

Family Matters

family structure and child outcomes



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and Child Outcomes***

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TABLE OF CONTENTS

Executive Summary	1
Introduction	3
Problems Defining Types of Family Structure	5
A. Sampling Problems	6
B. Methodological Problems	7
Family Structure and Educational Outcomes	10
A. Preschool Readiness	10
B. Elementary Education	11
C. Secondary Education: Achievement and High School Completion	13
D. College Attendance	16
Family Structure and Social Competencies	18
School Misbehavior	18
Smoking, Illegal Drugs, and Alcohol Consumption	20
Sexual Activity and Teen Pregnancy	22
Illegal Activities	24
Psychological Outcomes	25
Discussion	27
Endnotes	30
References	33
Appendix A	40
Appendix B	42

Family Matters: Family Structure and Child Outcomes

Executive Summary

Differences in life outcomes, some have argued, are largely determined by the characteristics of the family, such as its composition and social and economic resources.¹ One fundamental characteristic of the family that has significant and sustaining effects on children is its structure—that is, the number of parents and their relationships to the children in the household. A family structure can constrain the availability of economic and social resources such as parents' ability to spend time with their child, be involved in educational activities, and expend monetary resources that can promote positive educational outcomes and well-being.²

Research has consistently shown that family structure can facilitate or limit the ways in which parents are able to positively influence the future outcomes of their children.³ What is less understood is in what domains family structure matters and the magnitude of its effects over time.

This paper presents existing evidence on the association between family structure and child achievement, social misbehaviors, and well-being and identifies several methodological problems associated with many of these studies. Special attention is paid to the difficulties in drawing causal conclusions about specific factors through which family structure affects children's achievements. Finally, guidelines for conducting research regarding the relationship between family structure and children's educational outcomes and social and psychological well-being are proposed.

Research indicates that most children in non-intact families are at an educational and social disadvantage compared to children in traditional families. Some of the explanations for this disadvantage have been tied to income differentials, time constraints, and commitment to the child's well-being, especially in families with stepparents.⁴

Although it would seem that two-parent families should be able to provide more resources for children, particularly in terms of income and availability of time to spend with children, children from stepparent families often look similar to those from single-parent homes.⁵ In comparison to step-families, cohabiting relationships and foster care appear to be even more deleterious with respect to child outcomes.

Raising the educational expectations parents have for their children may be one way parents can mediate the negative consequences associated with non-traditional family structure. Research has shown that parent expectations are an important predictor in a student's educational outcomes.⁶ Parent expectations in turn appear to vary with family structure.⁷

Another way parents positively influence their children's educational and social outcomes is through their involvement in the child's life. When parents do not spend time with their children or are not involved in their children's lives, the opportunity for social capital transmission is diminished.⁸ Based on the National Household Education Survey, the National Center for Education Statistics (NCES) reports that children from intact homes are about twice as likely as those from single or stepparent homes to have a parent participate in school activities, such as having a parent volunteer at school or attend school conferences, school meetings, and school events.⁹ Studies continue to demonstrate that when families communicate and provide guidance and support, young people are more likely to succeed in school and feel more positively about themselves.¹⁰

The specific causal mechanisms through which family structure affects life outcomes are not well understood. While randomized experiments offer the best evidence of causal relationships, such designs are not well suited for studying family structure. For obvious ethical reasons, it is not possible to randomly assign children to different types of families. However, researchers interested in investigating family structure have begun to take advantage of promising alternative methods for addressing questions of causality, such as natural experiments using siblings as comparison groups and propensity score matching.¹¹

Finally, family structure research could be substantially improved if longitudinal studies were designed with adequate samples of different family types and specific information on relationships among adults and children living in the household. Many datasets fail to adequately specify the relationships within the family, including relationships with non-custodial parents.

Other data limitations include the absence of information about how much time children spend with each parent figure, what sources of social, financial, and emotional support are available to the children and who is providing them, and how close the child is to parents or other caregivers. Such data is necessary to disentangle the interrelated effects of family structure, family resources, and family processes on children's academic and social well-being.

Introduction

Differences in life outcomes, some have argued, are largely determined by the characteristics of the family, such as its composition and social and economic resources (McLanahan & Sandefur, 1994; Cherlin, 2001). One fundamental characteristic of the family that has significant and sustaining effects on children is its structure—that is, the number of parents and their relationships to the children in the household. A family structure can constrain the availability of economic and social resources such as parents' ability to spend time with their child, be involved in educational activities, and expend monetary resources that can promote positive educational outcomes and well-being (Schneider & Coleman, 1993). Research has consistently shown that family structure can facilitate or limit the ways in which parents are able to positively influence the future outcomes of their children (Amato & Keith, 1991; Hines, 1997; Amato, 2001; Sigle-Rushton & McLanahan 2002). What is less understood is in what domains family structure matters and the magnitude of its effects over time.

Traditional family structure refers to households consisting of two married parents and their biological children. Non-traditional variations in family structure include families with one biological parent and one step-parent, a single parent, cohabiting parents, or other relatives as caretakers. Over the past 35 years, the prevalence of these non-traditional families has increased substantially. For example, the percentage of children living in two-parent homes decreased from over 85 percent in 1968 to less than 70 percent in 2003, and the proportion of children living in single-parent homes has more than doubled, from less than 12 percent in 1968 to more than 28 percent in 2003 (U.S. Bureau of the Census).¹² Paying serious attention to the influence of family structure on academic and social development is critical as the number of children in non-traditional families continues to increase.

Family structure has been the subject of considerable research since the 1970s, including a meta-analysis conducted in the early 1990s by Amato and Keith that included 37 studies of over 81,000 individuals on the long-term consequences of parental divorce. Compared with adults whose parents remained married, adults whose parents divorced reported negative outcomes on a wide range of well-being indicators, including psychological well-being, marital stability, socioeconomic status, and physical health. Effects were significant and negative for all measures. Amato and Keith concluded that “the argument that parental divorce presents few problems for children’s long-term development is simply inconsistent with the literature on this topic” (1991: 54).¹³

While most research in this area has indicated that family composition

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has significant effects on the academic experiences and social development of children, little consensus has been reached on why family structure matters. This paper presents existing evidence on the association between family structure and child achievement and well-being, and identifies several methodological problems associated with many of these studies. Special attention is paid to the difficulties in drawing causal conclusions about specific mechanisms through which family structure affects children's outcomes. Finally, guidelines for conducting research regarding the relationship between family structure and a child's educational outcomes and social and psychological well-being are proposed.

Problems Defining Types of Family Structure

Defining types of family structure has been a recent subject of debate, and the resulting ambiguity in terminology has contributed to the confusion about its effects (Popenoe, 1993; Stacey, 1993). In describing households that do not conform to a “normal” conception of the family (that is, two married parents and their biological children), researchers often employ categories such as traditional/non-traditional, intact/non-intact, biological or natural parents, stepparents, cohabiting partners, and mother-only or father-only households. Family members often have terms for identifying their relationships with each other that are not necessarily compatible with researchers’ categories. Though these research and conventional definitions are useful, they may not always provide enough information on which to base conclusions about how variations in family structure affect children’s lives. Such definitions do not always indicate who spends the most time with the child on a daily basis and who is primarily responsible for the child’s financial and emotional support.

Many datasets used by social scientists define family composition inconsistently, making comparisons about the influence of family structure across studies problematic. As shown in Table 1 in Appendix A, national datasets vary in their level of specificity and in the information they contain regarding the relationship of the child to the adults in the household.

As seen in Table 1, the High School & Beyond dataset (HS&B) did not differentiate between married stepparents and cohabiting partners, nor did it separate care by other relatives (i.e., grandparents) from non-relative care (i.e., foster care).¹⁴ If a dataset only categorizes family structure in terms of the number of parents in the household, information about stepparents and biological parents can be conflated. The economic benefit of having two incomes, regardless of family type, may mask the positive effects of growing up in a household with biological parents. Additionally, the different consequences of growing up in other types of families may be obscured when single- or adoptive-parent families and those headed by grandparents are all included in the same category. Mis-specification of family relationships into broad categories limits information critical for examining how family structure affects child outcomes.

Surveys that include self-reports by children and parents also present problems for analysts. For example, Lillard and Gerner (1999) point out that when children are respondents, they may provide inaccurate information if they are unaware of their parents’ marital status and may report who they think of as their parents instead of their true biological parents. Some datasets record precisely how the adult respondent is related to the child in question, such as the National Longitudinal Survey of Youth 1979 (NLSY, see Table 1).¹⁵

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Even when parents are asked directly about their family structure, respondents may not accurately describe the relationship of all parent figures in the child's life living in or out of the home.

Other datasets are not as comprehensive. Collecting information from stepparents, for example, may elicit different responses to survey items than if biological parents were asked, as stepparents are often less knowledgeable about the child's experiences prior to their involvement in the child's life. Asking both parents and children specific questions about the roles and responsibilities of adults in the family is likely to produce more detailed descriptions of family functioning.

Even when parents are asked directly about their family structure, respondents may not accurately describe the relationship of all parent figures in the child's life living in or out of the home. Single mothers who have never married may fail to mention "father figures" not living in the home who may provide both psychological and economic support to the children.¹⁶

When divorce is the cause of a family disruption, a survey question about the presence of parents in the home will not necessarily capture how much time the biological parent continues to spend with his or her child. Asking about the marital status of a child's parents may not indicate how many adults are supporting the child economically (i.e., divorced parents who supply child support, grandparents, or a person in a cohabiting relationship). The effect of family structure could be inaccurately estimated if time spent with children and economic and social support from parental figures both in and out of the home are not accurately measured or reported. Identifying measures that are well-suited for developing an in-depth and accurate understanding of how family structure influences educational outcomes presents a challenge for researchers, which is further complicated by problems with sampling, methodology, and analysis.

Sampling Problems

While many datasets contain information from thousands of respondents, they sometimes fail to include enough respondents from less common family structures, such as single-father, blended, or no-parent (custodial) families. Sample limitations often constrain the number and types of categories that researchers can analyze, and researchers are therefore restricted to use more general categories that may conflate family types. For example, Painter and Levine (1999) studied the effects of family disruption during high school on test scores of white, non-Hispanic respondents from the National Educational Longitudinal Study (NELS).¹⁷ Using this dataset, Painter and Levine were unable to draw conclusions about the experiences of children being raised in "other" types of families (i.e., foster or adoptive care where no biological parent is present) because too few cases of these alternative family types were included in the sample.

A second sampling problem occurs with datasets that only collect cross-sectional data, that is, data at only one time point, making it nearly

impossible to determine how family structure affects outcomes over time. Without longitudinal data it is difficult to understand whether the educational and social outcomes of children from divorced families are lower than those from traditional families as a result of the immediate impact of divorce or because of its long-term psychological effects. The emotional shock of divorce can create temporary obstacles and negatively influence children's achievement (Sigle-Rushton & McLanahan, 2002).

These negative effects may lessen over time, or they may reappear years after the divorce. Additionally, variations in timing of parents' divorce may produce different outcomes depending on the age of the child. Some studies have shown that divorce has greater negative effects on well-being into adulthood if the divorce occurred at a young age; other studies find no age effect (see Hines, 1997 for a review). Timing and developmental concerns offer a compelling rationale for why longitudinal data should be considered the standard for studying the advantages and disadvantages associated with growing up in different family structures over time.

Methodological Problems

Most researchers who study family structure and its effects on child outcomes use various forms of regression analyses. Though numerous researchers construct comprehensive models that include many variables related to family structure, such as income and education, these models with controls are not sufficient to establish causality. As Manski et al. noted:

It may be that, as the empirical evidence suggests, living in a non-intact family has adverse consequences for children. On the other hand, it may be that some unobserved process jointly determines family structure and children's outcomes. For example, parents who are less committed to their family may be more likely to divorce and may also provide less support for children. (1992: 25)

Further, when researchers build comprehensive models to estimate the impact of family structure on specific outcomes, they sometimes do not convert their findings into numbers that are easily interpretable, report the magnitude of the effects in terms that are understandable, or separate direct effects from interactive ones, making it difficult to translate coefficients into "real" numbers such as percents or odds-ratios.

There is little doubt that children who grow up in non-traditional families experience disadvantages, but regression analyses alone cannot tell us why. Using more sophisticated statistical methods is critical for developing policies that effectively address the consequences of living in non-traditional homes. Methods such as propensity score matching allow analysts to simulate "treatment effects" by identifying similar students and determining statistically what the effect on a specific outcome might be if a student's parents had not divorced.

Another approach for simulating treatment effects was used by Hotz, Mullin, and Sanders (1997) in their study of the effects of teenage childbearing. To conduct a “true experiment” in this case, researchers would have to randomly assign women’s age at the time their first child was born; however this is not a possibility. Instead, Hotz et al. used miscarriage as a natural way to divide the groups randomly by age at first birth, since the delay of childbirth would occur exogenously as a result of prior miscarriage (that is, independent of other factors that could affect outcomes). The authors note that some miscarriages are not random (for example, smoking and drinking have been shown to increase the likelihood of miscarriage), and therefore they call their sample a contaminated natural experiment and construct bounds on the causal effects of early childbearing.¹⁸ Such analyses improve on regression techniques, especially when assignment to experimental treatment and control groups is not feasible (see, e.g., Rosenbaum & Rubin, 1983).¹⁹

Another important consideration when examining the influence of family structure on a set of outcomes is building comprehensive models that include an extensive set of family background measures and “family process” constructs. Table 2 in Appendix B shows some of the types of family structure categories included in previous research and the outcomes they are often associated with. In building more comprehensive models, researchers need to include a series of mediating variables, that is, a set of prior or intervening factors associated with both family structure and child outcomes.

As Amato and Keith (1991) showed in their meta-analysis, researchers who did not employ extensive background controls in their analyses overestimated the effects of divorce on child outcomes. For example, in the 1990s, the modal African-American family structure was the single-parent home. Many of the mothers had never married, and their household economic and social resources were limited. In this instance, not controlling for income confounds the effects of being in a single-mother home with the effects of living in a household with few resources (Entwistle & Alexander, 1996).

While most researchers include basic demographic measures, family process variables which vary by family structure, including communication, discipline, and other social and emotional interactions among parents and children, can be important mediating variables that are often overlooked (Furstenberg et al., 1983; Muller, 1993; Thomson, Hanson, & McLanahan, 1994; Hines, 1997). Children living with both biological parents experience the highest levels of parental support while children in stepfamilies report the lowest levels (Thomson, Hanson, & McLanahan, 1994). Research on early adolescence suggests that positive adjustment to family disruption is related to closeness to the parent, parental monitoring,

joint decision making between parents and adolescents, and low conflict (Maccoby & Mnookin, 1992). Often working in tandem with family structure, these family process variables can influence a variety of outcomes, including educational expectations (Spenner & Featherman, 1978) and college selection (Lillard & Gerner, 1999; Kim & Schneider, forthcoming).

Past research on family structure has generally shown an association between non-traditional family structure and negative child outcomes in terms of immediate effects on educational performance and behavior, as well as lasting effects on socioeconomic status, marital satisfaction, health, and educational attainment in adulthood. Drawing causal conclusions or making policy recommendations from these studies is difficult. Insufficient samples, exclusion of prior control and mediating variables, and reliance on regression analyses prevents researchers from accurately determining the effects of family structure on child well-being. Despite these limitations, recent research suggests that the effect of non-traditional family structure on children's academic and social development is negative and significant.

Family Structure and Educational Outcomes

Preschool Readiness

Parents play an important role in helping to prepare their children for formal schooling. School readiness begins early in a child's life and includes not only engaging one's child in cognitive activities but also providing an environment that promotes appropriate social skills and physical development (U.S. Department of Health and Human Services, 2003). Parents who choose to be highly involved in their children's educational preparation may provide them with valuable developmental experiences that familiarize them with school expectations and responsibilities (U.S. Department of Education, 1999). As early as age three, children's ability to adapt to classroom routines appears to be influenced to some degree by the marital situation of their parents. Three- and four-year-old children with two biological parents are three times less likely than those in any other type of families to have emotional or behavioral problems such as attention deficit disorder or autism (Coiro, Zill, & Bloom, 1994).

The relationship between family structure and young children's behavior is perhaps most evident in comparisons between married mothers and those who cohabit. Longitudinal data from the Fragile Families and Child Wellbeing Study show that children with married versus cohabiting parents have fewer behavioral problems.²⁰

Osborne, McLanahan, and Brooks-Gunn (2004), using a subsample of 1,300 mothers, compared couples who were married with those who were cohabiting during their child's first three years and found that relative to children from married two-parent households, children whose mothers cohabited with their child's biological father scored 1/2 standard deviation higher on items measuring anxiety/depression, 1/3 standard deviation higher on items measuring aggression, and 1/4 standard deviation higher on items measuring withdrawn behaviors on the Child Behavior Checklist.

The negative effect of cohabitation on child well-being was particularly strong for child anxiety/depression even when income was included in the model. However, the effects for withdrawn and aggressive behaviors were only marginally significant once income was controlled for. Much like the negative impact cohabitation has been shown to have on relationships between partners, it also appears to have particularly deleterious effects on children (see Nock 1995 for a review of research comparing the quality of relationships between married and cohabiting partners).²¹

In addition to being socially prepared, children also need to have developed the physical skills to handle the tasks required of kindergartners. The federal report *Health of Our Nation's Children* (Coiro, Zill, & Bloom, 1994) shows that children in excellent health are most likely to be in families with two biological parents. On average, single-parent families (both

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mother-only and father-only) have less healthy children than all other family types, including stepparent families. Several items on the National Health Information Survey, including frequency of visits to the doctor and reports of any chronic health problems or injuries, were aggregated into a measure of overall health.

Children in adoptive-parent families have the highest instances of developmental delays and learning disabilities, but this could be related to health problems that existed prior to the child's adoption. Nonetheless, children who are just entering school tend to be less healthy if they come from non-traditional families, possibly due to fewer economic resources and the absence of a second adult in the household (Cherlin, 1982).

Many parents choose to engage in a series of cognitive activities with their children before they enter kindergarten. Children whose parents read to them have certain academic advantages when they enter formal schooling (see Purcell-Gates, 1996; Jordan, Snow, & Porche, 2000). In 2003, the U.S. Department of Health and Human Services reported that children who (1) are read to at least three times per week, (2) recognize their letters, (3) recognize their basic numbers and shapes, and (4) demonstrate an understanding of relative size when they enter kindergarten have significantly higher reading knowledge and skills at the end of their first year in school than those who do not, and these effects continue to be evident through the end of first grade. Family structure affects the frequency with which parents engage in these activities. Children living with two biological parents are more likely to be involved specifically in literacy activities than children from single-parent homes. On average, children in traditional families are twelve percent more likely to be read to every day, six percent more likely to be told stories at least three times per week, and thirteen percent more likely to visit a library at least once a month.

Overall, a majority of evidence suggests that being in a non-traditional family can be a disadvantage for a child about to enter formal schooling, a disadvantage that may persist for years. A child who has trouble adjusting to school is likely to form a negative impression of education. Whereas a child who is healthy, and socially and academically prepared is more likely to come to school each day ready to tackle the tasks at hand and accustomed to following a scheduled routine. Non-traditional family structure appears particularly problematic for young children as the cognitive and social behaviors developed early on persist throughout childhood and in later life (Manski et al., 1992).

Elementary Education

It has been argued that the most important outcomes in education are those related to achievement—that is, a student's ability to demonstrate growing proficiency in basic subject areas and maintain grade-level com-

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petencies (e.g., a third grader able to read at a third grade level). Evidence shows that achievement, from the primary grades through high school, can be hindered by growing up in non-traditional homes. Entwisle and Alexander (1995) analyzed gains in children's standardized test scores as they progressed from first through third grade in the Beginning School Study (BSS).²² Conducting a series of multivariate analyses which included the number of parents in the home, meal subsidy status, and parent education, they found a strong link between two-parent families and higher achievement scores in first grade. However, when analyzing the longitudinal data, the effect of family structure on students' achievement gain was not significant. The authors suggest that the differences between cross-sectional and longitudinal results could be the consequence of examining young children for whom the effects of single parenting could accumulate over several years and thus become apparent beyond the two-year period of this study. The negative effect of growing up in a non-traditional family was significant with respect to grades; children in non-traditional families received lower grades than those in traditional families.

Family structure's effect on academic performance was also studied by Patterson, Kupersmidt, and Vaden (1990). Analyzing the achievement test scores of 868 black and white elementary school students in a Southern city school district in second through fourth grades, the authors reported a significant correlation between achievement test scores and household composition by using a dummy variable that divides families into two-parent or mother-only households.

In conducting further analyses, they developed a more complex model that also included income, ethnicity, and gender. When these variables were taken into account, household composition accounted for 25 percent of the variance in academic achievement. Ethnicity and income, however, were the strongest predictors of achievement test scores. While household composition is a less robust predictor of achievement than income or ethnicity, at the bivariate level, household composition is significantly related to both income and ethnicity.

The U.S. Department of Education's report, *Reading Literacy in the United States* (1996), indicates that fourth-grade students in families with both biological parents scored higher on reading comprehension than students living in two-parent blended, single-mother, and other types of families. Additional analyses were conducted to simulate comparable backgrounds among the students in terms of their household income and family educational and social backgrounds. Estimates from these analyses indicated that fourth graders in single-parent families would perform at or above the level of those in two-parent biological families if all other characteristics were equal.

Therefore, it would appear that the relationship between single-parent

families and lower achievement is mediated by economic resources. However, fourth graders in two-parent blended and other types of families still scored below the mean of all students. Income or other family resources does not appear to explain the lower outcomes of children from other types of non-traditional families.

Pong (1997) studied the relationship between family structure and mathematics and reading achievement at both the individual and school level (that is, the effect of being in a school with a high concentration of single- and stepparent families). With respect to achievement in mathematics, non-traditional family structure had a negative and significant effect at both the individual and school level. Reading results were slightly different; family structure at the individual level was not significant, but it was significant at the school level. For math and reading achievement, family resources, social interactions, and race were related to performance at both the individual and school level, suggesting that non-traditional family structure and limited family resources interact and contribute to lower student performance in reading and mathematics. At the individual level, living in a single-parent family was associated with an eight percent decrease in a child's math scores (compared to the scores of children from two-biological parent families).

Data at the international level are rare, and many of the variables are not ideal for studying the direct effects of family structure (i.e., there tends to be incomplete information about parent education, occupation, or income; therefore proxy questions indicative of family background are often used in analyses).

Pong, Dronkers, and Hampden-Thompson (2003), in one of the few international studies, compared the achievement scores of nine-year-old students across eleven different countries using data from the 1995 Third International Math and Science Study (TIMSS), which tested and surveyed over 500,000 students and their teachers and administrators. In nine of the eleven countries (excluding Austria and Iceland), single parenthood was associated with a lower academic performance on both math and science tests. The gap between achievement scores for two-parent and single-parent families was large and significant (even after controlling for age, gender, and grade level), and this gap was larger in the U.S. than in any other country studied.

Secondary Education: Achievement and High School Completion

The effects of family structure on academic success continue through high school. Analyzing longitudinal data from HS&B, Mulkey, Crain, and Harrington (1992) investigated the effect of having an absent father or mother on grades and standardized test scores. Students from both single-father and single-mother homes had test scores that were on average three-

In another analysis of NELS:88-94 data, Teachman, Paasch, and Carver (1997) found that family structure, conceptualized as a measure of social capital within the family, remained a significant predictor of dropping out of high school even when income was included in the model. Compared to adolescents from two-biological-parent families, the odds of dropping out of school were consistently and substantially greater for children from any other type of family.

tenths of a standard deviation lower than those of students in two-parent homes. Unlike other studies of the effects of family structure on academic achievement, coefficients were not altered when the lower income of single-parent homes was taken into account. However, when student misbehavior variables, such as school tardiness/absence, not doing homework, and frequent dating, were included in the model, the negative effect of non-traditional family structure becomes insignificant.

The authors conclude that non-traditional family structure is associated with adolescent misbehavior, which subsequently negatively affects grades and test scores. They also argue that non-traditional family structure may more substantially influence other outcomes, such as high school dropout rate, high school graduation, and age at first pregnancy, than grades. This appears to be the case based on the evidence reported in a number of studies examining these outcomes.

Painter and Levine (2000) examined the effects of a family disruption during high school on high school dropout rates for white, non-Hispanic participants from NELS:88-94 and found that the dropout rate for youths in non-traditional families was five percent higher than that of students from traditional families. Painter and Levine examined several explanatory models, some of which controlled for variables that existed before the divorce to determine if some families were more inclined than others to experience a disruption in family structure.

Controlling for characteristics that existed prior to divorce decreased the difference in dropout rates between traditional and non-traditional families to 3.9 percent and did not result in a significant change in the effect size. The fact that prior characteristics made no statistical difference in the educational outcome estimates provides some support for the argument that divorce itself is responsible for negative outcomes.

In another analysis of NELS:88-94 data, Teachman, Paasch, and Carver (1997) found that family structure, conceptualized as a measure of social capital within the family, remained a significant predictor of dropping out of high school even when income was included in the model. Compared to adolescents from two-biological-parent families, the odds of dropping out of school were consistently and substantially greater for children from any other type of family. Children from stepparent families were almost twice as likely to drop out, children from father-only families were about 3 times more likely, and children from families headed by never-married women or other-parent families were between 1.5 and 2 times more likely to drop out, respectively.

Studying the impact of parental divorce on high school completion, Manski et al. (1992) estimated three models, each of which included varying levels of information about the decision to divorce and its subsequent effect on children's likelihood of graduating from high school. The three

models were constructed to tease out selection effects often associated with divorce, that is, familial interactions and conditions independent of the divorce that may significantly affect high school completion.

Across all three models, being in a single-parent home negatively affected the likelihood of graduating from high school. When comparing estimates across models, the one with extensive measures of prior information on family characteristics produced coefficients that showed the most robust association between family structure and high school dropout rates. By using a rigorous analytical strategy, the researchers were able to conclude that the characteristics of parents who are likely to divorce may have independent effects on their adolescent's likelihood of graduating from high school. Manski et al. caution family structure researchers to construct more inclusive models when determining the direct effect of family structure on outcomes.

Sandefur, McLanahan, and Wotjkievicz (1992) compared the likelihood of graduating from high school among adolescents in intact, stepparent, and single-parent families, as well as families that experienced a change in marital status in the 1979-1985 waves of the National Longitudinal Survey of Youth (NLSY). Children in any kind of non-intact family were less likely to receive a high school diploma or GED than those from intact families. Controlling for income did not significantly affect the relationship between family structure and high school graduation:

The only instance in which income had a significant effect was in single-parent families (income accounted for 15 percent of the effect size of family structure on high school graduation). Adding additional control variables to the model indicated that the negative effect of living in a non-intact family can be mediated to some degree by high levels of self-esteem and perceived parental expectations for college, but the negative effects of non-traditional family structure on high school completion still remained.

Conducting an analysis of longitudinal data, Krein and Beller (1988) examined the relationship between family structure and children's educational attainment. Using data from three waves of the National Longitudinal Survey (NLS), they found that, overall, children who spent more time in single-parent families had lower levels of educational attainment.²³ In examining the long-term effects of parent divorce, they found that disruptions that occurred during the preschool years, as opposed to the elementary and high school years, had significant negative effects on educational attainment, but only for males. These results concerning the timing of disruption stand in sharp contrast to those of Garasky (1995), who found that the more time that had passed since the divorce, the less likely the child was to experience poor educational outcomes.

More recently, Bjorklund, Ginther, and Sundstrom (2004) compared the

Changes in family structure, especially the introduction of a stepparent, had negative effects on college attendance rates, particularly if this change occurred during adolescence.

effects of family structure on educational attainment in Sweden and the U.S. and found very similar results for both countries, despite their differences in social policies toward the family. Controlling for age and gender, non-intact family structures were negatively associated with educational attainment. Each additional year spent with a single mother or a stepparent reduced a child's educational attainment by approximately six months.

College Attendance

One area that has received considerable attention is how parent and family characteristics, including family structure, influence children's college attendance. Empirical evidence suggests that non-traditional family structures are associated with lower college attendance rates and matriculation to less competitive institutions. Painter and Levine (2000) compared students in the NELS:88-94 dataset whose parents divorced during high school to those whose parents either divorced or remarried prior to the first year of the study, when the students were in eighth grade, and found that adolescents from both stepfather and mother-only households were 16 percent less likely to attend college than students from intact families.

Other research indicates that the effect of family structure on college attendance is often indirect. For example, Goldscheider and Goldscheider (1998), in an analysis of retrospective data provided by over 13,000 adults participating in the National Survey of Families and Households (NSFH), examined the effect of family structure on paths chosen in young adulthood (e.g. college, military, employment, marriage, and cohabitation).²⁴ They found that a young adult from a non-intact family was less likely to leave home for college and more likely to pursue other options. More than 20 percent of young people from two-parent biological families left home to attend college, whereas only 10 percent to 15 percent of students from other types of families did so. In addition, changes in family structure, especially the introduction of a stepparent, had negative effects on college attendance rates, particularly if this change occurred during adolescence.

Studying family composition and college choice of HS&B respondents, Lillard and Gerner (1999) found that non-traditional family structures were negatively associated with educational outcomes—specifically applying to, gaining admission to, and attending college, particularly more selective institutions. They also showed that the additional economic resources two parents can provide accounted for much of the difference in outcomes between students from intact versus non-intact families. This is not unexpected as the costs of higher education have outpaced increases in household income, and financial considerations are often seen as the major deterrent to pursuing postsecondary education (Advisory Committee on Student Financial Assistance, 2001).

Keith and Finlay (1988) argued that lower college-going rates for stu-

dents from non-intact families is a consequence of the loss of economic resources and parental supervision after parent divorce, suggesting that parent involvement accounts in part for the effect of family structure on college attendance. They also explored the effect of family structure on the timing of children's marriage and its relationship to educational attainment, finding that children with two biological parents tend to marry later (this is especially true for women).

Previous research established a link between delayed marriage and higher educational attainment among females (Marini, 1984). Keith and Finlay's research suggests that college attendance may be an intervening variable between family structure and delayed marriage; two parents may provide a more consistent message regarding the importance of education which results in their children delaying marriage to pursue a college degree.

Family Structure and Social Competencies

Family structure has also been shown to be associated with children's psychological well-being and social behaviors, ranging from school misbehavior to more risky behaviors such as smoking, drug use, and teen pregnancy. To examine the effect of marital disruption on children's antisocial behaviors, Morrison and Cherlin (1995) analyzed longitudinal data from a subsample of the NLSY that included young children whose parents were married in 1986.

Results indicated that marital disruption was associated with a higher incidence of antisocial behavior in the classroom for boys, but not for girls, suggesting that girls may be more psychologically resilient following parent divorce or separation. Thirty-five percent of boys in disrupted families had less favorable scores on the Behavior Problem Index (BPI) in 1988 than in 1986, compared with only 19 percent of boys who did not experience parent separation or divorce during this time.²⁵

These prolonged effects of marital disruption on antisocial behaviors were more robust than those found in earlier work by Cherlin et al. (1991). The children in the earlier study were 9-11 years old, whereas those in the later study were, on average, 6½-years-old at the time of family disruption. Morrison and Cherlin argue that children at this young age may be particularly vulnerable to family dissolution.

School Misbehavior

Thomson, Hanson, and McLanahan (1994) analyzed over 3,000 cases from NSFH, finding, consistent with prior research, that children (age 5 to 18) from intact homes had the fewest incidences of misbehavior.²⁶ When economic resources were included in the regression analyses predicting behavior problems, these resources accounted for about 10 percent of the association between family structure and behavioral outcomes. Income loss appears particularly detrimental to child outcomes in single-mother families, accounting for 50 percent of the association between family structure and misbehavior.

Another family characteristic explored in analyses was parental support, which consistently contributed to the statistical relationship between family composition and child outcomes. Families in which mothers cohabited with a partner and mother/step-father families reported the lowest levels of parental support, and this lack of support appears to negatively influence children's behavioral outcomes.

Results showed that there are varying effects for economic and emotional support among different family types. Nonetheless, it appears that lacking either economic or emotional resources is associated with higher incidences of behavioral problems.

Family structure has also been shown to be associated with children's psychological well-being and social behaviors, ranging from school misbehavior to more risky behaviors such as smoking, drug use, and teen pregnancy.

Peterson and Zill (1986) also found an association between family structure and school misbehavior among adolescents, examining over 2,000 cases from the second wave of the National Survey of Children, a longitudinal study based on a probability sample of U.S. households with children age 12 to 16. Compared with children living in non-traditional families, living in an intact family was associated with the lowest levels of school misbehavior, based on parent responses to questions about whether the child had ever been expelled or suspended or if the parent had ever received a note or been called into the school because of a child's discipline problems.

Both boys and girls in families where the mother had divorced and remarried had the highest rates of misbehavior (approximately three times higher than the rate for adolescents from intact families). These results differ from Thomson et al.'s (1994) findings that single-mother families, in contrast to blended families, reported more child behavioral problems. Thomson et al.'s findings point to income loss as a mediating variable between family structure and behavioral outcomes, whereas Peterson and Zill's results suggest that parent-child relationships reduce the association between family type and behavioral outcomes.

Stepparents have been shown to be less likely to have close relationships with their step-children and to have lower levels of social control (Furstenberg et al. 1983). Feelings of social distance between stepparents and stepchildren may be particularly problematic for adolescents, who are especially in need of guidance, supervision, and direction (Schneider and Stevenson, 1999).

Family structure has also been shown to affect adolescent school attendance and tardiness. Bethke and Sandefur (1998) conducted analyses using twelfth grade data from the second and third follow-ups of NELS:88-94 and found that students from non-traditional families miss school, are tardy, and cut class about 30 percent more often than students from intact homes even when taking into account demographic characteristics.

Students from families headed by foster parents, other relatives, or adoptive parents were the most likely to report frequently being late or missing school. Multivariate analyses indicated that income accounts for some of the difference in truancy and tardiness rates between two-parent and one-parent families. However, income did not substantially explain differences in misbehavior between traditional and non-traditional two-parent families. The authors concluded that close relationships between biological parents and children in traditional homes facilitate supervision and monitoring, and a lack of such relationships in other types of families may contribute to higher rates of tardiness and truancy.

Research has shown that children in families with high levels of marital conflict are more likely to have behavioral problems than those in fam-

Students from non-traditional families miss school, are tardy, and cut class about 30 percent more often than students from intact homes (even when taking into account demographic characteristics).

Research on the association between family structure and drug or alcohol use during adolescence has also shown that teenagers in non-intact families are more likely to participate in these activities than those from intact families (Astone & McLanahan, 1991; Thomson, McLanahan, & Curtin, 1992; Thomson, Hanson, & McLanahan, 1994; Downey, 1995; Jenkins & Zunguze, 1998).

ilies with low levels of conflict (Peterson & Zill, 1986; Amato, Loomis, & Booth, 1995; Jekielek, 1998; Cummings & Davies, 2002).

Children in high-conflict intact families often have even higher scores on behavioral problem indices than children whose parents divorce. For example, Morrison and Coiro (1999) included family conflict in their examination of misbehavior across various types of families. Using the 1988 and 1994 waves of the NLSY, they found that, on average, children of divorced or separated parents scored four points higher on the Behavior Problems Index (BPI) than children from intact homes, regardless of conflict levels within the family before marital dissolution.

However, children from high-conflict homes in which parents were married scored three points higher on the BPI than children whose parents were separated and seven points higher than children from low-conflict intact families. Overall, the authors concluded that divorce, regardless of marital conflict before the dissolution, was associated with behavior problems and that high-conflict marriages were associated with the largest increase in children's behavior problems.

While high-conflict marriages appear to be harmful to young children's social development, ending these high-conflict marriages does not necessarily alleviate these deleterious effects. As Manski et al. (1992) argued, when attempting to determine the effects of family structure on a set of child behaviors, family characteristics prior to divorce need to be considered, as the decision to divorce may mask household selection effects that negatively contribute to children's academic achievement and well-being.

Smoking, Illegal Drugs, and Alcohol Consumption

Research on the association between family structure and drug or alcohol use during adolescence has also shown that teenagers in non-intact families are more likely to participate in these activities than those from intact families (Astone & McLanahan, 1991; Thomson, McLanahan, & Curtin, 1992; Thomson, Hanson, & McLanahan, 1994; Downey, 1995; Jenkins & Zunguze, 1998). Surveying over 2,000 adolescents in the southeastern U.S. at two time points, Flewelling and Bauman (1990) found that adolescents from intact families were less likely to report experimenting with drugs and alcohol than adolescents from other types of families.

Adolescents from step- or single-parent families were about 1.5 times more likely to have smoked a cigarette or used alcohol and more than twice as likely to have used marijuana. Family structure remained significantly associated with cigarette, marijuana, and alcohol use even after controlling for age, sex, race, and parent education, suggesting that these demographic characteristics do not account for the persistent relationship between family structure and these risky behaviors.

Sophisticated statistical analyses can often help researchers understand

the mechanisms that operate in the relationship between family structure and adolescent outcomes. In their path analyses of a sample of 3,000 Florida middle-schoolers from Wave 1 of the South Florida Youth Development Project, Sokol-Katz, Dunham, and Zimmerman (1997) found that family structure appears to affect adolescent outcomes through family attachment as measured by responses to a family-loyalty scale.²⁷ Family structure had a significant relationship to family attachment. Intact families reported higher levels of attachment, and in turn, family attachment was found to have a direct and deterrent effect on adolescent cigarette smoking and illicit drug use.

Gil, Vega, and Biafora (1998) found differences among racial/ethnic groups when estimating the effects of family structure on drug use. Gil et al. used all three waves of the South Florida Youth Development Project, resulting in a longitudinal sample of 3,000 U.S. and foreign-born middle school students.

Unlike Flewelling and Bauman, Gil et al. found that there were differences in rates of adolescent drug use between single- and stepparent families and these differences varied by race and ethnicity. For whites and Hispanics, the lowest incidence of illicit drug use was in two-parent homes (22.9 percent and 21.2 percent, respectively), but for African-Americans the lowest incidence was in mother-and-other-adult (i.e., cohabiting partner) families (10.3 percent). For Hispanics, the highest incidence of drug use was found in single-mother families (29.6 percent), whereas for whites and African-Americans the highest incidence of drug use occurred in “changed” families (35.8 percent and 19.4 percent, respectively), those that had experienced marriage, death, or divorce during the study. Across all racial and ethnic groups, income and parent involvement again appeared to be the most influential components mediating the relationship between family structure and adolescent behavioral outcomes.

Similar effects between family structure and drug and alcohol use were also found by Hoffmann and Johnson (1998), who examined data from the National Household Survey on Drug Abuse (NHSDA), an annual survey based on a representative sample of the U.S. population age 12 and older. Intact families reported that their adolescents had the lowest rates of alcohol (8.3 percent), marijuana (6.9 percent), and other drug use (6.2 percent). Adolescents from father-stepmother, father-only, and other relative-only families were the most likely to use marijuana and other drugs. When family income, adolescent gender, age, and race were controlled for, adolescents in father-stepmother and father-only families were the most likely to use illicit drugs.

Needle, Su, and Doherty (1990) examined the impact of the timing of family disruption on drug use. Previous research (see e.g. Nye, 1958; McCord, 1982; Rankin, 1983; Mednick et al., 1987; Steinberg, 1987)

Adolescents (age 12 to 15) from non-intact families were 2 to 2.5 times more likely than those from intact families to report being sexually active.

found no differences in the effects of the timing of divorce on child outcomes. However, Needle et al.'s analyses of a subsample of over 1,000 families from a longitudinal study indicated that if parents divorced during adolescence versus childhood, the adolescent was more likely to report drug use than those from intact homes or homes that were disrupted earlier in the child's life.

Although this result was not statistically significant, the interaction of time of divorce with the passage of time was significant. At the time of initial data collection, adolescents whose parents divorced during early childhood looked similar to adolescents from intact families, but four years later, those from the childhood divorce group were more likely to report increased drug use.

This finding suggests two effects of the timing of family disruption. First, children who experience divorce in adolescence are more likely to use drugs than those whose parents divorced years earlier. Perhaps as a result of developmental differences, that is, adolescence is a period of identity formation and young people may be especially vulnerable to experimentation and peer pressure. Second, children whose parents divorced when they were young are more at risk than children from intact homes to increase drug use throughout their lives, suggesting that divorce has lasting and perhaps lagged effects on child outcomes.

Sexual Activity and Teen Pregnancy

Differences in family structure have also been associated with variations in the sexual behavior of adolescents, including the likelihood of teenage pregnancy (e.g., Rosenbaum & Kandel, 1990; Wu & Martinson, 1993; Wu, 1996). It has been argued that adolescents from non-traditional families may model their sexual behavior on the dating or cohabiting relationships they see their parents engage in, that these adolescents may be less closely supervised, or that their risky behavior may be a result of the instability of family and their relationships with their parents during divorce (see Moore & Chase-Lansdale, 2001).

Consistent with recent studies (e.g., Upchurch et al., 1999; DeLeire and Kalil, 2001), Flewelling and Baumann (1990) found differences in the sexual behavior of adolescents living in single- versus two-parents families. Adolescents (age 12 to 15) from non-intact families were 2 to 2.5 times more likely than those from intact families to report being sexually active. Sexual activity was higher in non-traditional families, although there were no significant differences in sexual behavior between adolescents from step- and single-parent families.

The similarity of sexual behavior patterns among adolescents in step- and single-parent families in this study suggests that remarriage may present some risks for effectively monitoring adolescent behaviors and trans-

mitting values that would deter early sexual relationships. However, results regarding the effects of remarriage remain inconclusive.

Analyzing data from the National Longitudinal Study of Adolescent Health (Add Health), Davis and Friel (2001) reported that females (approximately 15½ years old) in single-parent homes were 1.5 times more likely to be sexually active than those from intact homes.²⁸ In contrast to Flewelling and Baumann's findings, females from stepparent families were not significantly more likely than those from intact families to engage in sexual activity. The most significant factors in predicting adolescent sexual behavior were parent involvement, parent attitudes towards and discussion of sex, and mother-child relationships. In this study, factors which influenced the likelihood of engaging in risky behavior were measured with comprehensive models that included several mechanisms through which the positive effects of family structure operate.

Remarriage also showed positive effects for deterring teenage pregnancy in a study by Painter and Levine (2000) using data from NELS:88-94. Their findings reveal that girls whose parents divorced during high school were more likely to become pregnant as a teenager than those whose parents did not. When controlling for family and child characteristics in eighth grade, the gap in teen pregnancy rates between girls from intact versus non-intact families was decreased by nearly half. Young women whose mothers remarried after divorce had similar rates of teenage pregnancy to those from intact families, indicating that with respect to teenage pregnancy, remarriage may mediate some of the negative effects of marital dissolution.

The effect of family structure on teen pregnancy appears to work differently depending on the specific type of family disruption. In a study of nearly 300 adolescent African-American girls from low-income Chicago communities, Moore and Chase-Lansdale (2001) confirmed earlier findings of increased teen pregnancy among non-traditional families, but found differences within the broad category of single-parent families. Teenagers from divorced single-mother homes were significantly more likely than teens in single-mother never married homes to become pregnant. It seems that the event of disruption, possibly characterized by sudden loss of income, is particularly harmful to adolescents' social development. While income was not a significant covariate with family structure in this study, it should be noted that all respondents in this sample reported low incomes.

For teenage girls from intact or step-families, the odds of getting pregnant as a teenager were approximately 75 percent lower compared to girls from all other types of families, suggesting that the marital union of parents may act as a demonstrative or socializing tool in preventing teen pregnancy.

Examining cross-national longitudinal data, Ellis et al. (2003) reported

The most significant factors in predicting adolescent sexual behavior were parent involvement, parent attitudes towards and discussion of sex, and mother-child relationships.

Being in a step- or a single-parent family at age 10 more than doubled the odds of being arrested by age 14.

an association between father absence and teenage pregnancy that varied by timing of parents' marital dissolution.²⁹ Controlling for child behavior problems, family demographics, and family relationship characteristics, girls whose fathers left the family early (before age 5) were five times more likely in the U.S. and three times more likely in New Zealand to become pregnant as a teenager compared to girls from traditional families.

Girls whose fathers left later in life (from age 6-13) were about twice as likely as girls from intact families to become pregnant as a teenager. These results indicate that the effects of father absence linger over time and vary according to the child's developmental stage when the dissolution occurs. Psychological development is particularly malleable before the age of 5, and the authors hypothesize that girls whose fathers leave at this young age develop a concept of future relationships wherein male support is unimportant and unnecessary, leading them to engage in casual or unstable relationships.

Illegal Activities

The role of the "deficient family" in delinquency theory has been clearly established in the literature, and recent studies confirm previous work in this area (see, e.g., Comanor & Phillips, 2002; Chilton & Markle, 1972; Cloward & Ohlin, 1960; Nye, 1958). Using longitudinal data on 200 adolescents in the northwestern U.S., Coughlin and Vuchinich (1996) found associations between family structure and juvenile delinquency. Results indicated that being in a step- or a single-parent family at age 10 more than doubled the odds of being arrested by age 14. Even when peer influence, socioeconomic status, and a child's intelligence were held constant, family structure had significant effects on rates of delinquency. The authors conclude that parents in non-traditional families may be less able to closely monitor and supervise their adolescents, which can increase the likelihood of their child engaging in illegal activities.

Harper and McLanahan (2003) also looked at adolescents' likelihood of being arrested. Using data from the Fragile Families and Child Wellbeing Study, they found that male adolescents in all types of families without a biological father (mother only, mother and step-father, and other) were more likely to be incarcerated than teens from two-parent homes, even when demographic information was included in analyses. Youths who had never lived with their father had the highest odds of being arrested. Because both studies found high rates of incarceration or delinquency in homes without biological fathers, it seems biological fathers may have closer relationships with their children than step-fathers and that examining how these close ties function as an effective control on adolescent behavior may help to explain the association between non-intact families and higher rates of arrest.

Psychological Outcomes

Non-traditional family structure has been shown to be associated with stress, depression, anxiety, and low self-esteem in adolescents (Amato & Keith, 1991; Amato, 2001). This negative effect on psychological well-being can decrease adolescents' ability to focus and remain engaged in school activities, resulting in poor educational outcomes. Using prospective data on nearly 1,000 high school students from the Boston area collected in four waves, Aseltine (1996) confirmed these earlier findings regarding the association between family structure and poor adolescent psychological outcomes.

Non-traditional family structure was associated with a small but statistically insignificant increase in adolescents' reports of depressed mood.³⁰ However, comparing adolescents whose parents remarried following divorce and those whose parents had not, Aseltine found that children in stepfamilies had mood scores similar to those of adolescents from two-parent families, suggesting that remarriage may mediate the negative effects of divorce on psychological well-being. The majority of the association between being in a single-parent family and reporting higher levels of depression was accounted for by differences in income between single- and two-parent homes.

Other studies have examined the enduring effects of parental divorce on psychological well-being. Cherlin, Chase-Lansdale, and McRae (1998) conducted growth curve model analyses on over 17,000 English, Scottish, and Welsh participants from the National Child Development Study (NCDS). Results indicate that children whose parents divorced between the ages of 7 and 22 were more likely to report emotional problems compared to children whose parents stayed together. Parental divorce was associated with an increase of 1/4 standard deviation in emotional problems at age 33, and the slope for the increase in psychological problems was larger for children whose parents divorced.

The NCDS dataset does not include sufficient information on variables such as frequency of contact with the absent parent or parent remarriage to create a comprehensive causal model that distinguishes between the influence of family disruption on psychological well-being versus that of parental involvement or parent-child relationships. Nonetheless, this research is consistent with earlier findings that divorce has lasting negative emotional effects throughout childhood, adolescence, and adulthood.

Acock and Kiecolt (1989) investigated whether the experience of losing a father, whether through the father's death or marital separation), has a sustained influence on adult psychological measures, such as general happiness, life satisfaction, a sense of promise about the future, trust in others, and satisfaction with friendships. Analyzing data from the 1972 through 1986 General Social Survey (GSS), the authors found that men

Children whose parents divorced between the ages of 7 and 22 were more likely to report emotional problems compared to children whose parents stayed together.

and women from intact families had more positive psychological outcomes than those from single-mother families or reconstituted families.³¹

Results varied, however, between respondents whose fathers had died and those whose parents had divorced. Compared with those whose parents had divorced, men and women whose father had died before age 16 had higher levels of education, family income, and marital stability even when control variables were included in the analytic models. The authors concluded that men and women from families where parents divorced received less support (financial and emotional) from their social networks than those who were disrupted by the death of a parent. Divorced households appeared less equipped to mediate the negative psychological effects of family disruption.

Recently, Amato (2001) published a meta-analysis of 67 studies on the effects of divorce, updating the meta-analysis conducted by Amato and Keith in 1991. Comparing studies completed in the 1980s with those from the 1990s, he found that effect sizes of family disruption on psychological adjustment, self-concept, and social relations seem to have increased, and in the case of psychological adjustment, the gap between children from divorced versus continually married parents was higher than in the previous three decades.

Even when controlling for advances in methodological sophistication, effect sizes in studies of divorce and psychological adjustment have increased over time. The increasing gap in psychological adjustment between children in married versus divorced families raises serious concerns in light of increases in divorce rates among families with children, coupled with changing policies regarding marital dissolution (Maccoby & Mnookin, 1992).

Discussion

Research indicates that most children in non-intact families are at an educational and social disadvantage compared to children in traditional families. Some of the explanations for this disadvantage have been tied to income differentials, time constraints, and commitment to the child's well-being, especially in families with stepparents (Schneider & Coleman, 1993; Sigle-Rushton & McLanahan, 2002). Although it would seem that two-parent families should be able to provide more resources for children, particularly in terms of income and availability of time to spend with children, children from stepparent families often look similar to those from single-parent homes (Amato and Keith, 1991; Amato, 2001). In comparison to stepfamilies, cohabiting relationships and foster care appear to be even more deleterious with respect to child outcomes. Single parenting is not necessarily the consequence of divorce; in some instances the parent has been widowed or abandoned, and some parents choose never to marry.

Since many children will grow up in non-traditional families, how can families mitigate some of the negative effects associated with non-intact families? Raising the educational expectations parents have for their children may be one way parents can mediate the negative consequences associated with non-traditional family structure. Research has shown that parent expectations are an important predictor in student's educational outcomes (Sewell, Haller, & Portes, 1969; Schneider & Coleman, 1993). Parent expectations in turn appear to vary with family structure.

In their study of more than 300 Baltimore families, Entwistle and Alexander (1996) found that single mothers "have lower expectations, and their expectations influence children less than do the expectations of other parents" (351). Astone and McLanahan (1991) reported similar but slightly more complex findings. Families with two biological parents reported the highest levels of educational expectations for their children, but stepparent families, rather than single-parent families, had the lowest levels of parent expectations, again countering those theories that equate the mere presence of two adults with greater social capital.

Another way parents positively influence their children's educational and social outcomes is through their involvement in the child's life. When parents do not spend time with their children or are not involved in their children's lives, the opportunity for social capital transmission is diminished (Coleman, 1988; Portes, 1998). Based on the National Household Education Survey, the National Center for Education Statistics (NCES) reports that children from intact homes are about twice as likely as those from single or stepparent homes to have a parent participate in school activities, such as having a parent volunteer at school or attend school conferences, school meetings, and school events (U.S. Department of

Raising the educational expectations parents have for their children may be one way parents can mediate the negative consequences associated with non-traditional family structure.

The consequences of having an absent father are most easily observed through income loss, and this loss of income affects a wide range of outcomes.

Education, 1997). Studies continue to demonstrate that when families communicate and provide guidance and support, young people are more likely to succeed in school and feel more positive about themselves (Csikszentmihalyi and Schneider, 2000; Schneider and Waite, 2005).

One obstacle single parents often face is limited economic resources. Research has shown that two parents generally earn more income than one parent alone, and this additional income is often dedicated to improving children's educational outcomes (Elder, 1980; McLeod & Shanahan, 1993; Duncan et al., 1998). Single parents, particularly single mothers, experience higher rates of poverty than any other type of family (Bane and Ellwood, 1983). Using data from the Panel Study of Income Dynamics (PSID), Page and Stevens (2002) estimated that family income is reduced 70 percent immediately following a divorce, 42 percent one year later, and remains 30 percent less five years later. The consequences of having an absent father are most easily observed through income loss, and this loss of income affects a wide range of outcomes.

This finding permeates throughout the majority of studies reported in this review. Once income is controlled for, the association between negative outcomes and living in a single-parent home is often substantially reduced. In their critical review of the family structure literature, Sigle-Rushton and McLanahan (2002:32) point out that "A substantial body of research has demonstrated that, once income differences are taken into account, differences between children in single mother and two-parent families are far less pronounced."

This income advantage is not found, however, in stepparent families or other non-traditional households, despite the presence of other adults. Even though stepparent families may have more economic and social resources, children in these blended families still have more negative outcomes on most social and academic measures when compared with children in traditional families.

While remarriage may provide more resources, stepparents may not allocate resources to stepchildren in the same way that biological parents would. Children in other types of two-parent homes, such as those headed by grandparents, relatives, or foster parents, also tend to be at a distinct disadvantage compared with children in intact families and have outcomes that are as low or even lower than children in single-parent households (Chase-Lansdale, Brooks-Gunn, & Zamsky, 1994).

Research conducted to this point is particularly mixed on the consequences of the timing of family disruptions on children's immediate and later life outcomes. Does a family disruption that occurs early in a child's life have a more lasting effect because the child is at a formative stage in his or her life? Are young children less able to handle the shock of a change in family structure than adolescents who may have developed more

advanced coping strategies? Some evidence indicates that this is the case, especially in terms of lasting effects on adult psychological well-being (Amato, 2000). However other studies have suggested that the more time that has passed since the disruption, the more likely it is that a child has recovered from family disruption (Jekielek, 1998).

Although research clearly suggests that family structure is related to outcomes such as educational attainment and psychological well-being, the specific causal mechanisms through which these effects occur are not well understood. While randomized experiments offer the best evidence of causal relationships, such designs are not well suited for studying family structure. For obvious ethical reasons, it is not possible to randomly assign children to different types of families. However, researchers interested in investigating family structure have begun to take advantage of promising alternative methods for addressing questions of causality such as natural experiments (e.g., using siblings as comparison groups, see Sandefur & Wells, 1997) and propensity score matching.

Finally, family structure research could be substantially improved if longitudinal studies were designed with adequate samples of different family types and specific information on relationships among adults and children living in the household. Many datasets fail to adequately specify the relationships within the family, including relationships with non-custodial parents. Other data limitations include the absence of information about how much time children spend with each parent figure, what sources of social, financial, and emotional support are available to the children, who is providing for them, and how close the child is to parents or other caregivers. Such data are necessary to disentangle the interrelated effects of family structure, family resources, and family processes on children's academic and social well-being.

Once income is controlled for, the association between negative outcomes and living in a single-parent home is often substantially reduced.

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¹⁰Csikszentmihalyi, M., & Schneider, B. (2000). *Becoming adult: How teenagers prepare for the world of work*. New York: Basic Books. Schneider, B., & Waite, L. (2005). *Being together, working apart: Dual-career families and the work-life balance*. New York: Cambridge University Press.

¹¹Sandefur, G., & Wells, T. (1997). *Using siblings to investigate the effects of Family structure on educational attainment*. Mimeo, University of Wisconsin.

¹²Census data categorizes families as one- or two-parent and does not differentiate between step- and two-biological parent families.

¹³Amato conducted a second meta-analysis (2001) on research completed in the 1990s regarding outcomes of children from divorced families and confirmed his earlier findings that these outcomes were generally negative compared with those of children from traditional families.

¹⁴High School and Beyond is a nationally representative longitudinal survey that includes subjects from two cohorts, the 1980 senior class and the 1980 sophomore class. (See <http://nces.ed.gov/surveys/hsb/> for more information.)

¹⁵The NLSY is a nationally representative sample of 12,686 young men and women who were 14-22 years old when they were first surveyed in 1979. These individuals were interviewed annually through 1994 and are currently interviewed on a biennial basis. (See www.bls.gov/nls/y79summary.htm for more information.)

¹⁶“Father figure” is often used to refer to divorced or separated biological fathers, relatives, friends, and other adults who assume a paternal role to the child. Often, low-income single mothers do not report their relationship with their children’s father because being in a two-parent family jeopardizes eligibility for welfare assistance (Moffatt, Reville, & Winkler, 1998, Rendall, 1997).

¹⁷NELS: 88-2000 is a study that was conducted by the U.S. Department of Education that includes a sample of 25,000 eighth graders from 1,000 schools who were initially surveyed in 1988 with follow-ups through 2000. Students reported on a range of topics, including school, work, and home experiences; neighborhood characteristics; educational resources and support; parents’ and peers’ role in their education; and educational expectations and occupational aspirations. (See <http://nces.ed.gov/surveys/nels88/> for more information.)

¹⁸The authors found an association between age at first birth and participation in the labor force.

¹⁹Other approaches for simulating treatment effects use twin and sibling studies. See Currie and Thomas’s (1996) research on the effects of Head Start programs and Grogger and Bronar’s (1997) paper on the impact of welfare on single mothers’ marital decisions.

²⁰The Fragile Families and Child Wellbeing Study includes interviews with nearly 4,000 unmarried and 1,200 married mothers at the time of their child’s birth, with follow-up interviews when their child was between one- and three-years-old. See Reichman et al., 2001 for more information.

²¹Children in homes in which mothers cohabit with a partner have been shown to receive the lowest grades compared to all other family types (Thomson, Hanson, & McLanahan, 1994). Additionally, mothers in these types of homes reported nearly double the instances of child’s school behavior problems (including dropping out of school) compared to children with two biological married parents.

²²The Beginning School Study consists of longitudinal data from a stratified random sample of 790 Baltimore children who attended first grade in 1982.

²³Krein and Beller used the 1967-1979 Survey of Mature Women, the 1966-1980 Survey of Young Men, and the 1968-1980 Survey of Young Women. (See www.bls.gov/nls/home.htm for more information on NLS.)

²⁴NSFH consists of a national sample of nearly 10,000 households, oversampling of minorities, single-parent families, families with stepchildren, cohabiting couples, and recently married persons. One adult per household was randomly selected as the primary respondent, and this person participated in an interview and provided answers to a short survey regarding household characteristics. Original data collection took place in 1987-1988; two follow-up waves were conducted in 1992-1994 and 2001-2002. (See www.ssc.wisc.edu/nsfh/home.htm for more information.)

²⁵The Behavior Problem Index is an inventory consisting of 32 items that measure mothers’ reports of frequency and type of behavior problems.

²⁶In this study, misbehavior was measured using a dichotomous variable, with a value of 1 indicating the child had dropped out of school, been suspended or expelled from school, or that a parent had been called because of a discipline problem.

²⁷Items in the scale included: “We share similar values and beliefs as a family.” “Things work out well for us as a family.” “We really do trust and confide in each other.” “Family members feel loyal to the family.” “We are proud of our family.” “We can express our feelings with our family.”

²⁸Add Health is a nationally representative, school-based cluster study which provides longitudinal data on over 20,000 adolescents (grades 7 through 12). In this paper, data from Wave I (1995) on over 6,000 girls and 6,000 boys were included in analyses.

²⁹Longitudinal data were obtained from the Child Development Project, designed to collect data from 585 families at three sites in the U.S. from the time the focal child was 5 through age 18. Data from the Christchurch Health and Development Study, a longitudinal study of 1,265 children from Christchurch, New Zealand, followed from 1977 through the present were also examined.

³⁰Depressed mood was based on a 20-item scale on which adolescents reported the number of days they experienced depressive symptoms.

³¹The GSS is a personal interview survey of U.S. households conducted by the National Opinion Research Center (NORC) nearly annually since 1972. The analyses in this study included five items from the GSS measuring psychological well-being: Asking respondents to rate how happy they felt, how exciting or dull they found life to be, their control over their fate, the degree to which they trust others, and their satisfaction with their friendships.

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Appendix A

Table 1. Measures of Family Structure Used in National Datasets

National Education Longitudinal Study of 1988 (NELS:88)

“What is your current marital status?”

1. Single, never married
2. Married
3. Divorced
4. Separated
5. Widowed
6. Partner, significant other, not married, but in a marriage-like relationship

Determining Status Change

This question appears in the fourth follow-up survey in 2000. *“Did your first marriage end in a...”*

1. Divorce or annulment
2. Permanent or legal separation
3. Death

General Social Survey (GSS)

“Are you currently married, widowed, divorced, separated, or have you never been married?”

1. Married
2. Widowed
3. Divorced
4. Separated
5. Never Married
9. No answer

“Were you living with both your own mother and father around the time you were 16?” (IF “NO”: “With whom were you living around that time?”)

1. Both own mother and father
2. Father and stepmother
3. Mother and stepfather
4. Father only
5. Mother only
6. Some other male relative (No female head)
7. Some other female relative (No male head)
8. Other arrangement with relatives
0. Other
9. No answer

The National Longitudinal Study of Adolescent Health (AddHealth)

Asked in parent interview:

“What is your current marital status?”

1. Single, never married
2. Married
3. Widowed

4. Divorced
5. Separated
6. Refused

Early Childhood Longitudinal Study (ECLS)

Classification of the focal child's parents who reside in the household:

1. Biological mother and biological father
2. Biological mother and other father (step-, adoptive, foster)
3. Biological father and other mother (step-, adoptive, foster)
4. Biological mother only
5. Biological father only
6. Two adoptive parents
7. Single adoptive parent or adoptive parent and stepparent
8. Related guardian(s)
9. Unrelated guardian(s)

National Survey of Families and Households (NSFH)

Marital Status of Respondent

1. Married
2. Separated due to marital problems
3. Divorced
4. Widowed
5. Never Married
9. No answer

“NOTE: “Married” includes Married, Spouse Absent”

High School and Beyond (HS&B)

Family composition 1988:

1. Mother and father
2. Mother and male guardian
3. Father and female guardian
4. Mother only
5. Father only
6. Other relative or non-relative
98. Missing

U.S. CENSUS

1. Never married. Includes all people who have never been married, including people whose only marriage(s) was annulled.
2. Ever married. Includes people married at the time of counting, including those who are separated, widowed, or divorced.
3. Now married. All people whose current marriage has not ended by widowhood or divorce. This category includes people defined above as “separated.”
- * Spouse present. Married people whose wives or husbands

Table 1 (continued). Measures of Family Structure Used in National Datasets

were counted as members of the same household or the same group quarters facility, including those whose spouses may have been temporarily absent for such reasons as travel or hospitalization.

* Spouse absent. Married people whose wives or husbands were not counted as members of the same household or group quarters facility.

* Spouse absent, other. Married people whose wives or husbands were not enumerated as members of the same household, excluding separated. This includes any person whose spouse was employed and living away from home, in an institution, or away in the armed forces.

4. Now married, except (not including) separated. Includes people whose current marriage has not ended through widowhood or divorce; or who are not currently separated. The category also may include people in common-law marriages if they consider this category the most appropriate. In certain tabulations, currently married people are further classified as “spouse present” or “spouse absent.”

5. Separated. Separated includes people with legal separations, people living apart with intentions of obtaining a divorce, and people who are permanently or temporarily separated because of marital discord.

6. Widowed. This category includes widows and widowers who have not remarried.

7. Divorced. This category includes people who are legally divorced and who have not remarried.

National Longitudinal Survey of Youth (NLSY)

“What is your current marital status?”

0. Never Married
1. Married
2. Separated
3. Divorced
4. Widowed

“Mother figure’s relationship to R: Is she...”

1. Your biological or natural mother.
2. A stepmother who did not adopt you.
3. Your adoptive stepmother.
4. Your father’s girlfriend.
5. Your adoptive mother.
6. Your foster mother.
7. A relative who is like a mother to you.
8. Someone else who is like a mother to you.

“Father figure’s relationship to R: Is he...”

1. Your biological or natural father.
2. A stepfather who did not adopt you.
3. Your adoptive stepfather.
4. Your mother’s boyfriend.

5. Your adoptive father.
6. Your foster father.
7. A relative who is like a father to you.
8. Someone else who is like a father to you.

“Does your biological mother/father live in the household?”

1. Yes
0. No

“NOTE: The survey organizes respondents’ answers to questions about household members into a “household roster.” This data grid is the best information source about household members and should be used instead of the raw data in analyses.”

Panel Study of Income Dynamics (PSID)

Are you (HEAD) married, widowed, divorced, separated, or have you never been married?

1. Married
2. Never Married
3. Widowed
4. Divorced, annulled
5. Separated

Family Composition Change between the 1999 and 2001 Waves

0. No change; no movers-in or movers-out of the family.
1. Change in members other than head or “wife” only.
2. Head is the same person as in 1999, but “wife” left or died; head has new “wife”; used also when cohabiting, non-relative female becomes “wife.”
3. “Wife” from 1999 is now head.
4. 1999 female head got married—husband (usually a non-sample member) is now head. Used also when cohabiting non-relative male becomes head.
5. Some followable individual other than 1999 head or “wife” has become head of this FU. (Used primarily for male and unmarried female splitoffs.)
6. Some followable female other than 1999 head got married and her husband is now head. (Used primarily for married female splitoffs.)
7. Female head in 1999 with husband in institution—husband in FU in 2001 and is now head.
8. Other (used for recontacts and recombined families—the latter are usually heads and wives who have parted for a wave or more, been interviewed separately, and who have reconciled at some time since the 1999 interview but before the 2001 interview).
9. Neither head nor “wife” (if there is one) is followable and neither of them was a head or “wife” last year. (Used primarily for underage splitoff children.)

Appendix B

Table 2. Common Variables Used to Examine Effects of Family Structure

<u>Examples of Family Structure Categories</u>	<u>Mediating Variables</u>	<u>Dependent Outcomes</u>
<ol style="list-style-type: none"> 1. Dummy Variable <ol style="list-style-type: none"> a. Living with 2 parents b. “Other” 2. Dummy Variable by mother <ol style="list-style-type: none"> a. Intact family (with both biological parents) b. Mother & step-father, and mother alone 3. Intact, Single, Step, Other <ol style="list-style-type: none"> a. Both natural parents b. One natural parent only c. One natural parent & one step-parent d. Neither parent 4. Detailed Mother and Father Status <ol style="list-style-type: none"> a. Two biological parents b. Stepfather families c. Stepmother families d. Mother only families e. Father only families f. Non-parent guardians 5. Information on Timing of Disruption <ol style="list-style-type: none"> a. Stable intact b. Stable stepparent & parent c. Stable neither parent d. Intact at 14 & single parents or stepparent at age 17 e. Step-parent or single parent at age 14 & neither at age 17 f. Other changes 6. Description of Family Conflict <ol style="list-style-type: none"> a. Divorced, high marital conflict b. Divorced, low marital conflict c. Non-divorced, high marital conflict d. Non-divorced, low marital conflict 	<ol style="list-style-type: none"> 1. Child Characteristics <ol style="list-style-type: none"> a. Race (black, white, Hispanic) b. Child’s age c. Child’s grade level d. Child’s gender e. Average score on standardized tests/ college SAT f. Behavioral problems g. Emotional problems 2. Family Characteristics <ol style="list-style-type: none"> a. Whether a foreign language is spoken in the home b. Whether the mother or father is foreign born c. Number of siblings d. Whether the home has a library card, magazines, & many books (as reported by the student) e. Level of religious observance f. Parents’ marital quality (marital happiness, marital conflict) 3. Socioeconomic Resources <ol style="list-style-type: none"> a. Parent education (mother, father, or average for family) b. Employment status c. Occupational prestige d. Family income (mother, father, average for family) e. Welfare recipient 4. Family Processes <ol style="list-style-type: none"> a. Parental monitoring b. Parent-child relationship quality c. Parent-child discussion d. Parent involvement in school activities 5. Community Characteristics <ol style="list-style-type: none"> a. Rural v. urban b. Local school dropout rate c. Local unemployment rate d. Average community SES 	<ol style="list-style-type: none"> 1. Pre-school readiness <ol style="list-style-type: none"> a. Being read to b. Recognizing letters, numbers, and shapes c. Aggression d. Child health e. Safety f. Learning disabilities 2. Elementary Education <ol style="list-style-type: none"> a. IQ test scores b. Standardized test scores c. Academic grades d. Self-concept of academic performance e. Grade-level competency f. Literacy g. Math proficiency 3. Secondary Education <ol style="list-style-type: none"> a. IQ test scores b. Standardized test scores c. Letter grades d. High school GPA e. Self-esteem f. Attitude toward school (“I like working hard in school”) g. High school dropout/ completion h. Attendance (self-reported) i. Attainment of a GED j. College aspirations 4. College Variables <ol style="list-style-type: none"> a. Reasons for leaving home b. Application to (selective) college c. Admission to (selective) college d. Attendance at (selective) college 5. School Misbehavior <ol style="list-style-type: none"> a. Suspended/expelled b. Truancy/tardiness c. Scores on behavior problem inventories 6. Risky Behaviors <ol style="list-style-type: none"> a. Cigarette smoking b. Drug use c. Teen drinking d. Teenage pregnancy e. Early sexual activity 7. Psychological Well-being <ol style="list-style-type: none"> a. Emotional adjustment b. Depression c. Anxiety d. Life satisfaction

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