephones. Since the sample for the NHES:96 was drawn from households with telephones, the estimates were adjusted using control totals from the Census Bureau's Current Population Survey (CPS) so that the totals were consistent with the total number of civilian, noninstitutionalized persons in all (telephone and nontelephone) households.

Another potential source of nonsampling error is respondent bias. Respondent bias occurs when respondents systematically misreport (intentionally or unintentionally) information in a study. There are many different forms of respondent bias. One of the best known is *social*

desirability bias, which occurs when respondents give what they believe is the socially desirable response. For example, surveys that ask about whether respondents voted in the most recent election typically obtain a higher estimate of the number of people who voted than do voting records. Although respondent bias may affect the accuracy of the results, in the voting case the estimate of the number who voted, it does not necessarily invalidate other results from a survey. If there are no systematic differences among specific groups under study in their tendency to give socially desirable responses, then comparisons of the different groups will accurately reflect differences among the groups. In this report, there may be a tendency for respondents to say that they participated in a school activity when they did not. There is no a priori reason, however, to believe that parents in two-parent families are more likely than those in single-parent families or that mothers are more likely than fathers to give the socially desirable response. Thus, it is likely that contrasts in this report reflect true differences between fathers and mothers and parents in single-parent and in two-parent families.

Another form of respondent bias occurs when respondents give unduly positive assessments about those close to them. For example, parents may give rosier assessments about their children's school experiences than might be obtained from school records or from the children themselves. It is possible that parents who are highly involved in their children's schools are more likely than those who are not so involved to say that their children are doing well in school or that their children enjoy school. However, it is also possible that parents who are highly involved in their children's schools have more information than those who are less involved on which to base their reports. This information could be positive or negative. Thus, it is equally conceivable that parents who are highly involved in their children's schools are less likely than other parents to give rosy assessments of their children's school experiences. Readers should be aware that respondent bias may be present in this survey as in any survey. It is not possible to state precisely how such bias may affect the results.

Sampling Errors and Weighting

The sample of telephone households selected for the NHES:96 is just one of many possible samples that could have been selected. Therefore, estimates produced from the NHES:96 sample may differ from estimates that would have been produced from other samples. This type of variability is called sampling error because it arises from using a sample of households with telephones, rather than all households with telephones.

The standard error is a measure of the variability due to sampling when estimating a statistic. Standard errors for estimates presented in this report were computed using a jackknife replication method. Standard errors can be used as a measure of the precision expected from a particular sample. The probability that a complete census count would differ from the sample estimate by less than 1 standard error is about 68 percent. The chance that the difference would be less than 1.65 standard errors is about 90 percent, and that the difference would be less than 1.96 standard errors, about 95 percent.

Standard errors for all of the estimates in this report have been calculated and are available from NCES upon request. These standard errors can be used to produce confidence intervals. For example, it is estimated that 55 percent of fathers in two-parent families with children in kindergarten through 5th grade attended a meeting at their child's school, and this statistic has a standard error of 0.54. Therefore, the estimated 95 percent confidence interval for this statistic is approximately 54 to 56 percent.

All of the estimates in this report are based on weighting the observations using the probabilities of selection of the respondents and other adjustments to partially account for nonresponse and coverage bias. These weights were developed to make the estimates unbiased and consistent estimates of the national totals. In addition to properly weighting the responses, special procedures for estimating the statistical significance of the estimates were employed because the data were collected using a complex sample design. Complex sample designs, like that used in the NHES, result in data that violate some of the assumptions that are normally required to assess the statistical significance of the results. Frequently, the standard errors of the estimates from the survey are larger than would be expected if the sample was a simple random sample and the observations were independent and identically distributed random variables. WesVarPC was used in this analysis to calculate standard errors for both bivariate estimates and regression analyses.

Replication methods of variance estimation were used to reflect the actual sample design used in the NHES:96. A form of the jackknife replication method was used to compute approximately unbiased estimates of the standard errors of the estimates in the report. The jackknife methods were used to estimate the precision of the estimates of the reported national totals, percentages, and regression parameters. To test the differences between estimates, Student's *t* statistic was employed, using unbiased estimates of standard errors derived by the replication methods mentioned above.

As the number of comparisons at the same significance level increases, it becomes more likely that at least one of the estimated differences will be significant merely by chance, that is, it will be erroneously identified as different from zero. Even when there is no statistical difference between the means or percentages being compared, there is a 5 percent chance of getting a significant F or *t* value from sampling error alone. As the number of comparisons increases, the chance of making this type of error also increases. A Bonferroni adjustment procedure was used to correct significance tests for multiple comparisons. This method adjusts the significance level for the total number of comparisons made with a particular classification variable. All the differences cited in this report are significant at the 0.05 level of significance after a Bonferroni adjustment. For example, the total number of comparisons for the race/ethnicity variable is six (i.e., white, non-Hispanic vs. black, non-Hispanic; white, non-Hispanic vs. Hispanic; white, non-Hispanic vs. other race; black, non-Hispanic vs. Hispanic; black, non-Hispanic vs. other race; Hispanic vs. other race). Thus, the significance criteria for each race/ethnicity comparison is adjusted to p=0.0083 (i.e., .05 / 6).

Derived Variables

A number of variables used in this report were derived by combining information from two or more questions in the NHES:96. The derivation of key variables is described in this section. Original variables from the NHES:96 appear in all upper case letters. The created variables appear in lower case letters. See the NHES:96 User's Manual (U.S. Department of Education, 1997) for the precise wording of the questions.

Parent Involvement Variables

Attendance at a general school meeting. Two versions of the involvement questions were asked of split-half samples of parent respondents. These two versions differed only with respect to the questions about attending general school meetings. For this report, the two versions of items measuring involvement in general school meetings were combined into a single measure as follows:

```
Meeting=.
If FSMEETNG=1 or (FSBAC=1 or FSATTPTA=1) then Meeting=1;
        else if FSMEETNG=2 then Meeting=2;
                else if (FSBAC=2 and FSATTPTA=2) then Meeting=2;
```

Essentially, respondents who received the second version that consisted of two questions were said to have attended a general school meeting if they had responded yes to either one of the two types of meetings. They were said not to have attended a general school meeting if they had not attended either type of meeting.

Number of school activities parents participated in. Information on whether any adult had attended each of the four types of school activities and which adult had attended was used to create an indicator of maternal involvement and an indicator of paternal involvement. For each activity that either the mother or both parents had attended, the indicator of maternal involvement (Cntmom2) was increased by one. Similarly, for each activity that the father or both parents had attended, the indicator of father involvement (Cntdad2) was increased by one. Cntmom2 and Cntdad2 range from 0 (no activities attended) to 4 (all four activities attended). Parallel variables were created for nonresident fathers and mothers who had had contact with their children in the past year.

High maternal and paternal involvement. The variables measuring high maternal and paternal involvement were based on Cntmom2 and Cntdad2. Two dichotomous variables were created that were assigned a value of 1 if the parents had attended three or four of the activities and were assigned a value of 0 if they had attended none, one, or only two of the activities. Parallel variables were created for nonresident fathers and mothers who had had contact with their children in the past year. For the nonresident parents, however, the dichotomy was between nonresident parents who had participated in two or more activities in their children's schools versus those who had participated in none or only one activity.

Children's contact with their nonresident parents. The measure on children's contact with their nonresident fathers and mothers has the following categories:

- The child has had contact with the nonresident parent within the past year;
- It has been more than one year since the child has had contact with the nonresident parent;
- The child has never had contact with the nonresident parent; and
- The nonresident parent is deceased.

The NHES:96 contained a variety of items that obtained information on contact with nonresident parents. The variable on recency of contact with the nonresident parent incorporated information about which parent the child usually lives with during the school year, the length of time since the child has lived in the same household with the nonresident parent, whether the child currently has contact with the nonresident parent, the length of time since the child last had contact with the nonresident parent, and whether the nonresident parent is deceased. The SAS computer code for the first identified nonresident parent is reproduced below:

```
Nr1stat=.;
If NRLIVAR1=2 or NRLIVAR1=3 then Nr1stat=1;
Else if (NRLIVAR1=4 or NRCONTA1=3) then Nr1stat=4;
Else if (NRLIVAR1=5 or NRLIVEV1=2 or NRCONTA1=4) then Nr1stat=3;
Else if LASTCON1 gt 12 then Nr1stat=2
Else if 1 <= LASTCONT1 <= 12 then Nr1stat=1;
If NR1STAT=. then do;
        If NRCONTA1=2 and NRLSTCO1=2 then Nr1stat=3;
        Else if NRCONTA1=2 and NRLIVEV1=1 then Nr1stat=2;
        Else if NRLIVEV1=0 then Nr1stat=3;
        End;
```

Children were said to have had contact with their nonresident parent within the last year if any of the following were true:

- The children had lived at least half of the time since the beginning of the school year with the nonresident parent;[1] or
- The children lived mostly with the respondent, but had had contact with their nonresident parent within the past 12 months.

Children were said to have ever had contact with their nonresident parents, but not to have had contact in the past 12 months if any of the following were true:

- The children had had contact at some point in their lives, but had not had contact with their nonresident parent in more than 12 months;
- The children had ever lived with their nonresident parent, but had no current contact.

Children were said to have never had contact with their nonresident parent if the respondent reported that the children had never had contact with the nonresident parent.

If the respondent reported that the nonresident parent was deceased, the child was considered not to have a nonresident parent.

A parallel variable, Nr2stat, was created for the second identified nonresident parent. Once these two variables were created, two additional variables (Momstat and Dadstat) were created that took the value of Nr1stat or Nr2stat depending upon which one referred to the nonresident mother or the nonresident father for a particular case.

[1] Not quite 3 percent of children with nonresident parents actually lived most of the school year with that parent.

Family Characteristic Variables

Family type. A measure of the children's living arrangements was created using information on the type of father (DADTYPE) and mother (MOMTYPE) present in the child's household at the time of the interview. Family type consisted of the following categories:

- Two biological or adoptive parents;
- Biological mother and step or adoptive father;
- Biological father and step or adoptive mother;
- Biological, adoptive, or stepmother only;
- Biological, adoptive, or stepfather only; and
- Foster or other nonparents only.

Resident parents' education. Resident fathers' and resident mothers' education was obtained by combining information on the highest grade that the mother or father had attended and whether the mother or father had a high school diploma or GED. The variables for mother's and father's education consisted of the following categories:

- Less than a high school education;
- High school graduate or obtained GED;
- Some college or vocational school experience;
- Graduated from a 4-year college; and
- Professional or graduate school experience.

Poverty measure. The poverty measure presented in this chapter was developed by combining information about household composition and household income. In the NHES:96, household income was collected in increments of $5,000; however, exact income to the nearest $1,000 was also collected if the household's poverty status was ambiguous based on the increment reported. A household's size and income was compared to the poverty thresholds provided by the U.S. Bureau of the Census. A household is considered poor if:

- The number of household members is 2 and household income is $10,259 or less;
- The number of household members is 3 and household income is $12,158 or less;
- The number of household members is 4 and household income is $16,000 or less;
- The number of household members is 5 and household income is $18,408 or less;
- The number of household members is 6 and household income is $21,000 or less;
- The number of household members is 7 and household income is $24,000 or less;
- The number of household members is 8 and household income is $26,237 or less;
- The number of household members is 9 or more and household income is $31,280 or less.

Receipt of federal assistance. Respondents were asked: "In the past 12 months, has your family received funds or services from any of the following programs? How about...(a) Women,

Infants, and Children, or WIC? (b) Food Stamps? (c) AFDC or Aid to Families with Dependent Children? Respondents who answered "yes" to any of the three sources of assistance were classified as having received federal assistance in the past 12 months.

Student Outcome Variables

Gets mostly A's. If parents reported that their children received mostly A's in school, this dichotomous variable was assigned a value of 1. If parents reported that their children received mostly B's, C's , D's, or F's in school, the variable was assigned a value of 0. Some children attended schools that did not give letter grades. For these children, if parents reported that their children's work was *excellent*, the children were coded as receiving mostly A's, otherwise the children received a value of 0 on this variable.

Ever repeated a grade. This dichotomous variable is based on SEREPEAT. It takes a value of 1 if the child has ever repeated a grade and a value of 0 otherwise.

Enjoys school. This dichotomous variable is based on SEENJOY. It takes a value of 1 if the parent agrees or strongly agrees with the statement that "child enjoys school" and a value of 0 otherwise. The question was not asked of children in kindergarten, so the variable is set to missing for them.

Ever suspended or expelled. This dichotomous variable is based on SESUSEXP. It takes a value of 1 if the parent reports that the child has ever been suspended or expelled and a value of 0 otherwise. The question on suspension or expulsion was only asked about children in grades 6 through 12, so the variable is set to missing for all other children.

Participates in extracurricular activities. Parents of children in kindergarten through grade 5 were asked whether their children had participated in any school activities such as sports teams, band or chorus, or safety patrol. They were also asked whether during the school year the children had participated in any activities outside of school, such as music lessons, church or temple youth group, scouting, or organized team sports, like soccer. If the parent reported yes to either of these questions, the child was said to have participated in extracurricular activities, otherwise the child was said not to have participated. Children in grades 6 through 12 were asked the same two questions. If the 6th through 12th graders reported that they had participated in school or non-school activities during the school year, they were said to have participated in extracurricular activities, otherwise they were said not to have participated.

School Climate Variable

The variable measuring school climate was based on responses to the following question:

- "Tell me whether you strongly agree, agree, disagree, or strongly disagree with the following statements:

- Child's teachers maintain good discipline in the classroom;
- In child's school, most students and teachers respect each other;
- The principal and assistant principal maintain good discipline at school;
- The child's school welcomes my family's involvement with the school; and
- The child's school makes it easy to be involved there."

These items were first recorded so that strongly agree took a value of 4, agree a value of 3, disagree a value of 2, and strongly disagree a value of 1. The recorded items were then summed to create the scale of school climate. The scale ranges from 5 to 20.

Adjusted Odds Ratios

Tables 2 through 10 present the results of the logistic regression models as adjusted odds ratios. *Odds* are the ratio of the probability that an event will occur to the probability that it will not. An *odds ratio*, as the name implies, is the ratio of two odds. Odds ratios measure the change in the odds that an event will occur for each unit change in a given variable. When the variable is dichotomous, the odds ratio measures the change in the odds that is due to belonging to one category versus the other. *Adjusted odds ratios* are estimates of the odds ratios after controlling for other factors.

An example will help clarify the concepts. The odds that fathers in two-parent families are highly involved in the schools of their 6th through 8th graders and of their 9th through 12th graders can be calculated using the descriptive information presented in figure 3. According to figure 3, 25 percent of fathers in two-parent families are highly involved in their 6th through 8th graders' schools and 23 percent are highly involved in their 9th through 12th graders' schools. The *odds* that fathers are highly involved in their 6th through 8th graders' schools are calculated as follows: 0.25/(1-0.25)=0.33. Similarly, the odds that fathers are highly involved in their 9th through 12th graders' schools are 0.23/(1-0.23)=0.30. The *odds ratio*, 0.33/0.30, measures the change in the odds that fathers are highly involved in their children's schools that is due to the children's grade level. In this case, the odds that fathers are highly involved in their children's schools are 1.1 times as large for fathers of 6th through 8th graders as they are for fathers of 9th through 12th graders. This can also be expressed as a percent change in the odds calculated as (odds ratio-1)*100. A positive value indicates a percent increase in the odds and a negative value indicates a percent decrease in the odds. Thus, one can also say that the odds that fathers are highly involved in their children's schools are 10 percent greater for fathers of 6th through 8th graders than they are for fathers of 9th through 12th graders. This does not mean, however, that fathers of 6th through 8th graders are 1.1 times more likely or are 10 percent more likely to be highly involved in their children's schools than fathers of 9th through 12th graders.[2] In this

[2]In trying to understand the influence of specific factors on the likelihood that an event will occur, it is important to control for potentially confounding factors. According to the results in table 3, after controlling for the other factors in the model, the *adjusted odds* that fathers are highly involved in their children's schools are 28 percent lower, rather than being 10 percent higher, for fathers of children in grades 6 through 8 relative to those in grades 9 through 12. The change in the interpretation highlights why it is important to control for potentially confounding factors.

example, the *relative risk* or *relative probability* that they are highly involved is 0.25/0.23 or 1.09, which can also be expressed as a percent change in the relative risk, as follows: [(relative risk -1)*100=9]. In this case, the odds ratio and the relative risk are close. This is not always the case, however. Odds ratios will always overstate the difference in relative risks. It is always true, however, that whenever odds ratios are greater than 1 so is the relative risk. Similarly, whenever odds ratios are less than 1, so is the relative risk.

The reason that odds ratios are frequently used to summarize the results of logistic regression models is because odds ratios are easy to obtain and do not depend upon the values of the other variables in the model. Probabilities, on the other hand, change depending upon where on the logistic regression curve they are evaluated (that is, they depend upon the values of the other variables in the model).

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