

THE RELATIONSHIP OF PARENT INVOLVEMENT
AND POST-DIVORCE ADJUSTMENT TO THE
ACADEMIC ACHIEVEMENT AND
ACHIEVEMENT MOTIVATION
OF SCHOOL-AGED
CHILDREN

By

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CHAPTER I

INTRODUCTION

The American family has changed dramatically from the two-parent nuclear family common prior to the late 20th century. Increased divorce rates since the 1970's have changed family configurations, making single parent families and stepfamilies common. According to a U.S. Census report in 1994, the fastest growing marital status category was divorced persons. Furthermore, the number of divorced adults quadrupled from 4.3 million in 1970 to 17.4 million in 1994. In 2000, twelve million women and nine million men were divorced (U.S. Census Bureau, 2000).

Along with the increase in divorce rate, there has been an escalation in the numbers of children involved in divorce. Statistics show that the number of children whose parents divorced grew by 700 percent from 1900 to 1972 (National Center of Health Statistics, 1995). Further, since 1973, there have been over one million new children of divorce each year (National Center of Health Statistics). Between 1970 and 1996, the number of children living with both parents declined from 85% to 68%.

Oklahoma children are especially likely to experience the divorce of their parents. The divorce rates in Oklahoma are the second highest in the nation. In 1998, about 20,000 marriages ended in divorce (Oklahoma Health Statistics, 1998). In Oklahoma, 32% of adults have divorced compared to the national rate of 21% (OSU Bureau of

Social Research, 2001). Ninety-three percent of Oklahomans see divorce as a serious or somewhat serious national problem.

With the high number of divorcing couples in Oklahoma come a large number of children facing divorce. In a study conducted by the Oklahoma State Bureau of Social Research in conjunction with the Oklahoma Marriage Initiative (OMI), a majority of divorced nonresident parents reported that they felt close to their children. However, 39% also tended to be dissatisfied with their relationships with their children (OSU Bureau of Social Research, 2001).

Divorce not only causes relational problems within the family, but may lead to psychological difficulties for children. Children from divorced families have a greater likelihood of referral for psychological treatment (Amato & Keith 1991). Many of the students seen by school psychologists may be referred for problems related to parental divorce. School psychologists are in a unique position to help children overcome these problems and become successful at school despite familial difficulties. The National Association of School Psychologists (NASP) recently formally recognized the need for school psychologists to become knowledgeable in servicing and collaborating with diverse families and children, including those from diverse configurations, in order to increase parent involvement and student success (NASP, 2000).

THEORETICAL FRAMEWORK

Much research has focused on the factors that influence children during and after parental divorce. From this research, at least four central concepts have developed as explanations for how divorce impacts children: parental absence, economic disadvantage, family conflict, and parental adjustment/quality of parenting (Amato &

Keith, 1991; Hilton & Desrochers, 2002). None of these perspectives have been complete in explaining child post-divorce adjustment. But, the theory gaining the most support is the parental adjustment/quality of parenting perspective (Hilton & Desrochers, 2002). This theory suggests that positive relationships with parents and siblings are likely buffers that ameliorate the effects of divorce. Positive parental post-divorce adjustment is theorized to have a major impact on children as it impacts the parent-child relationship.

Another framework with growing acceptance is the three-tiered transactional model that of Stolberg et al. (1987). Many studies support the idea that individual, familial, and environmental factors interact in influencing child post-divorce outcomes (Hetherington, Bridges & Insabella, 1998; Stolberg, Camplair, Currier, & Wells, 1987). The perspective of Stolberg et al. is a comprehensive and logical framework for studies in the field, as it addresses the many possible determinants of child outcomes after divorce.

From a theoretical perspective, the current study relies upon both Stolberg's transactional model and the parental adjustment theory. It is proposed that many environmental, individual, and familial factors, such as the time since the divorce, SES, and family conflict, impact child post-divorce adjustment indirectly through their direct influence on parent adjustment and/or parent-child relationships. Parent-child relationships, particularly parent involvement, is anticipated to directly and profoundly impact a child's post-divorce adjustment (i.e. school performance). Though this study focuses on parent-child relationships and parental adjustment, other environmental, individual, and familial factors are not ignored.

Environmental Factors

Environmental influences likely to impact the adjustment of children after divorce include instability and changes, social support, the time elapsed since the divorce, and economic disadvantage. The importance of these environmental influences has been supported by much research (Colletta, 1979; Raschke, 1987; Stolberg et al., 1987). But, as Kurdek (1988) and Emery, Kitzmann, & Waldron (1999) suggest, parental involvement and adjustment are likely to mediate the influences of social support and economic disadvantage. It remains important, as Guidubaldi et al. (1983) stress, that socioeconomic status is controlled for in research studies in this field. Therefore, this study examines the influence of SES on child outcomes to divorce as a covariate.

Many studies examining the impact of time since divorce have resulted in inconclusive results (Amato & Keith, 1991, Bonkowski, Boomhower, & Bequette, 1985; Kurtz, 1994; Sun & Li; 2002; Woody, Colley, Schlegelmilch, Maginn, & Balsanek, 1984). Although it is logical that the time since divorce may mediate the effects of divorce on children, many studies in the field fail to examine this variable. Therefore, the current study will look at the relation of time since divorce with child outcomes at school.

Individual Factors

Individual determinants of a child's divorce adjustment include the child's age, gender, and personality characteristics. Research has indicated consistent effects for all of these variables (i.e. Amato & Keith, 1991; Clarke-Stewart, Vandell, McCarney, Owen, & Booth, 2000; Hetherington & Stanley-Hagan, 1999; Kurdek, 1988; Rohrllich et al, 1977; Stolberg & Anker, 1983; Wallerstein & Kelly, 1974; Wallerstein & Kelly, 1976). Children of specific age or gender are likely to experience outcomes in response to

divorce that are characteristic of their age and/or gender. Specifically, male children tend to have more aggressive externalizing responses to divorce than females (Hetherington et al., 1985). However, few academic achievement differences have been found between genders. Children of different age are very likely to experience divorce differently and few studies have failed to control for age in their studies. Finally, the influence of personality characteristics has been very difficult to adequately study due to their abstract nature and the inability to measure them prior to the divorce. Thus, within the domain of individual variables influencing divorce adjustment, it is most important to control for the influences of age. This study examines the divorce adjustment of elementary school-aged children from ages eight to eleven years old. Children in this age group are less likely than very young children or adolescents to be experiencing maladjustment due to developmental issues (i.e. separation anxiety, egocentrism) unrelated to the divorce (Wallerstein & Kelly, 1976), and were considered optimal for the present study.

Familial Factors

Family variables targeted in the study of divorce adjustment of children have included family conflict, parental adjustment, and parent-child relationships. Family conflict has been consistently found to influence children primarily in how it impacts the parent-child relationships (Black & Pedro-Carroll, 1993; Fauber & Long, 1991; Hetherington, 1979; Hodges, 1991; Tschann, Johnson, Kline, & Wallerstein, 1989). Thus, the effects of conflict on children will hopefully be captured in this study indirectly through the parental adjustment and/or parental involvement.

Parent Adjustment

Post-divorce parental adjustment is most likely to affect a child's adjustment through the changes in their parenting abilities and responsiveness to their child's needs (Hodges, 1991). During divorce and the two years following, parents become emotionally and physically distanced from their children and parent-child relationships suffer. Parents tend to become more inconsistent, less affectionate, and lack control over their children following divorce (Hetherington, 1991). Some studies have suggested that aggression and other behavioral and adjustment problems in children of divorce may be a result of their parent's lack of confidence in parenting skills, an actual lack of skills, and/or the child's perception of the lack of control (power assertion parenting methods) (Hetherington, 1979).

When looking at the long-term academic achievement consequences of divorce on children, Mednick, Baker, Reznick, and Hocevar (1990) found that the adjustment of parents is important in long-term child adjustment. The results of their study indicated a significant relationship between the mother's adjustment and the child's achievement which was not influenced by the time since the divorce. It can be suggested from this longitudinal study that children are more influenced by their parent's adjustment than the time since the divorce.

Parent Involvement

Parent involvement is one aspect of the parent-child relationship likely to impact children (Bronstein, Clauson, Stoll & Abrams, 1993). For this study, *parent involvement* refers to a parent's propensity to seek out his or her children and manifest an interest in their activities. Because parents are likely to experience emotional and adjustment

problems following divorce such as low self-worth, depression, and alienation, they may spend less time with their children and be less focused on their activities at home and school (Bigner, 1989). It is likely that divorce will have some impact and introduce some change in the way parents and children interact and spend time together.

Few studies have looked specifically at parental involvement with children from divorced homes. Much of the research in this field focuses on variables that are indications of negative parent involvement, such as conflict or parent maladjustment. Also, whereas a large body of literature shows consistent evidence of the positive effects of other aspects of the parent-child relationship, it can be deduced that parent involvement would have similar mediating effects on divorce adjustment. Further, many of these studies, although not specifically measuring parent involvement, measure constructs similar to the present definition of parent involvement. For instance, Hess and Camara (1979) posited positive parent-child relationships encompass the quantity and quality of parent-child interaction. This is similar to our description of parent involvement as being interested and involved with a child's activities.

Studies examining familial influences on the adjustment of children following divorce have led to several conclusions. First, they provide additional evidence that marital conflict is important in a child's adjustment to divorce primarily through its effect on the parent adjustment and parent-child relationship (Black & Pedro-Carroll, 1993; Fauber & Long, 1991; Kelly, 2000). The post-divorce adjustment of parents is important for children's post-divorce adjustment (Bronstein, Clauson, Stoll & Abrams, 1993). Often a parent's ability to be warm and involved and to parent effectively is diminished by their own emotional and adjustment problems following divorce.

Furthermore, it is clear that parental involvement, often measured as quantity and quality of time spent together, is an important aspect of the parent-child relationship, especially as mediators to child maladjustment to divorce (Amato & Booth, 1996; Hess & Camara, 1979; Tschann et al., 1989). As this study proposes, having an involved, well-adjusted custodial parent may help children overcome the stressors of divorce and avoid negative outcomes.

OUTCOMES FOR CHILDREN

The literature in this field suggests that due to the aforementioned environmental, individual, and familial variables, maladjustment is common in children who have experienced divorce. The likely outcomes for children are varied, with both internalizing and externalizing problems probable. School-aged children are likely to experience internalizing problems, such as sadness, grief, depression, and fear of the future (Johnston, Gonzalez, & Campbell, 1987; Wallerstein & Kelly, 1976). These internalizing difficulties are likely to negatively impact a child's motivation to achieve. Externalizing problems such as aggression, noncompliance, and antisocial behaviors are not as common in school-aged children. These negative outcomes may be noticeable in a child's school performance and behavior. Negative academic outcomes for children following divorce are likely, specifically in their academic achievement and achievement motivation.

Academic Achievement

Very early research by Kelly et al. (1965) introduced academic difficulties as a negative consequence of divorce. This early finding seems to be pervasive. Kelly (2000) and Hetherington and Stanley-Hagan's (1999) literature reviews, and Amato and Keith's

(1991) meta-analysis, each found substantial evidence that children from divorced homes have greater academic and achievement problems than children from intact homes. Kelly found that children of divorce consistently have more adjustment and achievement problems, as evident in school, than children from intact homes. Similarly, Amato and Keith found significant effect sizes for school achievement. There is a large body of literature that suggests that school performance is one of the most common and pervasive areas of maladjustment for children from divorced homes.

Research in the field has led to several conclusions when considering the academic achievement of children from divorced homes. First, many studies concur that children from divorced homes experience more academic difficulties than children from intact homes (Guidubaldi et al., 1983; Guttman, Amir, & Katz, 1987; Kinard & Reinherz, 1986; McCombs & Forehand, 1989; Mulholland, Watt, Philpott, & Sarlin, 1991; Plante, Goldfarb, & Wadley, 1993). Several factors stand out as having specific impact on a child's academic achievement after divorce. Characteristics of the mother's adjustment (McCombs & Forehand, 1989), SES (Guidubaldi, et al., 1983), and time since the divorce (Kinard & Reinherz, 1986) may all mediate a child's achievement following divorce. Additionally, several of these variables, including the mother's adjustment and socioeconomic status have been shown or suggested to affect children primarily by their effect on the parent-child relationship (Halloway & Machida, 1991; Hetherington, 1979; Hodges, 1991). The present study examines standardized test scores of participants as a measure of academic achievement. Analyses will examine the influence of parent involvement, family status, parental adjustment, time since divorce, and SES on children's achievement.

School manifestation of divorce maladjustment is not only likely in their academic achievement, but also their achievement motivation. Achievement motivation is highly associated with academic achievement, and is an important variable to consider in the divorce adjustment of children.

Academic Achievement Motivation

Academic achievement motivation has been defined as the tendency to approach and strive to accomplish tasks in the academic arena, and to quickly reach high standards (Stinnett, T. & Oehler-Stinnett, J., 1992). Motivation orientation can be described in two broad categories. Extrinsic motivation refers to the motivation to engage in an activity as a means to an end. Intrinsic motivation, on the other hand, is the motivation to engage in a task for its own sake. An intrinsic motivation orientation is preferable, as this orientation leads to more self-confidence and less task avoidance than that of the extrinsically motivated child (Das, Schokman-Gates, & Murphy, 1985).

Some researchers have used a behavioral framework when looking at a child's achievement motivation (Stinnett et al., 1991). As Bandura (1977) originally described, there are differences between problems in acquiring information and problems in performing the behavior. For this study, it is important to distinguish between skills and performance deficits. A skills deficit would mean that a child does not have the academic skills in his/her repertoire to succeed due to low intellectual ability or a lack of academic skills. A performance deficit, on the other hand, would indicate that the child has the necessary skills but fails to succeed. A performance deficit would be an indication of low achievement motivation that could possibly be due to the influence of family change as a result of divorce.

Motivation can be seen as a set of conscious beliefs and values shaped by recent experiences, successes, and failures, and by immediate factors (Stipek, 1993). Here, motivation is not stable, but varies with situational variables. Thus, school-aged children experiencing the withdrawal and depression associated with divorce would be expected to have a decline in motivation. Preoccupation with their family situation and other adjustment difficulties may temporarily lessen a desire to achieve, thus lowering their intrinsic motivation. However, it has been suggested that parents who teach children ways to cope with difficulties and model persistence and effort strengthen children's self-efficacy and in turn, motivation (Schunk & Pajares, 2002).

Achievement motivation has consistently been associated with academic achievement (Gottfried, 1990; Howse, Lange, Farran, & Boyles, 2003; Stinnett, Oehler-Stinnett, & Stout, 1991; Zsolnai, 2002). Specifically, Gottfried found that intrinsic motivation is positively related to achievement, IQ, and perception of competence in children. As Raffini (1986) suggests, a child's achievement motivation is an intervening variable can be identified and intervened on to improve academic achievement. Because this variable is so important in determining a child's academic performance, it is of interest to see how it is affected after divorce. The research of Mulholland, Watt, Philpott, and Sarlin (1991) and Guttman, Amir, and Katz (1987) have shown that divorce has a negative impact on academic achievement motivation in children from divorced families.

In light of this literature, the present study will examine the effects of family status, time since divorce, parent adjustment, and parent involvement on academic achievement motivation.

Parent Involvement and School Performance

There is a large body of literature to support the positive influence of parental involvement on school performance. As O'Shea, O'Shea, Algozzine, & Hammitte (2001) stress, effective families spend time together, are comfortable with each other, and are concerned for each other. In turn, families that are effective in these ways can have a dramatic positive impact on a child's school performance. Some studies have suggested that parent involvement may be even more influential on academic achievement than family configuration (Walberg, 1984).

Some research has examined the effects of parent involvement and other aspects of the parent-child relationship on children's school performance, particularly their motivation to achieve. Grolnick and Slowiaczek (1994) found that parent involvement is likely to lead to improved achievement motivation. In their examination of the parental involvement and other parenting behaviors of 302 parents of middle school students, certain aspects of parent involvement were found to predict a child's motivation, which in turn, predicted academic achievement.

Thus, the research on the impact of parental involvement has shown that academic achievement and other school performance characteristics, including motivation, are often higher in children with highly involved parents (Christensen & Hurley, 1997; Grolnick & Slowiaczek, 1994; O'Shea, O'Shea, Algozzine, & Hammitte, 2001). Although there is little research on how parent involvement specifically impacts children from divorced homes, there is a large body of research indicating that positive parent-child relationships can lead to improved adjustment for children. Therefore, this study hypothesizes that children from divorced homes with high levels of parent

involvement will have better motivation and achievement than children from divorced or intact homes with low parent involvement.

RATIONALE AND PURPOSE OF THE STUDY

With the growing number of children facing divorce, schools and professionals working within schools will increasingly need to be familiar with the specific difficulties these children face. In consideration of the literature presented, there is a need to connect parent involvement with the child's outcomes in school, specifically their academic achievement and motivation. Parental involvement has been consistently shown to have a positive impact on children's academic performance. There is also evidence of strong mediating influences of parent involvement in children's adjustment to divorce.

The primary goal of this study is to provide empirical support for the importance of parent involvement in mediating the effects of divorce on academic achievement and motivation in children from divorced and intact homes. Also, this study examines the impact of parental adjustment to divorce on the achievement and motivation of children. The relative influence of socioeconomic status and time since divorce are also investigated.

CHAPTER II

REVIEW OF THE LITERATURE

Children in schools today have many different academic, social, and psychological needs than they did thirty years ago. Societal and familial changes have not left children unaffected. One specific family configuration change, divorce, is influencing more and more children. With the changing family comes a mandate for school personnel, including school psychologists, to be knowledgeable and sensitive to diverse family systems.

The American family has changed dramatically from the two-parent nuclear family common prior to the late 20th century. Until 1960, most families held similar beliefs and values about family life that shaped their structure and function (Hamburg, 1993). Two-parent families held prescribed expectations for members, where fathers served as the head of the household and the source of income. Mothers were responsible for supporting their husbands, looking after the home, and guiding their children's development (Hamburg). Marriage was a commitment and a bond not easily broken.

With important gains in women's rights, changes in divorce laws, and many other societal changes in the past three decades, the American family has transformed. Women have entered the workforce, introducing a move of childcare to outside the home (Hamburg, 1993). Women often postpone marriage and no longer favor having large families.

Divorce has become easier and more common. According to a U.S. census report in 1994, the fastest growing marital status category was divorced persons. Furthermore, the number of divorced adults quadrupled from 4.3 million in 1970 to 17.4 million in 1994. In 2000, twelve million women and nine million men were divorced (U.S. Census Bureau, 2000).

Along with the increase in divorce rate, there has been an escalation in children involved in divorce. Statistics show that the number of children whose parents divorced grew by 700 percent from 1900 to 1972. Further, since 1973, there have been over one million new children of divorce each year (National Center of Health Statistics, 1995). Between 1970 and 1996, the number of children living with both parents declined from 85% to 68% (National Center of Health Statistics). It is estimated that by the age of sixteen, about half of all children will see their parents divorce (Hamburg, 1993).

Children in Oklahoma are especially likely to experience the divorce of their parents. The divorce rates in Oklahoma are the second highest in the nation. In 1998, about 20,000 marriages ended in divorce (Oklahoma Health Statistics, 1998). In Oklahoma, 32% of adults have divorced compared to the national rate of 21% (OSU Bureau of Social Research, 2001). Ninety-three percent of Oklahomans see divorce as a serious or somewhat serious national problem (OSU Bureau of Social Research).

With the high number of divorcing couples in Oklahoma come a large number of children facing divorce. In a study conducted by the Oklahoma State Bureau of Social Research in coalition with the Oklahoma Marriage Initiative (OMI), a majority of divorced nonresident parents reported that they felt close to their children. However,

39% also tended to be dissatisfied with their relationships with their children (OSU Bureau of Social Research).

Divorce not only is related to relational problems within the family, but also may lead to psychological difficulties for children. Children from divorced families have a greater likelihood of referral for psychological treatment (Amato & Keith, 1991). Thus, many of the students seen by school psychologists may be referred for problems related to parental divorce. School psychologists are in a unique position to help children overcome these problems and become successful at school despite familial difficulties.

After a nation-wide study on the impact of parental divorce on school-age children sponsored by the National Association of School Psychologists (NASP), a group of professionals emphasized the importance of the school psychologist's role in working with children from divorced homes.

School psychologists have often been frustrated by administrative restrictions of their services to select groups of children labeled "handicapped" or "special".

Service to existing special categories of children is, of course, necessary, but the profession needs to call attention to the importance of preventive mental health services and to the legitimacy of services to other groups of special children who are indeed handicapped by life circumstances. (Guidubaldi et al., 1983, p. 321).

As Guidubaldi and colleagues (1983) emphasized, school psychologists' primary role is to promote the healthy adjustment and development of children. These professionals must be attuned to family problems and other ecological variables that may affect child development, and use their knowledge of motivation, learning, personality, and behavior to benefit children experiencing familial changes. Guidubaldi et al.

encouraged school psychologists to “sensitize ourselves to such national trends as divorce . . . “in order to prepare for helping children.

More recently, NASP has formally recognized the need for school psychologists to become more knowledgeable in servicing diverse families and children, including those from varying configurations such as divorced and separated. In the organization’s training and credentialing standards revamped in 2000, NASP emphasized that school psychologists should be educated about family systems. Not only should they use best practices in providing psychological services for diverse families, but they should also be able to support, educate, and collaborate with families in order to increase parent involvement and student success (NASP, 2000). When families are undergoing a divorce, it is likely that parents will become less involved in their child’s school performance. Many times parents are overwhelmed by the divorce and the process demands much of their attention. Thus, it is even more important for school psychologists to be well-versed in parent collaboration and assistance. Understanding family changes and the special needs of children from divorced homes is the first step in providing their families with the best services possible.

Researchers began to study the effects of divorce on children before divorce began commonplace in the United States. Early studies concentrated on the implications of single-parent homes (from divorce or death) on children and pinpointed the most traumatizing aspects of divorce for children. In the late 1970’s, researchers started building programs of study looking at many characteristics of divorce impact on children.

HISTORY AND CURRENT STATE OF THE LITERATURE

In 1959, Freudenthal took one of the first informal looks at the problems of single-parent families. Freudenthal collected observational and clinical data from single-parent support groups. The groups initially consisted of single parents missing partners due to either death or divorce. However, as the group progressed, many of the widows dropped out due to vast differences between the problems they faced and the problems common to those undergoing divorce (Freudenthal). This study became one of the first investigations into the dynamics of divorced families.

Freudenthal (1959) concluded that single-parent families (as a function of divorce) had four dynamic elements. First, a sense of frustration and incompleteness was common for single-parent families. Both parents and children realized their difference from “normal” two-parent families, and realized “that a child’s life is likely to have more fullness in the presence of two parents” (p. 45).

A second dynamic of single-parent families noticed by Freudenthal (1959) is a sense of failure. Both parents and children expressed feelings of failure, either in their choice of spouse (for parents) or in their inability to prevent the family breakup. Children attributed the divorce to their incapability in “holding onto” to the absent parent, rather than parent incompatibility. Similarly, the third single-parent family dynamic noted by Freudenthal is a sense of guilt. As with the second dynamic, children felt guilt over not being able to keep the family together. Freudenthal found that children also had feelings of guilt associated with the first dynamic, incompleteness, as they often felt they were the cause of the family’s “deprivation” of a normal family. Feelings of guilt are a dynamic of divorce consistently noted in children from divorced homes (Amato & Keith, 1991;

Hetherington, 1979). Guilt appears to be a characteristic reactionary feeling of children from divorce across decades and social changes.

Freudenthal's (1959) final dynamic of single-parent homes is feelings of ambivalence. An element of hostility between parent and children tended to arise as parents saw their children as reminders of their failed marriage and came to resent having a disproportionate amount of responsibility in caregiving. Children felt hostility toward their caregiver when they held that parent responsible for the marriage dissolution. On the other hand, children and single parents often became closer after a divorce and their relationship was strengthened. Freudenthal's work with divorced families provided important groundwork for understanding the dynamics of these families, as many of these dynamics continue to be important variables in research with children of divorce.

Landis (1960) conducted one of the first systematic studies with children of divorce, examining the retrospective perceptions of college students whose parents had divorced. Landis noted that only about ten percent of students at the time of the study, 1950-1959, had experienced the divorce of their parents. Each student was asked to rate on a four point scale their family happiness, unity, and security prior to the divorce. Landis found that many of the respondents felt high amounts of unity, happiness, and security in their family, and were thus very surprised by their family's breakup. These children had the most difficulty adjusting to their parents' divorce. Only 22 percent of the sample reported high rates of conflict in their family. These children were often relieved that the conflict ended after the divorce and were more accepting of the breakup.

Landis (1960) found that most respondents, regardless of predivorce conflict, reported feeling less happy and less secure than they were prior to the divorce. Forty-

four percent of participants also reported trauma over being “used” by parents after the divorce. Those from families that were reportedly unhappy prior to the divorce tended to exhibit more “using” behaviors. These behaviors included trying to obtain information from the child about the ex-spouse, asking the child to testify in court against the ex-spouse, being told untrue things about the other parent, and being a go-between during quarrels.

Another common trauma noted by Landis (1960) was a broken relationship between child and parent(s). In this study, children tended to suffer most in their relationship with their father. This finding may have been impacted by a tendency for mothers to have custody; only nine percent of the sample lived with their fathers. One-third of respondents also reported that their peer and social relationships were negatively influenced by the divorce. Children reported being uneasy inviting other children to their “new” homes and feeling less confident in their relationships.

From this study, Landis (1960) suggested that age might be a major influence in how children respond to divorce. He found that children who were younger (five to eight years old) when their parents divorced had fewer feelings of insecurity and unhappiness. Researchers today continue to examine the variable of age closely in studying the influences of divorce on children (Clarke-Stewart et al., 2000; Kalter & Rembar, 1981; Kot & Schuemaker, 1999; Pett, Wampold, Turner, & Vaughan-Cole, 1999). These studies rarely have supported Landis’s finding that youngest children have the most positive reactions to divorce. Although this study utilized retrospective reports of students feelings before and during divorce, which might be unreliable, it was important in introducing the major traumas children might experience following divorce.

Another early study investigated the behavior of children in schools after their parents divorce. Kelly, North, and Zingle (1965) examined the school attendance, reading achievement, and behavior problems of 131 junior high school students from single-parent families. The gender of the child, the gender of the custodial parent, the nature of the familial breakup (death or divorce), and the child's year in school were examined in a multiple analysis of variance as predictors of the above behavior variables. Kelly et al. found that when family breakup occurred during a child's first three years of schooling, when many reading skills are acquired, there was an adverse affect on reading achievement. This study was unable to predict behavior problems in children from divorced homes, primarily due to an inadequate measure. Kelly et al.'s study was beneficial in initiating interest in the school performance of children from divorced families.

After these preliminary works in the 1950's and early 1960's, the divorce rate began to increase in the United States. It was during this time of inflated divorce rates that major researchers began to emerge in the field. During the 1970's these researchers conducted many studies and published papers that led to an enhanced understanding of how divorce influences children.

Judith Wallerstein and Joan Kelly began their investigation of children from divorced families in the early 1970's. Wallerstein and Kelly's works, primarily based on clinical investigation rather than experimentation, began by looking at age-related aspects of divorce adjustment in children. Their early works were based on their study of 131 children from preschool age to late adolescence. Wallerstein and Kelly were the first theorists to expand on Landis's (1960) research and define age-related outcomes to

divorce such as regressive behaviors in preschoolers; irritability, aggression, self-blame, and confusion in middle preschoolers, and increased anxiety and aggression in oldest preschoolers (1975). Sadness, grieving, fears, fantasies of responsibility and reconciliation, anger and loyalty issues were found to be characteristic of younger latency-aged children (Kelly & Wallerstein, 1976). Similar responses of anger, loyalty confliction, and loss, along with shame, rejection, and helplessness were identified in older latency-aged children (Wallerstein & Kelly, 1976). Common responses of adolescents were identified as sadness, shame, embarrassment, anxiety, worries about future and marriage, and withdrawal (Wallerstein & Kelly, 1974). These age-related characteristic responses to divorce developed by Wallerstein and Kelly are commonly used as groundwork in today's research in the field.

Wallerstein and Kelly's (1980) five-year follow-up to these studies, they made another huge contribution to the literature by pinpointing seven variables as having a positive effect on adjustment to divorce. These were identified as the parents ability to resolve post divorce conflict and anger, the ability of custodial parent to resume parental role, the ability of noncustodial parent to maintain relationship with the child, the personality characteristics of the child that provide for coping skills, the family's support systems, the diminished depressive or angry responses by the child, and the age and gender of the child (boys appear to need a positive relationship with fathers more than girls). Up to this study, much of the research in the field concentrated on the negative outcomes for children rather than possibilities for positive outcomes.

Wallerstein and Kelly introduced many important factors related to divorce adjustment in children through their years of study. Their works have been important in

laying the groundwork for further investigations. Although Wallerstein and Kelly's influence on the field has been great, they suffer from several methodological errors. First and foremost, Wallerstein and Kelly's research is all based on interview data, and caution should be taken when utilizing this type of self-report alone. In addition, the participants in Wallerstein and Kelly's studies came from a mostly middle-class clinical sample. The design lacked a control group of intact-family children, and thus cannot be generalized to the total population of divorced families.

Another major theorist and researcher in the field, E. Mavis Hetherington, began her studies in the 1970's. Like Wallerstein and Kelly, Hetherington's early studies often utilized observational data rather than more systematic quasi-experimentation. Hetherington has benefited the field by changing the approach of divorce research from a focus on a single event (the divorce) to a focus on a sequence of experiences (Hetherington, 1979). Hetherington chose to use a crisis model in conceptualizing the short-term effects of divorce on children. When divorce occurs, children experience many changes such as a loss of home, a loss of parent, conflict, and family disorganization.

Like Landis and Wallerstein and Kelly, Hetherington (1979) also noted the importance of a child's age at the time of divorce and the influence of a child's temperament, gender, and relationship with their parents on their adjustment to the divorce. Hetherington has added a vast amount of knowledge to the literature, including an examination of the factors contributing to a child's adjustment to divorce. Similar to Wallerstein and Kelly's (1980) discussion of variables impacting positive outcomes, Hetherington, Bridges, and Insabella (1998) concluded that a transactional model

examining multiple variables such as a child's individual vulnerability and risk, stress (including socioeconomic disadvantage), parental distress, disrupted family processes, and family composition (parent absence) is best in determining outcomes for children. Hetherington et al. (1998) questions the parent-absence hypothesis that many early studies, such as Frudenthal (1959), operated on, which is that a child is at a disadvantage when they are in a single-parent home. Instead, Hetherington et al.'s theory focuses on family processes, such as parent-child relationships and parental adjustment.

Hetherington's works may be criticized for often being based on professional opinion rather than scientific data. Many of Hetherington's works, however, are based on well-designed studies using multiple methods with multiple informants (i.e. Hetherington, Cox, & Cox, 1978). Hetherington has greatly benefited the understanding of divorce adjustment in children. She has provided theoretical frameworks for further research and has worked to clearly define the most crucial variables in the study of children from divorced homes.

Although many of the aforementioned researchers, like Freudenthal, group divorced families with other families with one absent parent (i.e. death, never-married single parents), for the purposes of this study, the term *divorced family* refers to a family that has undergone a legal divorce proceeding during the lifetime of the children, unless otherwise stated. Likewise, an *intact family* refers to families where parents of target children have never undergone divorce proceedings during the child's lifetime. The classification of an intact family did not require that both parents be the biological parents of the children in the family, but that they are the main mother/father figure in the child's life.

With these definitions and historical influences in mind, there are several prominent theoretical perspectives to explain how divorce influences children that have shaped the current literature in the field.

THE IMPACT OF DIVORCE ON CHILDREN

At least four central concepts dominate the theoretical considerations for how divorce impacts children: parental absence, economic disadvantage, family conflict, and parental adjustment/quality of parenting (Amato & Keith, 1991; Hilton & Desrochers, 2002). The parental absence perspective proposes that two-parent homes are most ideal for children and deviations from the two-parent family configuration may cause problems for children. Therefore, separation, divorce, and death of a parent would be stressors likely to lead to adjustment difficulties. When one of a child's parents is absent, there is likely to be less parental support, supervision, and role models for adequate social skills (Rollins & Thomas, 1979). The parental absence model is comparable to the conceptual models found in the early works of Freudenthal (1959) and Landis (1960).

In the meta-analysis of Amato and Keith (1991), the parental absence perspective was examined for empirical support. Three hypotheses in respect to the theory were considered. First, if parental absence causes maladjustment, then children who have lost a parent to death should have similar adjustment difficulties to children from divorced homes. Secondly, the parental absence theory suggests that if a single parent were to remarry, a child's adjustment should improve. The last hypothesis examined by Amato and Keith was that the quality and quantity of contact with the noncustodial parent should be positively associated with a child's well being.

Amato and Keith (1991) found moderate support for these hypotheses in their meta-analysis. In regard to the first hypothesis, though there was evidence that children experience death of a parent or divorce had similar difficulties, many studies examined found that children from divorced homes had worse adjustment than those who had experienced the death of a parent. There is little evidence for the second and third hypotheses associated with the parental absence perspective (Amato & Keith). In fact, the addition of a stepparent rarely improves a child's adjustment, and may in fact cause added difficulties for children. Similarly, there are mixed results as to whether increased contact with noncustodial parents has a positive or negative impact on children (Amato & Keith). Therefore, there is weak evidence in the literature for the parental absence perspective. As discussed earlier, for the purposes of this study, there is a focus on children who are experiencing parental absence solely due to divorce.

A second perspective on the adjustment of children to divorce is the economic disadvantage perspective. This concept holds that parental divorce often leads to a decline in the standard of living for mothers, who are the usual custodial parent (Amato & Keith, 1991). Children with less economic resources may be more likely to have poor nutrition, health, educational opportunities, and community support. The economic disadvantage perspective would suggest that children from divorce would experience few differences from intact families when family income is controlled for. Guidubaldi et al. (1983) found that when income was controlled for in a study comparing children from divorced and intact homes on 34 outcomes, only 13 were significantly different. However, when income was not controlled, there were significant differences between groups on 27 of the outcome variables. Amato and Keith (1991) found that many studies

have found similar support for the economic disadvantage perspective. Although there is evidence that economic difficulties may have a negative impact on children of divorce, it does not seem to be a complete explanation of divorce adjustment. Even when level of income is controlled, differences remain between children from divorced and intact homes (Hetherington et al., 1998). Because the impact of SES on divorce adjustment is complex and uncertain, the current study examines SES not as a primary variable in the study, but as a covariate.

A third theoretical perspective is the family conflict perspective. It proposes that divorce affects children largely because of the conflict that occurs between parents before and during the divorce process. This perspective was initially supported by the early work of Landis (1960), and has more recently been explored by Kelly, Hetherington, Wallerstein, and many other contemporary researchers in the field. According to this perspective, a child's adjustment to divorce should improve as conflict subsides.

A longitudinal study conducted by Hetherington et al. (1982) found that the behavior of children improved after two years, when conflict had subsided. Research indicates that the presence of buffers to protect children from conflict are the most important predictors of child adjustment (Kelly, 2000). Many theorists have suggested that conflict most influences children through its impact on the parent-child relationship (Hetherington, 1979; Hodges, 1991). For this reason, the current study examines a major aspect of parent-child relationships rather than the level of parental conflict.

The fourth theoretical framework is the parental adjustment/quality of parenting perspective. This model suggests that the psychological adjustment of the custodial parent following divorce is the most important predictor of children's outcomes. This

perspective has more consistent support than the other three models (Hilton & Desrochers, 2002). In examining the evidence for this theory, Amato (1993) found that the literature in the field has indicated that the adjustment of children following divorce was positively associated with the adjustment of the custodial parent and the quality of parenting after divorce. When parental adjustment variables have been controlled for, fewer differences are seen between divorced and intact families.

Hetherington et al. first suggested including parental adjustment and quality of parenting as part of the child divorce adjustment models (1988). They suggested that many theoretical perspectives only partially described childhood adjustment to divorce because any negative effects that children experience due to the loss of a parent, economic difficulties, or conflict within the family can be mediated through the support and supervision of parents. They proposed that positive relationships with parents and siblings are likely buffers that ameliorate the effects of divorce. As discussed later, there is much evidence that parental adjustment impacts a parent's ability to be an effective parent. Therefore, parent-child relationships are often negatively impacted by divorce.

Hetherington et al. (1988) also suggested that any one theoretical model is not complete in explaining the divorce adjustment of children. Rather, a transactional model of risks associated with divorce adjustment is most appropriate. The current study conforms to the assumptions of the parental adjustment model, while recognizing the importance of other moderating variables in the post-divorce adjustment of children. In line with Hetherington et al.'s perspective and the model for the present study is Stolberg et al.'s (1987) transactional model of child divorce adjustment. This model accounts for environmental, individual, and familial influences on child well-being and, therefore,

provides a comprehensive and logical framework for discussing the many possible determinants of child outcomes after divorce.

Determinants of Outcomes for Children

Stolberg et al. (1987) found that many negative outcomes for children following divorce, such as school problems, externalizing and internalizing pathology, and low self-concept were better accounted for by indirect influences of the divorce such as family changes or parenting than by the divorce directly. Following their framework, these influences can include environmental changes such as family relocation and economic difficulties. Individual characteristics of the child experiencing the divorce, such as age, sex, and emotional disposition also influence the impact of divorce. Familial influences, such as parental psychological adjustment, parent-child relationship and ongoing conflict are also likely to affect a child's adjustment to divorce.

The three-part framework utilized by Stolberg et al. (1987) in examining children of divorce is similar to the ecological perspective delineated by Bronfenbrenner (1979). Bronfenbrenner's theory acknowledges several levels of influences as important in child "development-in-context" (1979, p. 12). In respect to the aforementioned theoretical model of divorce adjustment, Bronfenbrenner's "ontogenic system" involves all the various within child factors, or individual influences, that influence how a child deals with divorce (Kurdek, 1981). The "microsystem", or the immediate environment of the child, corresponds with familial variables, namely parent-child relationships, parental involvement, parent adjustment, conflict, and social support. Bronfenbrenner's term for environmental influences, the "exosystem", includes all the instabilities in a child's

environment during divorce, including moves, changes in family routine, and financial hardship.

Bronfenbrenner's ecological model, and likewise that of Stolberg et al. provides a logical way of conceptualizing the possible factors that influence children post-divorce. These models focus on the contexts in which children develop as being interconnected in influencing divorce adjustment. Therefore, the direct and indirect effects of many contexts and relationships between contexts are considered, providing a thorough picture of divorce adjustment. The present study recognizes the utility of Stolberg's model in discussing the many possible post-divorce influences on child adjustment.

Environmental Influences

Instability and Changes

There are inevitably a multitude of changes in a child's environment following a divorce. Environment instabilities include moving to a new home, community, and/or school and changes in family routines and rules. These changes are likely to be viewed negatively by children and may lead to psychological problems (Wallerstein & Kelly, 1980). Research has indicated that as the level of instability increases after divorce, children have a more difficult time adjusting (Stolberg et al., 1987). All children are likely to experience changes following divorce. Through randomization of the sample, this study eliminates variance due to the degree of changes experienced by participants.

Social Support

Social support systems for both the custodial parent and for children following divorce have been shown to be important to divorce adjustment (Colletta, 1979; Raschke, 1987). In a study of 35 white, middle-class children, Kurdek (1988) found that children

who reported high levels of social support showed better adjustment. Although the size and degree of support is important for child adjustment, the source of support was not found to be important. Kot and Shoemaker (1999) emphasize the importance of external social supports in helping divorced families become able to show beneficial support *within* the family system. Kurdek (1981) reported that positive social supports are important in helping reduce the stresses associated with single parenting. Children in Kurdek's study had better post-divorce adjustment when their parents received positive social support.

In a study of 58 divorced mothers, Halloway and Machida (1991) found that those mothers who relied more on social supports were often more distressed and less authoritative (especially when the social support was from their own family). This finding seems contradictory to previous literature indicating the use of social support as a positive way of coping, but as Halloway and Machida explain, certain types of social support may be damaging. But, detrimental social support of parents does not necessarily mean children will also have negative support (Kurdek, 1988).

The research in this area has been plagued by differing definitions of social support and inconsistent findings. In light of Kurdek's (1981) findings, social support is assessed in this study as an aspect of parental adjustment. It is proposed that social support, like many other variables, indirectly influences children through its impact on parent adjustment and parent-child relationships.

Economic Disadvantage/Socioeconomic Status

An environmental variable given much attention to in the literature is that of financial hardship following divorce. In fact, this is the basis for the economic

disadvantage perspective on divorce adjustment discussed earlier. There are often significant economic changes and struggles for families following divorce, especially when the family breadwinner changes from one parent to another. Longitudinal data indicates that the living standards of single mothers and their children falls at least 10% after divorce, and may remain that way if the mother remains single. Single fathers, on the other hand, although likely to live in poverty, are less likely to experience such declines in income as single mothers (Duncan & Hoffman, 1985; McLanahan & Booth, 1989). After divorce, single parents must adjust to a loss in income, often accompanied by increased workloads and moving to a less desirable neighborhood (McLanahan & Booth).

Economic changes in divorced families are likely to be accompanied by childhood adjustment difficulties. In an early study, Hodges, Wechsler, and Ballantine (1979) found that children from divorced homes were significantly more maladjusted than those from intact homes. Several studies since have found that childhood maladjustment following divorce is more attributable to economic disadvantage than to family status (Blechman, 1982, Nelson, 1993). Decreases in family income following divorce cause an increase in parental strain and a decline in children's self-esteem (Nelson). The increased workload and other pressures on the single parent may have a negative impact on parent-child relationships (Emery et al., 1999). Similarly, there is some evidence that lower income is associated with less adequate parenting; and quality of parenting, not financial difficulties in themselves, lead to childhood adjustment difficulties (Emery et al.). All in all, economic disadvantage and increased expenses following divorce can lead to specific pressures for children such as a change in home

and/or school, lost contact with old friends, parents working longer hours, increased time in child care, increased household responsibilities, and greater exposure to parental conflict regarding financial struggles.

As discussed earlier, Hetherington (1998) has suggested that even when level of income is controlled, differences remain between children from divorced and intact homes. Because the influence of SES is uncertain and complex, the current study does not focus on SES as a primary variable, but examines any possible influences of SES by utilizing it as a covariate in the analyses. SES has been measured by the self-report income and educational levels of responding parents.

Time Since the Divorce

Another variable considered in divorce adjustment related to the environment is that of time elapsed since the divorce. For the purpose of this study, *time since the divorce* refers to the time elapsed since the divorce proceeding finalized. This term does not include time the family spends apart due to separation or other parental absence. Although parental separation may be traumatic for children, due to the precedent in the literature to look at the time elapsed since the divorce rather than the time since the separation, this study focuses on post-divorce adjustment.

Studies focusing on the effects of the time since the divorce have been inconclusive. Some studies have supported the theory that the first year following divorce is a traumatic period, during which parents and children must adjust to a range of coexisting intense emotions, changes, and challenges. This theory holds that as the time since the divorce increases, the intensity of emotional reactions and challenges diminish and adjustment improves. In clear support of this theory, Kolevzon and Gottlieb (1983)

examined the adjustment of 157 parents following divorce. The findings of their study found that parent adjustment improved following the first year of divorce.

Although this theory makes logical sense, studies with children have provided minimal support. Some longitudinal studies have shown improvements in child adjustment in divorce over time. Wallerstein and Kelly (1980) conducted a five-year study and found that although the mother-child relationship initially deteriorates by the end of the first year following divorce, many mothers are able to reestablish positive relationships with children. After five years, forty percent of mother-child relationships were considered very good and an additional twenty percent were rated as adequate. Father-child relationships, on the other hand, did not show improvement over time. This study provides support that divorce adjustment for children improves over time, and is especially important evidence for the present study in that it also demonstrates the long-term importance of parent-child relationships.

A study with similar results conducted by Aquilino (1994) found that adults from divorced homes described positive relationships with their biological parents, not unlike adults who grew up in intact homes. There were almost no group differences in mother-child relationship quality or contact between adult child and parent in Aquilino's study. However, this study failed to compare the adult parent-child relationships with the relationship status during childhood, and cannot make conclusions about long-term improvement in divorce adjustment.

In a study conducted by Fine, Moreland, and Schwebel (1983), results were contradictory to the Wallerstein and Kelly (1980) results. Fine et al. examined 101 college students whose parents had divorced before they were eleven years old. The

sample was contained approximately equal numbers of males and females, and participants were comparable in age and SES (middle-class). Measures of divorce adjustment included several rating-scales focusing on parent-child relationships, some being retrospective to childhood. MANOVAs comparing subjects from divorced and intact homes indicated that young adults whose parents had divorced had significantly poorer parent-child relationships. The researchers concluded that relationships did not improve over time between divorced parent and child, suggesting long-term effects of divorce. Similarly, other research has supported the notion that divorce has long-term effects by showing that young adults whose parents divorced when they were children have difficulty with romantic relationships and may fear intimacy and commitment in adulthood (Walker & Ehrenberg, 1998).

When looking at the long-term academic achievement consequences of divorce on children, Mednick, Baker, Reznick, and Hocesvar (1990) found that the adjustment of parents is important in long-term child adjustment. Menick et al. examined the academic achievement progress of 77 children from various SES whose parents had divorced at some time during the previous eighteen years. Reading and math proficiency measures obtained from teacher ratings collected in the eleventh and twelfth grades were correlated with a set of eight measures derived from intensive interviews with mothers designed to assess various stressors in the environment. The findings showed that there was no significant relationship between the number of years since the divorce and the child's academic achievement or the mother's adjustment. However, there was a significant relationship between the mother's adjustment and the child's achievement. Therefore, it

can be suggested from this longitudinal study that children are more influenced by their parent's adjustment than the time since the divorce.

Kurtz (1994) examined child behavioral ratings and coping strategy questionnaires from the parents of a sample of 122 elementary school-aged children. Participants were the parents of children from both divorced and intact homes. Children in the divorced group had experienced divorce from three months to nine years prior. MANOVAs indicated that the frequency and effectiveness of coping strategies improved with the passage of time following divorce. However, behavioral ratings did *not* vary as a function of the time since the divorce. Therefore, this study provides mixed support for the theory held by Kolvezon and Gottlieb (1983).

Sun and Li (2002) utilized data on the cognitive test scores and self-report of well-being of 9,524 eighth graders from several waves of the National Education Longitudinal Study. For the selected participants, data was collected at two points before and two points after the divorce of their parents. The results of a pooled time-series analysis showed that cognitive test scores declined over time, while social-psychological measures initially decreased and then improved. These results are similar to that of Kurtz (1994), suggesting that some aspects of adjustment improve following divorce while others do not.

Bonkowski, Boomhower, and Bequette (1985) examined the post-divorce adjustment of 48 children by analyzing themes within letters the children had written to their parents. Twenty of the children in the sample lived in families where parents had been divorced less than a year, thirteen children's parents had been divorced for one to three years, and thirteen children had parents who had been divorced more than three

years. Over the three time periods, there were little differences in the expression of feelings (anger about the divorce, questioning why, longing for family togetherness) in the letters. In fact, some feelings, such as anger, were expressed more often in those letters from children whose parents had divorced more than three years previously than those who had experienced divorce one to three years before. The only feelings that were less common as time progressed were desires for parental reconciliation. The findings of this study might be limited by a failure to control for any other influences on child adjustment and by subjective measurement.

A study by Woody, Colley, Schlegelmilch, Maginn, and Balsanek (1984) looking at the effects of parental stress on the divorce adjustment of children also failed to find improvements over time. Woody et al. interviewed 87 families (parents and children) and parents subsequently completed a checklist of child symptoms of maladjustment. Multiple regression analysis indicated that high levels of parental stress and parent symptomology predicted child symptoms that did not decrease with the passing of time. In other words, children in this study continued to show maladjustment up to two years following divorce. Data from children having experienced divorce more than two years before the study were not examined. This is a clear limitation of the study, as it limits the ability to make conclusions about the long-term influences of divorce.

Further inconclusive findings in this area were emphasized by the meta-analysis of Amato and Keith (1991). From their analysis, conduct problems was the only variable showing an effect across time; as time since the divorce increases, conduct problems decrease. Amato and Keith suggest that this finding should not be over-interpreted. As

time passes, other environmental changes likely to influence adjustment, such as remarriage, are likely to occur.

Although it is logical that the time since divorce may mediate the effects of divorce on children, many studies in the field have been inconclusive in their findings in this area. Among the reasons for inconclusive results may be the stress and pressure of divorce is likely to make newly divorced parents unwilling to participate in research. Many studies that have examined this variable successfully, however, have emphasized the impact of time on parent-child relationships and parental adjustment. Therefore, this study examines the indirect impact of time on child post-divorce adjustment through its effect on parent adjustment and parent-child relationships.

The measurement of time since divorce is fairly simple, usually obtained from background questionnaires or interviews. A limitation of the previous research with this variable, however, is a failure to have a clear theoretically based standard for dividing the range of years since the divorce into groups. In this study, time since divorce data was obtained from a parental questionnaire. Based on the limited research with this variable, participants fell within one of three groups, less than two years post-divorce, two to five years post-divorce, and more than five years post-divorce.

Individual Influences

Age

Individual factors, such as age, gender, and personality characteristics have been the focus of much investigation into the impact of divorce on children. Age has repeatedly proven to be influential in a child's adjustment following divorce. In their meta-analysis, Amato and Keith (1991) found that age was significantly associated with

effect sizes for psychological adjustment, social adjustment, and parent-child relations; those children in primary and high school having the biggest effect sizes. Although this finding and many other researchers have suggested that one age category might have more adjustment difficulties than another age group, it is probably more likely that age groups do not necessarily differ in the quantity of their adjustment difficulties, but rather in the quality. In other words, the outcomes for children differ depending on their age and the developmental tasks characteristic of that age (Kalter & Rembar, 1981).

In their clinical evaluation of 144 children from divorced homes from the age of seven to seventeen, Kalter and Rembar found, in contradiction to the early work of Landis (1960), that the youngest children were the most vulnerable to parent-child relationship difficulties. A common developmental task in early childhood involves coping with separation from parents. Kalter and Rembar suggest that this normal developmental task makes them more vulnerable to difficulties from parental divorce. Likewise, other research has found very young children to display many more externalizing behaviors, such as aggression and whininess, following divorce (Clarke-Stewart et al., 2000; Wallerstein & Kelly, 1975).

School-aged children are likely to experience divorce-related cognitive problems and other internalizing difficulties, such as guilt, depression, etc. (Johnston, Gonzalez, & Campbell, 1987; Stolberg & Anker, 1983; Wallerstein & Kelly, 1976). Following divorce, adolescents are likely to experience alcohol and drug use and teenage pregnancy (Amato & Keith, 1991; Hetherington & Stanley-Hagan, 1999; McLanahan & Sandefur, 1994). Adolescents are also likely to experience internalizing difficulties surrounding their developmental characteristics of egocentrism, lower empathy, and individualization.

Withdrawal, anger, and low perceived self-competence are common in this age group (Long, Forehand, Fauber, & Brody, 1987; McLoughlin & Whitfield, 1984; Wallerstein & Kelly, 1974).

It is clear that children of different ages are likely to experience divorce in different ways. The focus of this study, therefore, is limited to children of “school-age,” particularly those from eight to eleven years old. Children in this age group are less likely than very young children or adolescents to be experiencing maladjustment due to developmental issues (i.e. separation anxiety, egocentrism) unrelated to the divorce (Wallerstein & Kelly, 1976).

Gender

A child’s gender might also influence their post-divorce adjustment. Although Amato & Keith (1991) found no evidence of post-divorce adjustment differences between boys and girls, gender related differences have been reported in several studies. Namely, many studies have indicated that boys have more externalizing problems, such as aggression, following divorce than females (Hetherington et al, 1985). Boys have been characterized as more aggressive, anti-social, and impulsive following divorce than girls (Rohrlich, Ranier, & Berg-Cross, 1977). However, in adolescence, there is evidence for an increase in aggression for females from divorced homes (Hetherington, 1993). On the other hand, Hetherington (1989) proposed that some girls, but few boys, exhibit enhanced functioning, probably as a positive reaction to enhanced responsibilities, independence and other challenges. All in all, boys and girls seem to have relatively the same reactions to divorce: depression, behavior problems, academic difficulties, social

problems, etc. For this reason, the current research limits any gender differences through randomization of the sample.

Personality

A final individual variable implicated in divorce adjustment in children is personality characteristics. In children who have poor adjustment prior to divorce, post-divorce adjustment is all the more likely to be poor (Hetherington, 1989). Hetherington suggests that personality characteristics indicative of positive adjustment are intelligence, competence, easy temperament, internal locus of control, good sense of humor, and high self-esteem. These characteristics enable a child to induce positive responses and gain support from others. It is difficult to study the pre-divorce adjustment of children, however. Several studies have used existing data sets of normal child development to examine how pre-divorce adjustment might influence post-divorce adjustment. From these investigations, it has been concluded that many of the psychological problems of children after divorce actually were present before divorce (Block, Block, & Gjerde, 1988; Doherty & Needle, 1991). As Emery et al. (1999) notes, “Emotional problems that predate divorce cannot be ‘consequences of divorce.’ Thus, at least some of the increased risk found in comparing children from divorced and married families is not due to divorce.” (p. 15)

In a study of 356 children nine to twelve years old from divorce, Sandler, Tein, Mehta, Wolchik, and Ayers (2000) found that a high coping efficacy, or “personal ability to cause positive outcomes” in children was a mediator to the relationship between active coping and psychological problems of children of divorce. (p. 1113). Thus, positive coping skills in children may lead to positive adjustment. This finding supports the

suggestion that adjustment skills or deficits prior to divorce are critically important to a child's divorce adjustment.

Other research has indicated the importance of locus of control on post-divorce adjustment in children. An internal locus of control has been found to be a mediator of children's divorce adjustment (Fogas, Woldchik, Braver, & Sanford, 1992; Kurdek, 1988). Furthermore, a child's perceptions of the divorce are important in their adjustment. If they have misconceptions about the divorce, including self-blame or unrealistic hopes for reconciliation, they are more likely to experience anxiety and poor self-esteem (Kurdek, 1986; Kurdek & Berg, 1987).

It is clear that individual personality characteristics are certain to influence a child's adjustment to divorce. However, there are unlimited personality constructs that could be examined and their influences are likely complex. Also, it is very difficult to adequately measure pre-divorce adjustment and characteristics, especially with retrospective self-reports. Therefore, this study does not examine pre-divorce variables or other personality characteristics. It is recognized, as suggested by Emery et al. (1999) that at least some of the maladjustment found in children from divorced families is not due solely to divorce.

Familial Influences

Familial factors likely to impact the divorce adjustment of children include parental psychological adjustment, parenting skills, parent-child relationship and ongoing conflict. These familial variables have been held as some of the most important variables influencing divorce adjustment in children. In fact, two familial variables, family conflict and parental absence, have been the basis of theoretical models of divorce adjustment, as

discussed earlier. Parent adjustment and parent-child relationships have recently been cited by many researchers as paramount factors in child post-divorce adjustment (Pruett et al., 2003; Wallerstein & Lewis, 2004).

Family Conflict

An end to conflict is supposed to be a positive product of divorce. Children experiencing high levels of pre-divorce conflict have been found to have more behavioral and academic problems than children from low-conflict families (Vadewater & Lansford, 1998). In actuality, conflict often does not end with divorce and the effects of pre-divorce conflict are often long lasting. In many cases the focus of conflict shifts to the children following divorce, as they are the primary focus of interaction between the two ex-spouses (Emery et al., 1999). There is research to indicate that high conflict that focuses on the child is more predictive of behavior problems than conflict that is not child-centered, even when in high frequency (Grych & Fincham, 1990).

At any rate, there appears to be a consensus that interparental conflict is detrimental to children. Amato and Keith's (1991) meta-analysis indicated that children in high-conflict families have significantly more psychological adjustment problems and lower self-esteem. Conflict in the family was more related to the well-being and adjustment of children than whether the family was divorced or intact. Though there is a vast body of support for the negative effects of parental conflict on children, research has identified buffers for the effects of conflict.

Wallerstein and Lewis (2004) reported that children of divorce in their longitudinal study often reported as adults that although divorce is designed to relieve stress and conflict, for children that is not often the case. Stresses associated with living

in a divorced family are often perceived as more burdensome than conflict in the marriage, and children often feel they have lost more than they have gained. A positive post-divorce family atmosphere may ameliorate some of the child's stress. A good relationship with the custodial parent, parental warmth, and the support of peers and siblings are likely to mediate the negative impact of familial conflict and stress (Kelly, 2000). Research has found that the common association between conflict and behavioral problems in children from divorced homes was mediated through the child's perceived rejection by their parents or by some aspect of the parent's parenting style (Fauber & Long, 1991). Black and Pedro-Carroll (1993) similarly concluded that the effects of family conflict were mediated by parent-child relationships, namely the level of security the child feels with their parents. Some suggest that high levels of marital conflict can lead to a deterioration of the parent-child relationship, causing the child to have difficulty adjusting to divorce (Tschann et al., 1989).

All-in-all, there is a substantial amount of evidence to suggest that level of familial conflict is important to child divorce adjustment primarily in the way it effects the parent-child relationship (Black & Pedro-Carroll, 1993; Fauber & Long, 1999; Hetherington, 1979; Hodges, 1991; Tschann et al., 1989). For this reason, the current study examines a major aspect of parent-child relationships and parental adjustment rather than the level of parental conflict. To ensure that the impact of conflict was not overlooked in the present study, however, the measure of parent adjustment utilized in the study is comprised of many family conflict related questions.

Parental Adjustment

Divorce has an indirect negative impact on children as families change and new parenting roles are introduced (Stolberg et al., 1987). Single parents emerge after divorce, and must face a variety of new stressors that may lead to diminished well-being. Clarke-Stewart et al. (2000) found that married mothers have significant advantages over single mothers in education and income. Further, married mothers have psychological advantages, such as more child-centered beliefs, less conflict, less depression, and more support. Signs of poor psychological adjustment in newly single parents include anger, anxiety, depression, loneliness, and preoccupation with their challenges (Hetherington et al., 1998). For this study, *parental adjustment* refers to the parent's perceived adjustment following divorce.

Parental maladjustment is likely to most affect a child's adjustment through the changes in their parenting abilities and responsiveness to their child's needs (Hodges, 1991). During divorce and the two years following, parents become emotionally and physically distanced from their children and parent-child relationships suffer. Parents tend to become more inconsistent, less affectionate, and lack control over their children following divorce (Hetherington, 1991). Some studies have suggested that aggression and other behavioral and adjustment problems in children of divorce may be as a result of their parent's lack of confidence in parenting skills, an actual lack of skills, and/or the child's perception of the lack of control (power assertion parenting methods) (Hetherington, 1979).

Mednick, Baker, Reznick, and Hocevar (1990) found that the adjustment of parents is important in long-term child adjustment. In examining the relationship between the number of years since the divorce, parental adjustment, and the child's

academic achievement, a significant relationship was found between the mother's adjustment and the child's achievement. It can be suggested from this longitudinal study that children are more influenced by their parent's adjustment than the time since the divorce.

In a study of twenty custodial mothers and their children, Kurdek (2002) found strong evidence of the mediating effects of positive parental adjustment. Child adjustment was examined approximately a year after the divorce and again one year later. Pearson correlations revealed that parental adjustment was highly related to child adjustment. Specifically, children's adjustment at the second examination was related to high maternal adjustment at the first examination. Thus, this study gives evidence that parental adjustment has ongoing consequences for children.

In a similar study, Forehand, Thomas, Wierson, Brody, and Fauber (1990) looked at the role of maternal functioning in the adjustment of adolescents. Two hundred fourteen adolescents and their mothers from either divorced or intact homes completed measures assessing depression and conflict. They were also observed interacting to assess parenting skills. Teachers completed measures assessing adolescent functioning. Analysis found that parent functioning was important in predicting adolescent functioning. As Forehand et al. concluded, divorce is likely to be a stressor that makes parents more irritable and less positive in their parenting, leading to lower adolescent functioning. This study is yet another indication that parental adjustment to divorce is important in mediating child adjustment.

One final study by Stolberg and Bush (1985) examined the post-divorce adjustment of 82 mothers and their school-aged children. Historical factors, parental

adjustment, and child outcomes (self-concept) were assessed. Stolberg and Bush found that better adjusted custodial mothers described themselves as more effective single parents, and in turn described their children as being well adjusted. This study led to the conclusion that well-adjusted mothers appear to practice better parenting techniques that lead to positive outcomes for children.

Much research has indicated the positive impact of parent adjustment on child adjustment to divorce (Forehand et al., 1990; Kurdek, 2002; Mednick et al., 1990; Stolberg & Bush, 1985). From this research, one can conclude that parent maladjustment and changes in parenting could lead to diminished parent involvement. For this reason, the present assesses the influence of parents' post-divorce adjustment on child adjustment. This study recognizes the limitations of not examining parental pre-divorce adjustment; it will be difficult to conclude that parent maladjustment is due to the divorce alone. However, it is hard to accurately measure pre-divorce adjustment and it is not a major interest of the current study.

Many studies have measured this variable through parental self-reports either by interview, full psychological batteries, or rating scales. This study will use a measure of post-divorce parental adjustment derived from the Fisher Divorce Adjustment Scale utilized by Stolberg and Bush (1985). The Fisher Divorce Adjustment Scale was developed by Bruce Fisher and is an internationally well-known measure for assessing adjustment to the end of a love relationship. The examiner-revised Divorce Adjustment Scale contains items assessing both social and emotional adjustment, and has many items that specifically deal with family conflict and social support.

Parent-Child Relationships

Research suggests that changes in parenting stresses, adjustment, and roles following divorce are likely to impact children (Furstenberg, 1988; Wallerstein & Kelly, 1980). The earliest researchers in the fields, such as Landis (1960) and Freudenthal (1959) stressed the importance of parent-child relationships in the divorce adjustment of children. Much research since then has suggested that children in divorced homes have less positive relationships with their parents than those in intact families (Amato & Keith, 1991; Hetherington, 1991; Wallerstein & Kelly, 1980). As suggested previously, poor parental adjustment following divorce is likely to impair parenting and parent-child relationships. Although it has been suggested that these relationships improve with time, especially with the custodial parent, difficulties often remain (Hetherington, 1991; Wallerstein & Kelly, 1980). As Hetherington et al. (1998) stresses any negative impact divorce has on children may be mediated through support and supervision of parents. Positive relationships with parents can ameliorate the effects of divorce.

Many researchers have examined the role of noncustodial parent involvement in the post-divorce adjustment of children. Traditionally, it has been widely accepted that the level of contact and the quality of the relationship with the noncustodial parent is positively associated with children's well-being. In fact, several studies have shown child adjustment to be better when there is a strong relationship with the noncustodial parent (Guidubaldi et al., 1983; McLanahan & Sandefur, 1994; Peterson & Zill, 1986; Wolchik, Sandler, & Braver, 1987). However, as Amato & Keith (1991) note from their meta-analysis, many of the associations in these studies appear for only certain outcomes. In fact, there are also several studies that fail to find associations between noncustodial

parent involvement and child outcomes (Berg, 2003; Hess & Camara, 1979; Hodges, Buchsbaum, & Tierney, 1983; Kalter et al., 1989; Luepnitz, 1982). Some studies have even found that noncustodial parent contact can have a negative impact on child adjustment (Baydar, 1988; Hodges, Wechsler & Ballantine, 1979). In light of these surprising results, it can not be concluded that noncustodial parent involvement is necessary for positive post-divorce adjustment in children. Instead, as this study hypothesizes, a positive relationship with a well-adjusted custodial parent is paramount to child well-being.

The ideal positive parent-child relationship is likely to be impacted by family conflict. Amato and Booth (1996) examined parent-child relationships pre- and post-divorce utilizing data from a national longitudinal study of about 2,000 families. The parents' perceptions of their relationship with their children, their affection for and closeness with their children, and their marital satisfaction were assessed at three different times. The results indicate that parents often detect suffering parent-child relationships prior to divorce, often in conjunction with low marital satisfaction. A path analysis indicated that low marital happiness prior to divorce predicts problems with the parent-child relationship pre-divorce and low parental-child affection post-divorce. Although Amato and Booth's study did not examine child outcomes, it does provide important evidence that parent-child relationships are likely to be negatively impacted by marital conflict. As discussed earlier, marital conflict is not a major variable of interest in the present study. Rather, parental post-divorce involvement and adjustment, two variables likely to be impacted by marital conflict, are examined.

Many studies have added much to this body of literature by examining both the parent-child relationship following divorce and the behavioral and/or emotional outcomes for children. In one early study, Hess and Camara (1979) examined the family relationships in divorced and intact homes and how these relationships affect children. A limited sample of 16 Caucasian, middle-class divorced families and 16 similar intact families were examined by teacher, parent, and child interviews, teacher ratings, and behavioral checklists. From a series of correlational analyses, Hess and Camara concluded that the child's relationship with their parents is a very powerful influence on the child's school and social adjustment post-divorce. Those children maintaining positive relationships (quantity, quality, and communication) with their parents had lower ratings of stress and aggression and more positive ratings of work effectiveness and social interaction with peers. When relationships with both parents were negative, children had the worst behavioral ratings. The authors suggest that the effects of divorce can be buffered by a positive relationship with both parents, although they recognize that a positive relationship with only the custodial parent might be enough to benefit the child.

Tschann et al. (1989) studied parent-child relationships, among other factors such as levels of pre- and post-divorce conflict, as predictors of children's emotional adjustment following divorce. The sample for the study included 178 children from divorced families from two to 18 years old. The families were all middle-class, well-educated, mostly white families from a suburban community. Path analysis indicated that one of the strongest predictors of positive emotional adjustment was the quality of relationships with both parents, but especially with mothers. Poor relationships with mothers or fathers were the best predictors of behavior problems. The strongest indirect

effects found in this study were for marital conflict. Thus, conflict only affects the child as it impairs the parent-child relationship, as suggested earlier. The researchers concluded that marital conflict (pre or post separation) is followed by a negative impact on parent-child relationships, which is likely to lead to a child's poor emotional adjustment to the divorce. Once again, this study provides evidence for the hypothesis of the present study that the emotional adjustment of a child might be buffered if the custodial parent, whom the child is likely to interact with most, can maintain a positive relationship with the child and remain warm and empathetic.

Using data from the National Longitudinal Study of Adolescent Health, Videon (2002) looked at depression and delinquent behavior in adolescents. The data were representative of every social class, geographic region, and race. Two waves of data were collected, two years apart. Videon's analysis was limited to adolescents living with both biological parents in the first wave and those living with one or both biological parents in the second wave. The child's satisfaction with their relationship with their parents was assessed as a measure of parent-child relationships. The study indicated that parent-child relationships prior to divorce can moderate the effects of the divorce. However, the higher the child rates their relationship with a parent prior to divorce corresponds with high levels of delinquency when separation from that parent occurs as a result of divorce. On the other hand, when parent-child relationships are poor (accompanied by conflict), separation from the parent can actually be beneficial.

These studies on parent-child relationships lead to three major conclusions. First, parent-child relationships can be expected to impact a child's adjustment to divorce. Secondly, family conflict and other negative aspects of divorce are likely to be mediated

by parent-child relationships. Last, research has found that having a positive relationship with the custodial parent may be enough to mediate poor adjustment in children. There are a multitude of ways to look at parent-child relationships, as seen in the variety of categories and measures in the previously discussed studies. For this study, an important aspect of parent-child relationships, parent involvement, is examined.

Parent Involvement

For this study, *parent involvement* refers to a parent's propensity to seek out his or her children and manifest an interest in their activities. This aspect of parent-child relationships reflects the time a parent spends with their child and the knowledge they have about their child. Because parents are likely to experience emotional and adjustment problems following divorce such as low self-worth, depression, and alienation, they may spend less time with their children and be less focused on their activities at home and school (Bigner, 1989). It is likely that divorce will have some impact and introduce some change in the way parents and children interact and spend time together. However, if the custodial parent whom the child spends a significant amount of time with can maintain a positive relationship and create a positive post-divorce environment, the child will be benefited.

Few studies have looked specifically at parental involvement with children from divorced homes. Much of the research in this field focuses on variables that are indications of negative parent involvement, such as conflict or parent maladjustment. Also, a large body of literature shows consistent evidence of the positive effects of other aspects of the parent-child relationship, it can be logically deduced that parent involvement would have similar mediating effects on divorce adjustment. Further, many

of these studies, although not specifically measuring parent involvement, measure constructs similar to the present definition of parent involvement. For instance, Hess and Camara (1979) defined positive parent relationships as the quantity and quality of parent-child interaction. This is similar to our description of parent involvement as being interested and involved with a child's activities.

Although few studies have specifically looked at the influence of parental involvement in the divorce adjustment of children, one study by Bronstein, Clauson, Stoll, and Abrams (1993) provides evidence that parental involvement can have a positive influence on children following divorce. In a sample of 136 mostly Caucasian fifth graders, measures of parenting style, parent involvement, self-concept, psychological problems, classroom behavior, peer relations, and academic performance were examined. These variables were measured by parent, teacher, and child self-reports, structured interview, and an academic record review. A series of t-tests and ANOVAs were conducted to compare the participants from divorced and intact homes. Differences were found between intact and divorced families in both parental involvement and child adjustment. Two-parent families were more likely to take their children to community events, do things with them at home, and talk with them about their problems. Further, the results of this study indicated that when the noncustodial parent was uninvolved, the involvement of the custodial parent was often enough for positive child adjustment. The authors proposed that although divorce is associated with more problematic parenting and poorer outcomes for children, certain factors, such as SES, might also have a strong and equally influential impact on parental functioning. Overall, the findings of this study

support the idea that parental involvement is important in the adjustment of children to divorce.

Few other studies have looked specifically at the role of parental involvement in the adjustment of children from divorced homes. There is, however, a large body of literature to support the positive influence of parental involvement on school performance, namely academic achievement (a major dependent variable in this study). As O'Shea, O'Shea, Algozzine, & Hammitte (2001) stress, effective families spend time together, are comfortable with each other, and are concerned for each other. In turn, families that are effective in these ways can have a dramatic positive impact on a child's school performance. Some studies have suggested that parent involvement may be even more influential on academic achievement than family configuration (Walberg, 1984). Walberg coined the term "curriculum of the home" to refer to the interaction variables considered to be important on outcomes for children. These variables include parent-child conversations about daily events, encouragement and discussion of leisure reading, monitoring television watching, expressions of affection, and interest in children's academic and personal growth.

In a study related to the "curriculum of the home," Clark (1983) identified home variables that differentiated between high and low achievers. The family life of high achievers was characterized by frequent dialogue between parents and children, strong parental encouragement of academic pursuits, warm and nurturing interactions, clear and consistent limits, and consistent monitoring. A conclusion from the Clark study especially important to the theory underlying the present research is that parents of high

achievers felt personally responsible for helping their children gain knowledge and were involved in school functions and activities.

Parent involvement in education has been described as having positive effects on student achievement across grade levels, in programs that are home-based or school-based, and across levels of SES (Swap, 1992). As described by Christensen and Hurley (1997), in the past decade there has been an increase in the development of parent involvement programs in schools. These programs encourage parent involvement in their child's school, which in turn, elicits parent involvement with their child. One reason for the gaining popularity of parent involvement programs is that research findings have consistently found that parent contribution is important in the academic progress of children (Christensen & Hurley). Parent contributions to student academics are likely to lead to improved grades, test scores, reading and math achievement, attitude toward schoolwork, behavior, and self-esteem (Christensen & Hurley).

Grolnick and Slowiaczek (1994) found that parent involvement is also likely to lead to improved achievement motivation. In their examination of the parental involvement and other parenting behaviors of 302 parents of middle school students, certain aspects of parent involvement were found to predict a child's motivation, which in turn, predicted academic achievement.

Thus, the research on the impact of parental involvement has shown that academic achievement and other school performance characteristics, including motivation, are often higher in children with highly involved parents. Although there is little research on how parent involvement specifically impacts children from divorced homes, there is a large body of research indicating that positive parent-child relationships

can lead to improved adjustment for children. Therefore, this study hypothesizes that children from divorced homes with high levels of parent involvement will have better motivation and achievement than children from divorced or intact homes with low parent involvement. Also, parent involvement is hypothesized to be a major predictor of academic achievement and motivation.

Parent involvement is often measured by parent or child rating scales or questionnaires. Although standardized child rating scales with sufficient reliability and validity are rare, there are parent rating scales designed to assess parent-child relationships that have subscales for parent involvement. Many of these have been standardized on representative samples and have adequate reliability and validity. Self-report rating scales, however, are subject to bias, especially when examining parent-child relationships, as parents may desire to portray themselves in a positive light.

The Parent Child Relationship Inventory (PCRI) were utilized in the present study. The Parent-Child Relationship Inventory (PCRI) is a 78-item, self-report questionnaire that assesses parents' attitudes toward parenting and toward their children (Gerard, 1994). Items are arranged in scales that reflect major features of parenting and the parent-child relationship, including parent involvement. The 14-item Involvement scale examines the level of the parent's interaction with and knowledge of his or her child. The PCRI has adequate reliability and validity and was standardized on a representative sample.

The measure chosen for this study, the PCRI, was selected due to its excellent psychometric properties and its match with the design of the current research. Items on the PCRI such as "I seldom have time to spend with my child," "I am very involved with

my child's sports or other activities," "I spend very little time talking to my child," "My child and I go on outings together," "I enjoy spending time with my child," and "My child and I work on projects together" adequately reflect this study's definition of parent involvement as a parent's propensity to seek out his or her children and manifest an interest in their activities.

PCRI raw scores are converted to t-scores, normalized standard scores with a mean of 50 and a standard deviation of 10. Each subject's t-score obtained from the PCRI Parental Involvement scale was utilized for data analysis.

Summary of Theoretical Model

From a theoretical perspective, the current study takes from both Stolberg's transactional model and the parental adjustment theory. It is proposed that many environmental, individual, and familial factors, such as the time since the divorce, SES, and family conflict, impact child post-divorce adjustment indirectly through their direct influence on parent adjustment and/or parent-child relationships. More specifically, post-divorce parental adjustment, as impacted by a variety of divorce-related factors, is expected to be related to parent-child relationships. Parent-child relationships, particularly parent involvement, is proposed to directly and profoundly impact a child's post-divorce adjustment (i.e. school performance).

Outcomes for Children

"The day (my parents) divorced was the day my childhood ended." This quote taken from the interview research of Wallerstein & Lewis (2004) reflects the possible devastating outcomes of divorce on children. Divorce leaves an emotional mark that lasts a lifetime.

It is not surprising that much literature in the field has focused on the outcomes of divorce for children. It is important to not only determine what factors are likely to lead to positive or negative outcomes for children, but also to define the possible outcomes themselves. In Amato and Keith's (1991) meta-analysis, they emphasized that many studies have included a number of outcomes, rather than focusing on a limited amount of variables with theoretically strong backing. Thus, outcome effects have been diluted in many studies by irrelevant variables. Few studies have concentrated on a single outcome variable, so results are intermixed and often inconclusive. Many studies have relied on qualitative data and result in contradictory results.

With these considerations in mind, research has indicated a variety of outcome variables common in children from divorced families. Although most investigation focuses on maladjustment, there is also evidence of both enhanced functioning in children from divorced homes and of divorce having relatively no influence on a child's adjustment.

Enhanced Psychological Adjustment

As Stolberg et al. (1987) stressed, the outcomes for children after divorce may be maladaptive, as much research has concentrated on, or they can be adaptive and prosocial, leading to enhanced psychological functioning. Amato and Keith (1991) acknowledged that some studies found *less* detrimental effects of divorce on children, but failed to note any *positive* outcomes. Hetherington (1989) suggested that girls, more so than boys, are likely to develop positive outcomes following divorce, seemingly as an adaptive reaction to increased responsibility, independence, and other post-divorce challenges.

Stolberg et al.'s (1987) study provides unique and important information to the field. The divorce group in the study, consisting of 82 mothers and their children, was compared to a group of intact families. Looking at positive outcomes for children from divorced homes, Stolberg et al. found that when single parents have good parenting skills following divorce, their children are likely to exhibit enhanced prosocial behaviors.

Levin's (1988) study utilizing the nationally representative Health Examination Survey for Children examined children over several cycles of studies from 1963 to 1970. Although these data were collected in the 1960's when divorce was relatively low, Levin was able to collect data on about 7,000 children. This study found that although there were many negative outcomes for children, that compared with intact families, children living with a divorced mother had fewer academic problems, performed better on intelligence and achievement tests, and were monitored more closely by their parents.

The studies of Lewin (1988) and Stolberg et al.(1987) are important in showing possible positive outcomes for children after divorce, especially when parents are involved, well-adjusted, and demonstrate good parenting skills.

Studies Indicating No Lasting Effect of Divorce

Although the majority of studies indicate maladjustment in children of divorce, there is a moderately large body of literature that has deemphasized the effects of divorce on children. Reinhard (1977) found little effect of divorce during adolescence. Similarly, Santrock (1975) conducted a study using careful controls, and found that early divorce had little effect on the moral development of fifth and sixth grade boys. Pitts, Meyer, Brooks, and Winokur (1965) found no relationship between divorce in childhood and any diagnostic category as compared to a control group. In a group of 122

elementary school children from divorced and intact homes, no differences in coping strategies were detected between groups, though behavioral differences were evident (Kurtz, 1994).

Warren et al. (1986) found little effect of divorce on 112 children seven to twelve years of age who had experienced the divorce of their parents more than a year prior to the study. Jacobs, Guidabaldi, and Nastasi (1986) found no significant differences in social functioning between groups of three to six year olds from divorced and intact families. These studies are important in showing that divorce may not have a negative impact on all children.

Maladaptive Outcomes

There is much evidence of maladaptive outcomes subsequent to divorce manifested as both internalizing and externalizing problems. Childhood maladjustment to divorce is likely to diminish over time, but as Hetherington and Stanley-Hagan (1999) emphasized, children from divorced homes often remain less socially, emotionally, and academically well-adjusted than children from never-divorced homes. As discussed earlier, these outcomes are often dependent upon age.

Internalizing Problems

The early findings of Freudenthal (1959) were the first indications of possible maladaptive outcomes for children after divorce. He theorized that children often feel profound feelings of frustration/incompleteness, failure, guilt, and ambivalence following

the divorce of their parents. Many of these feelings have been consistently found along with other problematic internalizing behaviors.

Wallerstein and Kelly (1976) found that in a clinical sample of 26 school-aged children, sadness, grief, depression, and fear of the future were common. At this age, depression is not manifested as withdrawal, whininess, and irritability, as with younger children. In school-aged children, feelings of intense loss and sadness resemble the grief of an adult. Wallerstein and Kelly found that a wish for reconciliation is common for this age group.

A cognitive shift occurring in children aged nine to twelve results in an ability to take another's perspective and, thus, empathize with their parents during divorce. Oftentimes, children of this age will feel responsible for the psychological needs of the parent and may take on parental roles. Johnston et al. (1987) found in a sample of 56 children from high-conflict divorcing families, that such role reversal predicted poor child adjustment, including depression and withdrawal. Anger, shame, loneliness, and loyalty conflicts are other common responses in this age-group (Wallerstein & Kelly, 1976).

In another study of adjustment of nine to twelve year olds, Wyman, Cowen, Hightower, and Pedro-Carroll (1985) compared 98 children from divorced homes with 170 children from intact families. The children from divorced homes were found to have higher anxiety, lower perceived cognitive competence, and fewer social supports. Similarly, in a 1987 study of 82 mothers and their children from divorced homes, Stolberg et al. (1987), found that children from divorce display significantly lower self-esteem and prosocial skills than children from intact families. In a study by Kurtz and

Derevensky (1993) of 76 middle class elementary school children, it was found that children from divorce had lower cognitive (academic) and social self-concepts than those children from intact families.

Large-scale literature reviews and meta-analyses have further outlined the major internalizing problems common for children of divorce. Literature reviews conducted by Hetherington and Stanley-Hagan (1999) and Kelly (2000) found consistent evidence that children are likely to experience depression, anxiety, anger, and social difficulties with parents, peers, and authority figures following their parents' divorce.

A meta-analysis conducted by Amato and Keith (1991) of 92 studies in the field examined outcome measures such as conduct (aggression, behavior problems), mother-child relations, father-child relations, psychological adjustment (depression, happiness, anxiety), self-concept, social adjustment, and academic achievement. Looking at the effect sizes in these 92 studies (over 13,000 children), Amato and Keith confirmed that children of divorce experience an overall "lower level of well-being," or more evidence of maladaptive behaviors, than children living in intact homes (p. 30). However, the domains concerning internalizing difficulties such as psychological adjustment and self-concept had very small significance over the comparison groups.

As discussed earlier, this study focuses on the adjustment of school-aged children, specifically those eight to eleven years old. Overall, the research discussed here shows that depression, withdrawal, and other internalizing problems are common in school-age children from divorced homes. Very young children and adolescents are likely to experience divorce very differently than children falling in the age-range of this study. Externalizing problems have found to be more characteristic of very young children and

adolescents with long-term adjustment difficulties. Adolescents experiencing internalizing problems are likely to withdraw from activities, withhold anger, and have lower self-perceived social and cognitive competence (Long, Forehand, Fauber, & Brody, 1987; McLoughlin & Whitfield, 1984; Wallerstein & Kelly, 1974).

Externalizing Problems

Externalizing behaviors such as noncompliance, aggression, antisocial behaviors, and diminished achievement are likely to be manifested in children after parental divorce. In fact, the largest effect sizes in Amato and Keith's (1991) meta-analysis were for conduct problems.

As Kelly's (2000) review notes, children from divorce have consistently been found to have significantly more problems with aggression, impulsivity, and antisocial behaviors than children from never-divorced families. Kelly concludes that these behaviors tend to be most evident when pre-divorce marital conflict exists. Children are likely to model their parents' behavior and fail to learn appropriate social interaction and conflict resolution skills. In time, children can develop difficulties in affective regulation and experience heightened psychological stress system reactions. When a child is exposed to angry conflict, psychological stress reactions such as increased heart rate and blood pressure, crying, and flight occur. Kelly's literature review indicated that prolonged exposure to this type of psychological arousal can create difficulties in regulating emotional responses, leading to aggression and anger when a child is emotionally aroused. As discussed earlier, the negative affects of conflict can be mediated when parent-child relationships are positive.

Wallerstein and Kelly (1975) found that the fourteen children in their clinical study aged five to six primarily showed aggression, anxiety, restlessness, whininess, irritability, separation problems and tantrums in response to their parents divorce. Similar findings with this age-group were found by Clarke-Stewart, et al. (2000) in a study of 340 divorced, intact, and single, never-married families from diverse geographic settings and ethnic backgrounds. Across measures of cognitive ability, social ability, behavior problems, attachment security, and positive and negative behaviors with the mother, children in one-parent families (not just divorced families) performed more poorly than those in intact two-parent families. These differences between single parent and two parent families were not due to divorce, but probably some aspect of single parenting. Nevertheless, as indicated by this study, young children from divorced families are likely to experience these difficulties.

Preschool aged children may be cognitively unable to fully understand divorce. As children move to more logical thought and are able to think about the future, their reactions to divorce change and become more internalizing (Wallerstein & Kelly, 1975).

Externalizing problems following divorce often lead to long-term negative outcomes in adolescence such as dropping out of school, teenage pregnancy, and increased delinquent behavior. Teenagers from divorced homes are more likely to use alcohol, drugs, and cigarettes, and become pregnant (Amato & Keith, 1991; Hetherington & Stanley-Hagan, 1999; McLanahan & Sandefur, 1994). In fact, children from divorced homes are two to three times more likely to exhibit these behaviors than children from intact homes (Hetherington & Stanley-Hagan).

Teenagers and very young children have been shown to consistently exhibit externalizing behaviors following divorce. School-aged children, the focus of this study, are less likely to show evidence of externalizing problems. Their internalizing symptoms of maladjustment, such as depression and withdrawal, may often be manifested as diminished school performance. A primary objective of this study is to determine the outcomes of divorce on children's school performance. Behavioral and/or emotional adjustment per se will not be examined, other than how these difficulties are manifested in low academic motivation or achievement.

A large body of literature suggests that divorce is a major cause of school academic problems in terms of poor grades, poor school attendance, greater discipline problems, and greater likelihood of dropping out. Specifically, academic achievement and motivation are often negatively impacted by divorce.

Academic Achievement

Very early research by Kelly et al. (1965) introduced academic difficulties as a negative consequence of divorce. This early finding seems to be pervasive. Kelly (2000) and Hetherington and Stanley-Hagan's (1999) literature reviews, and Amato and Keith's (1991) meta-analysis, each found substantial evidence that children from divorced homes have greater academic and achievement problems than children from intact homes. Kelly found that children of divorce consistently have more adjustment and achievement problems, as evident in school, than children from intact homes. Similarly, Amato and Keith found significant effect sizes for school achievement. There is a large body of literature that suggests that school performance is one of the most common and pervasive areas of maladjustment for children from divorced homes. Here, *academic achievement*

refers to the actual performance of a child in the academic arena. Usually this is an objective measure of the student's progress.

Specific studies have greatly contributed to our knowledge of children's academic adjustment after divorce. The majority of these confirm academic difficulties in children from divorced families. A study conducted by Mulholland, Watt, Philpott, and Sarlin (1991) examined the grade point averages (GPA) and teacher ratings of behavior for 96 middle school students, sixty being from divorced families. Differences between the children from divorced families and those from intact families were evaluated with t-tests. These analyses indicated the children in the divorce group showed significantly lower GPAs than those in intact families, even when social class and scholastic aptitude were controlled for. Furthermore, when examined over time, the differences between the groups remained from elementary school into middle school.

Although Mulholland et al. (1991) attempted to control for socioeconomic status, their population failed to include low income families. Many researchers, such as Jeynes (1998) have shown great concern over not controlling for SES when examining the academic achievement of children from divorced homes. They propose that SES accounts for more variance in GPA and other common measures of achievement than the family status. In consideration of Jeynes' suggestion, the present study covaries for SES.

Other studies utilizing solely grade point average as measures of academic achievement have found similar results to Mulholland et al. (1991). Neighbors, Forehand, and Armistead (1992) examined the grade point averages of 29 children from divorced families, matched with 29 children from intact families. GPA was examined from two years predivorce, one year after parental divorce, and two years postdivorce. Although

both genders had low achievement after divorce, it appears that their performance was negatively impacted prior to their parents' divorce, probably by stressors associated with families in conflict, such as diminished parent-child relationships (Neighbors et al., 1992). The results of this study may have been confounded by developmental transitions that would have occurred during the study. Pubertal changes and transitions to middle school are probable stressors that may impact academic achievement and divorce adjustment (Neighbors et al.).

A study by Guttman, Amir, and Katz (1987) further examined gender differences in achievement following parental divorce. Guttman et al. accepted the common research finding that academic achievement is lower in children of divorce than children from intact families and hypothesized that there is a direct link between the nature of children's experience of parental divorce and their impaired school performance. Namely, they proposed, children's withdrawal threshold is lowered as they interpret their parent's divorce as taking the "easy way out" as an appropriate problem-solving strategy. They may, in turn, generalize this behavior to their school work, and when frustrated give up easily. This hypothesis suggests divorce-related low achievement motivation, another important variable in this study, which has been shown to be related to academic achievement (Gottfried, 1990; Stinnett, Oehler-Stinnett, & Stout; 1991, Zsolnai, 2002).

Sixty-two middle-class Israeli children from the age of 14.5 to 15.4 were recruited for the study. Thirty-one of the children were from divorced families; all lived with their mother. An average of 3.8 years had passed since the time of divorce of the parents of the children in the experimental group. The participants were administered three tests, a complex math test, a simple math test, and a word-copying test. All the tests

were designed to be tedious and long. The experimenters measured three aspects of the test completion to determine withdrawal threshold: Achievement (number of correct responses), Determination (number of attempted responses), and Time (time spent on the task).

Multivariate analysis of variance (MANOVA) indicated that across the different tests and the different measures of withdrawal threshold children from intact families scored higher than children of divorced families. Children from intact families scored higher on Achievement, Determination, and Time variables than those from divorced families. In conclusion, the children from intact families in this study consistently performed better than the children of divorce.

This study looks at a very specific sample (middle-class, Israeli, adolescent), and may not generalize to the larger population of children from divorced families. Furthermore, the construct validity of the withdrawal threshold measures was not determined. The task presented was likely to measure a variety of constructs other than withdrawal threshold, such as cognitive style, cognitive ability, math ability, and achievement motivation.

When familial factors are examined in light of GPA, different results have been indicated. McCombs and Forehand (1989) examined both adolescents' GPA and parental characteristics, such as mother's education and depression. Using analysis of variance (ANOVA), this study compared 71 low, medium, and high achieving adolescents from divorced homes. High and medium achieving adolescents had mothers with higher education levels and less depressive symptoms than those in the low achieving group. Thus, familial factors such as the mother's psychological adjustment may buffer the

negative impact of divorce on academic achievement. The effects of parent adjustment to divorce on their child's school performance will be considered in the present study. Also, as shown earlier, negative effects of poor parent adjustment is often mediated by the parent-child relationship (Black & Pedro-Carroll, 1993; Fauber & Long, 1991; Hodges, 1991; Hetherington, 1979; Kelly, 2000; Tschann et al., 1989), logically suggesting that positive parent involvement would mediate negative effects on achievement.

Plante, Goldfarb, and Wadley (1993) examined the effects of stress, including divorce and abuse, on academic achievement and cognitive ability (as measured by standardized testing) in a purely clinical sample. Participants included 100 children from the age of six to 16. Twenty-seven of the children came from divorced families, 13 from single-parent families, and seven from blended families. Licensed professionals collected demographic, DSM diagnosis, and standardized testing data. Pearson product moment coefficients of stress and coping variables with testing scores were obtained. A series of multivariate analysis of variance (MANOVA) were conducted to examine whether the children labeled with good or poor coping skills and low or high stress performed differently on the standardized testing. The analyses found that children from divorced families were correlated with low scores on the standardized testing. Similarly, children with significant stress tended to have lower test scores. Multivariate analysis indicated the both stress and coping were more closely associated with achievement test scores than ability scores. Thus, Plante et al.'s (1993) study provides evidence that children from divorce, like those undergoing other stressors, are likely to suffer academically.

There are several limitations to Plante et al.'s (1993) study. Because of the correlational design, confounding factors such as age of child and SES were not

controlled for. The sample was purely clinical, and thus, results may not be generalizable to the nonclinical population. The DSM indicators of coping and stress are purely subjective; standardized, objective measures would be more effective and reliable. The researchers do not explain why they decide to use only specific subtests of the cognitive measure, but this practice is very limiting and caution should be used when making conclusions using such narrow measures.

Guidubaldi et al. (1983) implemented specific measures of academic and social competence in their nationwide study. Participants included 341 children from divorced families and 358 children from intact families randomly selected from 38 states. The children were from first, third, and fifth grades from geographically diverse schools. Measures of academic achievement, social competence, and family and school environment included the use of ratings scales, interviews, standardized tests, and other standardized achievement scores from the child's school record. Analysis of variance by sex, grade, and marital status indicated consistent differences between intact and divorced groups on both social-emotional and academic criteria.

When SES was controlled, there were fewer differences between the groups. It is clear from this study that although SES variables may intervene to account for the negative impact of divorce, there are still a number of negative social and academic effects independent of SES. Popularity ratings, IQ scores, and 11 behavior ratings remained lower in divorced children, regardless of family income level. Despite this, the present study covaries for the effects of SES.

Research has shown that not only SES, but also the time since the divorce may be important in determining how a child's academic achievement is impacted. In covarying

achievement measures (cognitive screening, group achievement tests, parent-ratings, and teacher-ratings) from preschool, third, and fourth grade with the time since the divorce occurred, Kinard and Reinherz (1986) found that children from recently divorced families had more academic difficulties than children from early or never divorced families. Furthermore, children from never divorced families had the least academic problems of all children.

Although the majority of studies concur that divorce has a negative impact on a child's academic achievement, there are some studies that have failed to find similar results. In a Swedish study conducted by Wadsby and Svedin (1996) a group of 74 adolescent (age 11-17) children of divorce were examined to determine the effects of divorce on a child's final grades. These 74 children were matched with two of their same-sex classmates who lived with both of their biological parents. There were no differences between the matched groups in birth order and father's socioeconomic status (SES).

Using a series of t-tests, Wadsby and Svedin (1996) found no differences in the GPA of the study and control groups, irrespective of the time elapsed since the divorce or the academic subject. A difference was noted, however, in the GPA of children of different socioeconomic groups, regardless of family status. Children of lower SES, namely those whose father was a manual laborer, had lower GPA than those children of non-manual laborers or professionals. Wadsby and Svedin, therefore, concluded that a child's SES is more important for academic achievement than divorce.

In another study conducted by Smith (1995), similar results were found. Children were examined from 1,688 homes; all being in the seventh or ninth grade, from racially

and economically diverse urban schools. The dependent variables in the study, self-report school grades and academic achievement, were measured through questionnaires and standardized testing. The independent variable, parental separation, categorized any child not living with both of their biological parents as separated. Analysis of covariance indicated that when adjusted for variables such as gender, and time since divorce, there were no significant differences between the groups. Therefore, children from divorced homes had no difference in academic achievement than children from intact two-parent homes.

Smith's (1995) study may have been limited by the inaccuracy of their self-report measure of academic achievement. Further, the categorization of groups failed to isolate children from divorced or separated homes. For instance, children in single-parent never divorced homes were included in the divorce sample and children in blended families (having experienced divorce) were included in the intact family group. These limitations may have caused the measures to be inaccurate, resulting in misleading findings.

Watts and Watts (1991) found similar findings in their study of the academic achievement in students from single-parent families. Eleven independent variables, including academic achievement (test scores), family configuration, SES, and race were measured in 4,137 high school students across the United States. Path analysis yielded only a negligible effect for family configuration, meaning that being from a single home did not predict academic achievement. Once again, however, this study grouped all children living in a single-parent home together, resulting in a very heterogeneous group.

In these studies conducted by Smith (1995), Wadsby and Svedin (1996), and Watts and Watts (1991) there failed to be evidence for the effect of divorce on academic

achievement. However, these studies were limited by inaccurate measures and sampling. Furthermore, the majority of studies continue to show evidence for a relationship between divorce and academic achievement.

The research conducted by Guidubaldi et al. (1983), Guttman et al. (1987), Kinard and Reinherz (1986), McCombs and Forehand (1989), Mulholland et al. (1991), Neighbors et al. (1992), Plante et al. (1993), and Watt, et al. (1991) leads to several conclusions when considering the academic achievement of children from divorced homes. First, these studies seem to concur that children from divorced homes experience more academic difficulties than children from intact homes. Also, several factors stand out as having specific impact on a child's academic achievement after divorce. The effect of gender on academic achievement has been inconclusive, and will not be a focus of the present study. The importance of controlling for SES was repeatedly cited in the literature (Guidubaldi, et al., 1983; Mulholland et al., 1991, Wadsby & Svedin, 1996). In light of this, the present study covaries for SES. Kinard and Reinherz (1986) showed strong evidence for the impact of the time since the divorce on academic achievement, and the time elapsed since the divorce is also covaried in this study.

In the previously discussed studies, academic achievement was measured in a variety of ways. The most common way of measuring achievement is grade point average (GPA). There are limitations to using solely GPA, specifically when not controlling for SES. Because SES is highly correlated with GPA, if SES is not controlled multiple measures must be considered. Academic tasks, standardized achievement tests, and teacher ratings have often been utilized as a measure of academic achievement. Ratings obtained by teachers are subjective and may be affected by teacher bias. Further,

self-reports do not meet the definition requirements for the present study outlined earlier. Standardized testing is more reliable, but is time consuming when looking at a large sample. However, basic standardized test results are utilized in the present study.

Although academic achievement has been carefully studied in children from divorced families, the affects of divorce on the child's academic motivation has been relatively ignored in the literature. Motivation is a variable important to a child's academic success, particularly their academic achievement and therefore, should not be overlooked.

Academic Achievement Motivation

Although the early research finding of Kelly et al. (1965) indicating academic difficulties in children from divorced homes of divorce did not specifically address academic achievement motivation, this finding opened the door for the study of the school performance of children from divorced homes. *Academic achievement motivation* has been defined as the tendency to approach and strive to accomplish tasks in the academic arena, and to quickly reach high standards (Stinnett, T. & Oehler-Stinnett, J., 1992). Motivation orientation can be described in two broad categories. Extrinsic motivation refers to the motivation to engage in an activity as a means to an end. Intrinsic motivation, on the other hand, is the motivation to engage in a task for its own sake. An intrinsic motivation orientation is preferable, as this orientation leads to more self-confidence and less task avoidance than that of the extrinsically motivated child (Das, Schokman-Gates, & Murphy, 1985). Because achievement motivation can either be externally imposed or internalized as standards (learned), one can easily conceptualize

motivation from an ecological framework, having environmental, familial, and individual influences (i.e. Bronfenbrenner, 1979; Stolberg et al. 1987).

Some researchers have used a behavioral framework when looking at a child's achievement motivation (Stinnett et al., 1991). As Bandura (1977) originally described, there are differences between problems in acquiring information and problems in performing the behavior. For this study, it is important to distinguish between skills and performance deficits. A skills deficit would mean that a child does not have the academic skills in his/her repertoire to succeed due to low intellectual ability or a lack of academic skills. A performance deficit, on the other hand, would indicate that the child has the necessary skills but fails to succeed. A performance deficit would be an indication of low achievement motivation that could possibly be due to the influence of family change as a result of divorce. Deficits in self-concept, perceived control, and self-competence common after divorce are likely to negatively impact a child's interest in and performance of tasks (Schunk & Pajares, 2002). But, as this study will allude to, performance deficits could possibly be mediated by parental interest, concern, modeling of coping strategies, and in particular, parent involvement.

Theoretically, there are two general explanations for the source of achievement motivation (Stipek, 1993). The first is that motivation is stable and unconscious. The origins of high motivation are assumed to be within the family and cultural group of the child. Parents and others encourage and reinforce problem-solving, initiative, and competitiveness. Here, children see their actions can have an impact and have a desire to excel. On the other hand, some theorists see motivation as a set of conscious beliefs and

values shaped by recent experiences, successes, and failures, and by immediate factors. Here, motivation is not stable, but varies with situational variables.

This study subscribes to the second of these theories. Thus, school-aged children experiencing the withdrawal and depression associated with divorce would be expected to have a decline in motivation. Preoccupation with their family situation and other adjustment difficulties may temporarily lessen a desire to achieve, thus lowering their intrinsic motivation. Also, if parents have poor post-divorce adjustment and fail to stay involved and attached to their children, children's intrinsic and extrinsic motivation could decline. As Guttman et al. (1987) suggested, children might be less likely to persevere at academic tasks as a result of their divorce experience. They proposed that a child's withdrawal threshold is lowered as they interpret their parent's divorce as taking "the easy way out" as an appropriate problem-solving strategy. They may, in turn, generalize this behavior to their schoolwork, and when frustrated give up easily.

Furthermore, some researchers have suggested that children in disadvantaged homes may experience lower achievement motivation due to less family support and lower self-efficacy levels (Howse, Farran, & Boyles, 2003). One cannot assume all children experiencing divorce would fall in this category, but it is likely that children from divorced homes would have some disadvantage (economic change, social support). However, it has been suggested that parents who are involved with their children and teach them ways to cope with difficulties and model persistence and effort strengthen children's self-efficacy and in turn, motivation (Schunk & Pajares, 2002).

Achievement motivation has consistently been found to be related to academic achievement (Gottfried, 1990; Howse, Lange, Farran, & Boyles, 2003; Stinnett, Oehler-

Stinnett, & Stout; 1991; Zsolnai, 2002). Specifically, Gottfried found that intrinsic motivation is positively related to achievement, IQ, and perception of competence in children. As Raffini (1986) suggests, a child's achievement motivation is a moderator variable that can be identified and targeted for intervention to improve academic achievement. Because this variable is so important in determining a child's academic performance, it is of interest to see how it is affected after divorce.

In the research of Mulholland et al. (1991), divorce was shown to have a negative influence on both achievement and motivation in a sample of sixty school-aged children from divorced families. Achievement motivation was obtained from a teacher rating. Although motivation was not the main focus of this study, it is one of the few studies to look at the motivational outcomes following divorce.

Guttman et al. (1987) compared the academic performance of 31 children from divorced and intact homes. The dependent variables of Math Achievement (number correct), Determination (number attempted), and Time (spent on each task) were examined. The Determination variable could be considered a measure of motivation, as it captured the participants "tendency to strive toward a goal." The results of a MANOVA indicated that the Determination scores of children from divorced homes were significantly lower than those from intact homes. Although the reliability of Guttman et al.'s measure has not been established and the researchers did not consider it a measure of achievement motivation, this study can cautiously be adopted as evidence that child motivation is negatively affected by divorce.

Characteristics of the parent-child relationship, including the level of parental control and acceptance, have been shown to be associated with higher motivated children

(Nuttall & Nuttall, 1976). Nuttall and Nuttall had their sample of 533 teenagers from intact families complete a measure of parent-child relationship based on the child's perception and a self-report measure of motivation. Correlational analysis found that children were more highly motivated when they had parents who showed high levels of acceptance and less power assertion.

Positive parent involvement following divorce, the major independent variable in this study, might have a positive influence on a child's motivation. Parent-child relationships have been indicated to mediate many of the negative consequences of divorce (Black & Pedro-Carroll, 1993; Fauber & Long, 1991; Hodges, 1991; Hetherington, 1979; Kelly, 2000; Tschann et al., 1989). Some research has examined the effects of parent involvement and other aspects of the parent-child relationship on children's school performance, particularly their motivation to achieve. Several researchers, including Grolnick and Slowiaczek (1994), have found positive effects of parent involvement in their children's school performance.

Grolnick and Slowiaczek (1994) examined the parental involvement and other parenting behaviors of 302 parents of middle school students. The students completed questionnaires assessing their motivational characteristics. The sample was largely Caucasian and predominantly middle-class, but contained two-parent, single parent, and blended families. Path analysis indicated that certain aspects of parent involvement influenced a child's motivation, which in turn, predicted academic achievement (Grolnick & Slowiaczek). This study did not investigate differences between family configurations. Though this study is limited, it provides evidence that parental involvement is related to achievement motivation.

Many assessments of achievement motivation, including those in the previous studies, utilize informal interviews, observations, or self-report measures. Interviews and observations are time-consuming and may lack objectivity, reliability and validity. Informal procedures such as these also do not allow for comparison of the child to a standardization sample. Self-report inventories such as the Scale of Intrinsic versus Extrinsic Orientation in the Classroom and the Children's Academic Intrinsic Motivation Inventory have been judged to be psychometrically sound instruments based on theoretical models of motivation (Stinnett et al., 1991). However, the use of self-report measures with children can be problematic depending on the child's reading level, their ability to understand the directions of the inventory, and their desire to portray themselves in a positive light. Therefore, for this study, the rating of an adult is preferable.

The Teacher Rating of Academic Achievement Motivation (TRAAM) is a 50 item teacher-report instrument for the assessment of academic achievement motivation of elementary-school aged students (Stinnett & Oehler-Stinnett, 1992). The TRAAM is a rating-scale that rates students on six various indexes of achievement motivation. The items and subscales of the TRAAM were designed to reflect dimensions of motivation derived from the self-efficacy and behavioral research in order to differentiate between performance and skill deficits. The TRAAM yield scores of Mastery Motivation, Amotivation, Work Completion, Competition, Cooperation, Skill/Ability, and Total Score. For this study, the Total scores and subscales are examined.

The items on the TRAAM were written consistent with behaviors that teachers can observe in the classroom, rather than requiring them to make inferences about the

internal state of the child. The items are descriptive statements in which the teacher rates the student on a five-point Likert scale, ranging from strongly agree to strongly disagree. Some items are worded to reflect motivated behavior and others are worded to reflect a lack of motivation. Likert scores can be summed to obtain raw scores. The TRAAM has sufficient reliability and validity. It has undergone several validity studies, showing relationships between the TRAAM and self-report measures of motivation, academic achievement, grades, and social skills (Stinnett & Oehler-Stinnett, 1992).

Summary of Outcomes

There is a large body of literature that suggests that school performance is one of the most common and pervasive areas of maladjustment for children from divorced homes. Research in the field has led to several conclusions when considering the academic achievement of children from divorced homes. First, many studies concur that children from divorced homes experience more academic difficulties than children from intact homes (Guidubaldi et al., 1983; Guttman, Amir, & Katz, 1987; Kinard & Reinherz, 1986; McCombs & Forehand, 1989; Mulholland, Watt, Philpott, & Sarlin, 1991; Plante, Goldfarb, & Wadley, 1993). Also, several factors stand out as having specific impact on a child's academic achievement after divorce. Characteristics of the mother's adjustment (McCombs & Forehand, 1989), SES (Guidubaldi, et al., 1983), and time since the divorce (Kinard & Reinherz, 1986) may all mediate or exacerbate a child's achievement following divorce. For this study, academic performance will be examined in light of family status, parent adjustment, and parent involvement, with the effects of SES and time since divorce being considered.

Although the academic achievement of children from divorced homes has been the focus of much investigation, the achievement motivation of these children has been relatively overlooked. Research has indicated a link between achievement motivation and academic achievement, where a child's motivation can be considered an intervening variable than can be identified and targeted for intervention to improve achievement. Therefore, achievement motivation is a crucial outcome that should not be ignored. When looking at the achievement motivation of children from divorced homes, Mulholland, Watt, Philpott, and Sarlin (1991) and Guttman, Amir, and Katz (1987) have shown that divorce has a negative impact on academic achievement motivation in these children. However, it has been suggested that parents who teach children ways to cope with difficulties and model persistence and effort can strengthen children's motivation (Schunk & Pajares, 2002).

Several researchers, including Grolnick and Slowiaczek (1994), have found the positive effects of parent involvement in their children's school performance. Grolnick et al. (1994) examined the effects of parent involvement on the motivation of middle school students and concluded that certain aspects of parent involvement influenced a child's motivation, which in turn, predicted academic achievement. This study did not examine this pattern in divorced families.

The most imperative question in the current study is whether the pattern illustrated by Grolnick et al. (1994) holds up with children from divorced homes. Thus, this study compares the parent-child relationships (specifically parent involvement) in divorced and intact homes and how that relationship influences the child's academic achievement and achievement motivation. This study hypothesizes that positive parent-

child relationships and high parent involvement in divorced families will be associated with greater achievement motivation and in turn, academic achievement. Further, this study examines the impact of divorce-related variables (parent adjustment, SES, time since divorce) on children's academic motivation and achievement.

RESEARCH DESIGN

Rationale and Purpose

With the growing number of children facing divorce, schools and professionals working within schools will increasingly need to be familiar with the specific difficulties these children face. School psychologists, in particular, have been mandated to become knowledgeable about diverse families and to develop expertise in encouraging parent involvement for enhanced child success. Indeed, school psychologists are in a unique position to work with parents and school personnel in establishing parent involvement and home-school collaboration that would encourage positive school outcomes for children following a divorce. Further, by better understanding the nature of consequences of divorce on children and their families, professionals can make best practices recommendations for working with this specific family structure.

In consideration of the literature presented, there is a need to connect parent-child relationships, specifically parent involvement, in divorced homes with the child's outcomes in school, specifically their academic achievement and motivation. Positive post-divorce parent-child relationships have been consistently found to mediate the negative impact of divorce on children. Furthermore, parental involvement has been shown to have a positive impact on children's academic performance. However, the literature has not clearly addressed how parent involvement in divorced families

influences children's academic achievement and motivation. Thus, a critical focus of the present study is to clarify this relationship.

This study also examines the influence of divorce-related variables on the academic achievement and motivation of children from divorced homes. Working within the theoretical framework presented, individual and environmental variables have been controlled for, while familial variables are closely examined. It is proposed that the environmental and individual variables indicated by the literature to have some impact on post-divorce adjustment, specifically the time since the divorce and SES, impact children primarily through their impact on family factors. Poor parental adjustment is hypothesized to negatively impact parent-child relationships (parent involvement), which in turn, leads to poor academic outcomes for children.

Substantive Questions

The following Substantive Questions have been chosen for examination in this study.

1. Are there significant differences between children from divorced and intact homes (independent variables IV) with high, medium, or low parental involvement (IV) in academic achievement and achievement motivation (dependent variables DV)?
2. Are there significant differences between children from divorced and intact homes (independent variables IV) with high, medium, or low parental involvement (IV) in academic achievement and achievement motivation (dependent variables DV) when socioeconomic status (IV) and time since the divorce (IV) are covaried?
3. Are there significant differences between children from divorced homes with high or low parent adjustment (IV) and high, medium, or low parent involvement (IV) in academic achievement and achievement motivation (DV)?

4. Are there significant differences between children from divorced homes with high or low parent adjustment (IV) and high, medium, or low parent involvement (IV) in academic achievement and achievement motivation (DV) when socioeconomic status and time since the divorce are covaried?

Hypotheses

Based on the above questions, the following hypotheses are proposed:

1. There are significant differences between children from divorced and intact homes with differing levels of parental involvement in academic achievement and achievement motivation.
2. Differences between divorced and intact homes with differing levels of parental involvement in academic achievement and achievement motivation are not as significant when the variance associated with socioeconomic status and time since the divorce is removed.
3. There are significant differences between children from divorced homes with differing levels of parental involvement and parental adjustment in academic achievement and achievement motivation.
4. Differences between children from divorced homes with differing levels of parent involvement and parental adjustment in academic achievement and achievement motivation are not as significant when the variance associated with socioeconomic status and time since the divorce is removed.

CHAPTER III
METHODOLOGY

Participants

Participants included 107 parents and teachers of third, fourth, and fifth grade students (ages 8-11) from four elementary schools in Oklahoma and Texas. Two urban schools, one suburban school, and one rural school were recruited. These schools represent diverse ethnic and socioeconomic backgrounds and relatively equal numbers of males and females. Demographic characteristics of the participants are included in Table 1. The sample included 66 mothers (61.7%) and 41 fathers (38.3%). All teachers were female. The target students were 56.1% female (n=60) and 43.9% male (n=47). The age of targeted children ranged from eight to 12. Fifteen of the targeted children were eight (14%), 34 were nine (31.8%), 38 were ten (35.5%), 19 were 11 (17.8%), and one was 12 (.9%). The racial makeup of the participating parents was as follows: Caucasian 82.2% (n=88), Hispanic/Latino 10.3% (n=11), Asian American 3.7% (n=4), African American 2.8% (n=3), American Indian/Native American .9% (n=1). Of the participating families 87 were married (81.3%) and 18 were divorced (16.8%).

Table 1
 Characteristics of Recruited Families

Characteristic		<u>n</u>	Percent
Parent Gender	Male	41	38.3
	Female	66	61.7
	Total	107	100.0
Child Gender	Male	47	43.9
	Female	60	56.1
	Total	107	100.0
Child Age	8	15	14
	9	34	31.8
	10	38	35.5
	11	19	17.8
	12	1	.9
	Total	107	100
	Total	107	100.0
Family Status	Married	87	81.3
	Divorced	18	16.8
	Total	107	100.0

Procedure

The process for recruiting schools began with research recruitment letters sent by the investigator to all schools in northern Oklahoma and the Dallas Metro-area. The investigator then met with principals of interested schools. Written permission from principals was obtained prior to the onset of data collection.

When participating schools were identified, parent consent forms and letters describing the study were sent home with all children in the third, fourth, and fifth grade classrooms. In some schools, letters/consent forms were sent home in students' Thursday folders. In other schools, the investigator was asked to present the study to classrooms

and send the consent forms home at that time. Consent forms included one copy for the parents to keep and one copy to be sent back to the investigator. Included on the consent form were several numbers to call for more information on the study. Parents were given the option of indicating whether or not they wanted to participate, and all parents (those willing to participate and those unwilling) were asked to return the consent forms with their children to school. A contact person at the school, usually the school counselor, was identified early as the party responsible for consent form collection.

Families who returned the signed consent form to the designated consent form collector were considered participants in the study. A member of the research team then contacted consenting parents to answer any questions and inform them of the expected procedure for participation. Then, parent packets were sent home from school with students. Parent packets included the following questionnaires: the Parent Information Sheet (PIS), Divorce Adjustment Scale- Revised (DAS-R), and Parent-Child Relationship Inventory (PCRI). When parents had completed the surveys, they returned them in a pre-stamped and addressed envelope to the investigator. The parents mailed the questionnaires directly to the investigator to ensure confidentiality. Alternatively, parents were able to return the surveys to the school in a sealed envelope to be picked up by the investigator. For children from divorced homes, when consent was obtained from the custodial parent, the examiner attempted to obtain contact information for the non-custodial parent. If noncustodial parent contact information could be obtained, the investigator attempted to contact them and solicit their participation in the study. Attempts to contact noncustodial parents were rarely successful, often because contact

information was not available or custodial parents were reluctant to supply that information.

After parent permission was signed, the child's teacher's permission was obtained by direct contact at the school. When the teacher's consent was given, they also were given the teacher packet which included the Teacher Rating of Academic Achievement Motivation (TRAMM) and the Teacher Information Sheet (TIS). If a teacher was asked to provide information for more than one student, the consent forms allowed teachers to indicate for which students he/she would be willing to provide information about. The teacher questionnaires and information sheets were directly picked up at the school by a member of the research team.

Also following receipt of signed parent permission, the child's standardized achievement testing results were obtained. It should be noted that parent consent forms stressed that this information would be gathered, and parents were reminded of this part of the procedure during the subsequent telephone contact. Participating schools had different preferences on how the achievement test data collection was handled. Two schools had the research team retrieve the scores from the targeted students' cumulative records, one school had school personnel obtain the scores, and at one school the investigator was able to obtain the scores from an on-line database. Regardless of who collected the data, scores were recorded on the Achievement Test Data Form (ATDF). Percentile ranks and standard scores from the Iowa Tests of Basic Skills were preferred. Several steps were taken to protect the confidentiality of the students, parents, and teachers. When parent consent forms were received, the investigator gave them an identification number. Parent and teachers of target children had the same identification

number. From this point on, participants were identified solely by their identification number. Questionnaires did not have identifying information on them other than the identification number. A master list with the names and ID numbers was stored in a secure location until data was collected and all follow-up was complete. Contact information on consent forms was only connected with identification numbers when there was missing data for an identification number. In these cases, the principal investigator followed-up with participants. Data collected from this project will be kept secured for two years after the completion of this project.

Instrumentation

Several measurement tools were selected to collect data for this study. A description of these measures, their purpose, and reliability and validity follows. See Tables 2 and 3 at the end of this section for a summary of the instruments and variables (Table 2) and their relationship to the research questions (Table 3).

Parent Information Sheet

The Parent Information Sheet (PIS) is an examiner-made data collection page that is designed to gather basic demographic information concerning the child and the family. Questions on the Parent Information Sheet include demographic information such as family status, race, gender of child and age of the child. This information sheet also contains important questions to assess the time since the divorce in divorced families and socioeconomic status. The purpose of the PIS is to allow the examiner to study the various factors that may have an effect on responses to the ratings scales of parents and the teacher.

Preliminary analyses were conducted on indicators of SES from the PIS. Socioeconomic status was measured by total annual income (4 levels) and level of education completed (4 levels). Preliminary analyses found that school location is highly correlated with measures of SES ($p > .001$). ANOVA found that families from different schools in the study have significant differences in level of education completed ($F = 38.477, p < .001$) and annual income ($F = 21.388, p < .001$). Tukey HSD post-hoc analysis observed urban schools to have significantly lower ($p < .001$) SES than suburban and rural schools. Therefore, school location appears to be related to socioeconomic status and will be considered in the subsequent analyses in addition to annual income and level of education completed.

In order to determine the relevancy of SES as a covariate, further preliminary analyses were conducted. It was found that there are significant correlations between measures of SES and achievement scores ($p < .001$). There are also significant correlations between school location and achievement scores ($p < .001$). There are slightly lesser correlations between SES and TRAAM scores where only annual income correlates with motivation scores ($p < .05$). Therefore, SES was found to be an optimal covariate for the present study.

Time since divorce was also examined to determine its relevancy as a covariate. From the PIS responses, time since divorce was coded as low (1-2 years), medium (3-5 years) or high (5+ years). Preliminary analyses found that time since divorce is not highly correlated with TRAAM or achievement scores. Therefore, it would not be considered a relevant covariate in subsequent analyses.

Teacher Information Sheet

The Teacher Information Sheet (TIS) is a brief examiner-made questionnaire designed to obtain information about the child's current grades. On this questionnaire, teachers are asked to report the child's grades in math, reading, spelling, language arts, social studies, and science on their last report card. The date of the last report card is also noted. The grades reported are converted to a 3-point scale and averaged to obtain a mean score of academic achievement. The Teacher Information Sheet was originally designed based on the traditional 4-point grading scale, but had to be modified because at least one participating school did not give letter grades. Thus, the 3-point scale was designed to correspond not only with those schools' report card designations, but also the traditional grading 4-point scale. The final version of the TIS utilized the following criteria: 3 = Consistently successful, 85-100%; 2 = Progressing, 70-84%; 1 = Area of concern 70- 60%; 0 = Failing 60% and below. Because "0" was not an option on some schools' grading reports, teachers were asked to give an estimate for the 1 to 0 range according to the percent of time the child was successful in that area. Although the data from this measure were obtained to utilize as a measure of achievement, preliminary statistical analysis indicated that the data did not represent a normal distribution. The responses required from teachers on the TIS may have been too subjective, and therefore the data was skewed so that there were far too many high achieving scores.

Achievement Test Data Form

The Achievement Test Data Form (ATDF) is an examiner made form for recording standardized achievement test data. The primary investigator or trained member of the research team completed the ATDF with percentile ranks and standard

scores obtained from target children achievement test results. Specifically, scores from the Iowa Tests of Basic Skills were preferred. Scores were recorded on the ATDF in similar content areas as assessed by the TIS: math, reading, spelling, language arts, and listening comprehension. A broad achievement score is also recorded on the ATDF.

The Parent Child Relationship Inventory (PCRI)

The Parent-Child Relationship Inventory (PCRI) is a 78-item, self-report questionnaire that assesses parents' attitudes toward parenting and toward their children (Gerard, 1994). The PCRI was developed as an objective measure of parental attitudes that could be utilized for clinical or research purposes. As one of the few such measures available, the PCRI has an excellent reputation as being appropriate for children of different genders and ages and for meeting contemporary psychometric standards.

The PCRI is written on a fourth grade reading level. The items have a Likert-type, 4-point response format: strongly agree, agree, disagree, and strongly disagree. Items are arranged in scales that reflect major features of parenting and the parent-child relationship, including parent involvement. High scores generally indicate good parenting and low scores generally indicate parenting skill deficits.

There are 7 content scales on the PCRI. The 14-item Involvement scale, which is of primary importance to the present study, examines the level of the parent's interaction with and knowledge of his or her child. The Parent Support scale measures the practical help and emotional support the parent receives. The Satisfaction with Parenting scale reflects the enjoyment a parent receives as a parent. The Communication scale represents the parent's awareness of how well they communicate with their children in a variety of situations, and also indicates level of empathy. The PCRI's Limit Setting scale measures

the effectiveness and characteristics of the parents discipline techniques. Low scores on this scale indicate that a parent does not feel in control as a parent and may not have firm guidelines. The Autonomy scale is a measure of the parent's willingness to promote a child's independence. Finally, the Role Orientation scale is different from the other PCRI scales in that there are no clear positive and negative poles. This scale, rather, indicates two different approaches to shared parental responsibility. At one extreme, parents indicate that they share equally in parenting roles, while on the other extreme parents indicate that there are distinct roles for mothers and fathers. Along with the seven content scales, the PCRI also has two validity indicators measuring the tendency to give socially desirable responses and the tendency to give inconsistent responses.

The PCRI was standardized on more than 1,100 parents across the United States. Internal consistency and test-retest reliability of the PCRI are within acceptable ranges. The median internal consistency alpha coefficient value is .82 and no value is below .70. The mean test-retest correlation is .81 and the median alpha coefficient for internal consistency is .82. This level of internal consistency is an indication that the scales of the PCRI represent coherent constructs, and suggests construct validity. Further indications of construct validity in the PCRI are moderate levels of subscale intercorrelation and strong item-scale correlations. The predictive validity of the PCRI has also been established through a series of studies showing a relationship between the PCRI and custody evaluation scales and parental discipline practices.

PCRI raw scores are converted to t-scores, normalized standard scores with a mean of 50 and a standard deviation of 10. Each participant's t-score obtained from the PCRI Parental Involvement scale was used in data analysis. Also, t-scores on the PCRI

are grouped into three levels of parent-child relationships based on interpretation suggestions. Those t-scores from 61 to 85 are considered high; scores of 60 to 40 are considered medium, and scores from 39 to 18 are considered low. These groupings are utilized in the present study for analyses of group differences.

Divorce Adjustment Scale – Revised (DAS-R)

The measure used to assess the post-divorce adjustment of parents is a revised version of the Fisher Divorce Adjustment Scale. The Fisher Divorce Adjustment Scale, designed by Fisher (1976), is often used in divorce recovery workshops and support groups to measure the level of an adult's maladjustment following divorce. This scale measures the feelings and attitudes that people experience following divorce and includes several subscales. Similarly, the Divorce Adjustment Scale – Revised that was utilized in this study contains items dealing with ongoing parental conflict, social support, and level of functioning.

The Fisher Divorce Adjustment Scale has been utilized for over twenty years in both research and practice. In a field with few quantitative rating scales, Fisher's scale remains the gold-standard. The instrument consists of six subscales that quantify the degree of adjustment that the individual has in six areas: disentanglement from the former relationship (includes post-divorce conflict), self-worth, social self-worth, anger, grief, and intimacy. For this study, questions on the intimacy scale were eliminated due to their sensitive nature. Many studies cited in this study utilized the Fisher scale with and without revisions (Stolberg & Bush, 1985; Stolberg et al., 1987 etc.). Internal consistency of the unrevised scale was reported to be high, with Cronbach's alpha coefficients of .98 for the total scale score (Plummer & Koch-Hattem, 1986). The

criterion related validity has been supported by significant correlations with the Tennessee Self-Concept Scale (.46) and the Personality Orientation Inventory (.74) (Fisher, 1976). Cross-cultures, the internal consistency of the scale has been found to be very high (.97), and is deemed reliable across cultures (Yilmaz & Fisiloglu, 2005). In studies where slight revisions were made to the scale, reliability and validity remained (Hensley, 1996).

The only changes made to the Fisher Divorce Adjustment Scale were that items dealing with very sensitive issues from primarily one subscale were eliminated (i.e. sexuality and intimacy). Cronbach's alpha coefficients were similar to the unrevised version (.96). The revised Divorce Adjustment Scale (DAS-R) is a 51 item scale with a Likert-type five-point response format: almost always, usually, sometimes, seldom, and almost never. On most items, high scores indicate positive adjustment. Several items are reversed scored. Scores on the DAS-R are categorized as either high or low for data analysis in the present study. Specifically, scores from 51 to 180 are considered low and high scores are those from 180 to 255.

Teacher Rating of Academic Achievement Motivation (TRAAM)

The Teacher Rating of Academic Achievement Motivation (TRAAM) is a 50 item teacher-report instrument for the assessment of academic achievement motivation of elementary-school aged students. The items are descriptive statements in which the teacher rates the student on a five-point Likert scale. High scores reflect positive judgments and indicate motivated behavior. The TRAAM has six factors including a Total Motivation factor which are utilized in this study. The Amotivation scale includes items related to task avoidance, low effort, external orientation, and other avoidant

behaviors. Mastery represents overall positive motivation, approach to new tasks, expectancy of success, effort attribution, and persistence in the face of failure. Work Completion is the end result of motivation. This factor measures work completion without teacher prompting. A third factor is Cognitive Skills. This represents the teacher's judgment of children's academic and cognitive skill, comprehension ability, and ability to succeed academically. Low Cognitive Skills may represent a skill deficit, while the other factors indicate performance deficits. Thus, these factors reflect the skill versus performance deficit theoretical model consistent with motivation theory by which the TRAAM was designed. The Total Motivation score is a summary score calculated by summing the other TRAAM factors. The Total score gives an estimate of overall motivation and adjustment for school.

The TRAAM has excellent internal consistency. Coefficient alphas are all between .87 and .95. The reliability of the TRAAM is good. In two studies, the test-retest coefficients for the Total score were .84 and .96. Inter-rater reliability is also adequate (.77 and .86 for the Total score). The TRAAM has undergone several validity studies, showing relationships between the TRAAM and self-report measures of motivation, academic achievement, grades, and social skills (Oehler-Stinnett & Boyken, 2001; Stinnett & Oehler-Stinnett, 1992). Further studies have verified the TRAAM's discriminate validity (Oehler-Stinnett & Boyken).

Table 2
Variables Measured by Instruments

Instruments and Variables

Independent Variables:

Parent Information Sheet (PIS)
SES, Family Status, Time Since Divorce

Parent Child Relationship Inventory (PCRI)
T-Score on Involvement Scale

Divorce Adjustment Scale – Revised (DAS-R)
Parental Adjustment Total Score

Dependent Variables:

Teacher Information Sheet (TIS)
Child's current grades (4-point scale)

Teacher Rating of Academic Achievement Motivation (TRAAM)
Total Motivation Score and Factor Scores

Achievement Test Data Form (ATDF)
Percentile ranks on ITBS or other standardized test

Table 3
 Research Questions, Measures, and Data Analysis

Substantive Question	Hypothesis	IV Measures	DV Measures	Covariates	Analyses
1. Are there significant differences between children from divorced and intact homes with high, medium, or low parental involvement in academic achievement and achievement motivation?	There are significant differences between children from divorced and intact homes with differing levels of parental involvement in academic achievement and achievement motivation.	Family status (PIS) Parent involvement (PCRI)	Academic achievement (ATDF) Achievement motivation (TRAAM)		MANOVA
2. Are there significant differences between children from divorced and intact homes with high, medium, or low parental involvement in academic achievement and achievement motivation when socioeconomic status and time since divorce is covaried?	Differences between divorced and intact homes with differing levels of parental involvement in academic achievement and achievement motivation are not as significant when the variance associated with socioeconomic status and time since divorce is removed.	Family status (PIS) Parent involvement (PCRI)	Academic achievement (ATDF) Achievement motivation (TRAAM)	SES (Parent info. Sheet) Time Since Divorce (Parent info. Sheet)	MANCOVA
3. Are there significant differences between children with high, medium, or low parental adjustment and high, medium, or low parental involvement in academic achievement and achievement motivation?	There are significant differences between children from divorced homes with differing levels of parental involvement and adjustment in academic achievement and achievement motivation.	Parent adjustment (DAS-R) Parent involvement (PCRI)	Academic achievement (ATDF) Achievement motivation (TRAAM)		MANOVA

Substantive Question	Hypothesis	IV Measures	DV Measures	Covariate	Analyses
<p>4. Are there significant differences between children with high, medium, and low parental adjustment, and high, medium, or low parental involvement in academic achievement and achievement motivation when socioeconomic status and time since divorce are covaried?</p>	<p>Differences between children from divorced homes with differing levels of parent involvement and parent adjustment in academic achievement and achievement motivation are not as significant when the variance associated with socioeconomic status and time since divorce is removed.</p>	<p>Parent adjustment (DAS-R)</p> <p>Parent involvement (PCRI)</p>	<p>Academic achievement (ATDF)</p> <p>Achievement motivation (TRAAM)</p>	<p>SES (Parent info. Sheet)</p> <p>Time since divorce (Parent info. Sheet)</p>	<p>MANCOVA</p>

CHAPTER IV

RESULTS

This study examined the effects of family status, parent involvement, and parent post-divorce adjustment on the school performance (academic achievement and achievement motivation) of school-aged children. Family and parent factors serving as independent variables were obtained from the PIS, PCRI, and the DAS-R. The TRAAM and standardized achievement test data recorded on the ATDF served as dependent variables. As indicated previously, data obtained from the TIS were eliminated from the study due to violation of basic assumptions associated with the statistical procedures performed. Specifically, the Shapiro-Wilks statistic indicated that the distribution of scores from the TIS did not represent a normal distribution ($F=.595, p=.000$). The Statistical Package for the Social Sciences version 12.0 (SPSS, 2003) was used to conduct statistical analyses of the data. Table 4 shows the descriptive information, including ranges, means, and standard deviations for all dependent variables in the study. Table 5 shows the correlations of all independent and dependent variables.

Table 4
Descriptive Statistics for Dependent Variables

Variable	Range	Mean	Standard Deviation
TRAAM Total	136	194.08	37.336
TRAAM Amotivation	41	47.83	11.466
TRAAM Mastery	40	56.20	10.847
TRAAM Cog. Skills	13	25.70	4.050
TRAAM Work Comp.	15	19.15	3.879
Total Achievement	98	80.70	19.421
Reading	98	75.62	23.608
Math	89	76.64	22.534
Language	95	81.98	21.795
Spelling	87	76.14	22.887

RESEARCH QUESTIONS

Question One

In order to address Question 1, family status and levels of parent involvement (PCRI scores) were examined for group differences utilizing MANOVA statistics. TRAAM total score and factor scores (Amotivation, Mastery, Cognitive Skills, Work Completion) and ATDF total and sub-area standardized achievement scores (reading, math, language, spelling) served as dependent variables.

Table 5
Correlation Matrix for Independent and Dependent Variables

	Family Status	Income	Parent Involvement	Parent Adjustment	TRAAM Total	Amotivation	Mastery	Cog. Skills	Work Comp.	Total Ach.	Read	Math	Lang.	Spell.
Family Status	1	-.461	.071	-.094	-.321	-.370	-.192	-.200	-.316	-.266	-.262	-.398	-.387	-.374
Income	-.461	1	-.130	-.086	.192	.207	-.040	.127	.194	.336	.438	.455	.424	.273
Parent Involvement	.071	-.130	1	.262	-.156	-.159	-.122	.010	-.211	-.207	-.212	-.221	-.231	-.002
Parent Adjustment	-.094	-.086	.262	1	-.181	-.065	-.052	-.689	.155	-.594	-.429	-.337	-.764	-.628
TRAAM Total	-.321	.192	-.156	-.181	1	.912	.831	.568	.725	.554	.540	.636	.564	.453
TRAAM Amotivation	-.370	.207	-.159	-.065	.912	1	.778	.422	.683	.492	.447	.560	.480	.379
TRAAM Mastery	-.192	-.040	-.122	-.052	.831	.778	1	.547	.681	.339	.325	.397	.328	.289
TRAAM Cog. Skills	-.200	.127	.010	-.689	.568	.422	.547	1	.472	.486	.369	.416	.466	.534
TRAAM Work Comp.	-.316	.194	-.211	.115	.725	.683	.681	.472	1	.401	.368	.514	.406	.360
TRAAM Total Achievement	-.266	.336	-.207	-.594	.554	.492	.339	.486	.401	1	.927	.943	.924	.721
Reading	-.262	.438	-.212	-.429	.540	.447	.325	.369	.368	.927	1	.845	.848	.650
Math	-.398	.455	-.221	-.337	.636	.560	.397	.416	.514	.943	.845	1	.876	.614
Language	-.387	.424	-.231	-.764	.564	.480	.328	.466	.406	.924	.848	.876	1	.772
Spelling	-.374	.273	-.002	-.628	.453	.379	.289	.534	.360	.721	.650	.614	.772	1

Motivation (TRAAM)

MANOVAS for TRAAM scores were examined first. Scores utilized as dependent variables were Total TRAAM, Amotivation, Mastery, Cognitive Skills, and Work Completion. A significant interaction between family status and parent involvement was indicated (Wilk's Lambda = .869; $F=2.884$; $p < .05$). This relationship indicates that motivation scores are affected by the combined effect of parent involvement and family status.

Significant main effects were also indicated for both family status (Wilk's Lambda = .743; $F = 3.079$; $p < .001$) and parent involvement (Wilk's Lambda = .803; $F=2.220$; $p < .05$).

Eta^2 are reported as a way to estimate effect size. According to Cohen (1977) $\text{Eta}^2 = .01$ are considered small effects, $\text{Eta}^2 = .06$ are medium effects, and $\text{Eta}^2 = .14$ are large. The multivariate effect sizes for family status ($\text{Eta}^2 = .138$), parent involvement ($\text{Eta}^2 = .104$), and the interaction ($\text{Eta}^2 = .104$) indicate practical significance in addition to the previously indicated statistical significance. Table 6 summarizes the multivariate effect results for TRAAM scores.

Table 6
Multivariate Effects of Family Status and Parent Involvement on TRAAM Scores

Variable	DF	F	Sig.	Eta^2
Status	10/192	3.079	.001	.138
Involvement	10/192	2.220	.018	.104
Status X Involvement	5/96	2.884	.018	.131

Analysis of these data indicated that children from families of different status and with differing levels of parental involvement have significantly different levels of motivation. Univariate analysis of variance tests were conducted as a follow-up to the significant multivariate test. There were significant group differences on both dependent variables. Table 7 summarizes the univariate between-subjects effect results.

Table 7
Univariate Effects of Family Status and Parent Involvement on TRAAM Scores

Independent Variable	Dependent Variable	F	Sig.	Eta ²
Status	Total TRAAM	4.703	.011	.086
	Amotivation	5.254	.007	.095
	Mastery	3.183	.046	.060
	Cognitive Skills	2.002	.140	.038
	Work Completion	12.221	.000	.196
Involvement	Total TRAAM	2.912	.059	.055
	Amotivation	2.153	.121	.041
	Mastery	1.169	.315	.023
	Cognitive Skills	.585	.559	.012
	Work Completion	8.048	.001	.139

There was a significant main effect for family status on several factors of the TRAAM. The first univariate main effect was for the Total Motivation factor ($F=4.703$, $p<.05$). An evaluation of group means indicated that on the Total TRAAM scale, children from divorced homes ($M=168.39$, $SD=29.448$) scored significantly lower than children from married homes ($M=199.78$, $SD=36.999$).

There was also a significant effect for family status on Mastery ($F=3.183, p<.05$). Teachers of children from divorced homes ($M=51.44, SD=10.257$) rated them lower on Mastery than children from married homes ($M=57.16, SD=10.881$). A significant main effect was also found for family status on Amotivation ($F=5.254, p<.05$). Children from divorced homes ($M=38.17, SD=9.031$) were rated lower by their teachers on the Amotivation scale than children from married homes ($M=49.79, SD=11.044$). A significant main effect for family status on TRAAM Work Completion was also indicated ($F=12.221, p<.001$). Once again, divorced children were rated lower on Work Completion ($M=16.39, SD=3.346$) than children from married families ($M=19.72, SD=3.794$).

Univariate analysis also indicated a significant main effect for parent involvement on Work Completion ($F=8.048, p<.001$). No other TRAAM factor scores showed significant differences between levels of parent involvement. Parents with high parental involvement scores on the PCRI scored higher on Work Completion ($M=20.04, SD=3.867$) than medium ($M=19.15, SD=3.780$) or low ($M=15.50, SD=3.879$) parent involvement groups. Posthoc Tukey HSD indicated significant mean differences between high and low parent involvement groups ($Md=4.54, SEM=1.563, p<.05$) and medium and low parent involvement ($Md=3.65, SEM=1.459, p<.05$). No significant mean difference was indicated between high and medium parent involvement groups on Work Completion scores ($Md=.89, SEM=.794, p>.05$).

Once again, as with the multivariate η^2 values, univariate η^2 values indicated practical significance. Univariate η^2 values indicated that up to sixteen percent of the variance in motivation scores were accounted for by the independent variables.

Achievement

MANOVAs for achievement scores were also examined. Academic sub-area scores from the ATDF utilized in the analysis included total achievement, reading, math, language and spelling. Significant multivariate main effects were found for family status (Wilk's Lambda=.786; $F=2.996$; $p<.05$). No significant main effects for parent involvement (Wilk's Lambda=.731; $F=1.867$; $p>.05$) were indicated. Also, no significant interaction was found (Wilk's Lambda=.822; $F=2.374$; $p>.05$). Eta^2 values were calculated as a way to estimate effect size. The multivariate effect sizes for family status ($\text{Eta}^2 = .214$), parent involvement ($\text{Eta}^2 = .145$), and the interaction ($\text{Eta}^2 = .178$) show practical significance despite statistical significance (Cohen, 1977). Table 8 summarizes the multivariate effect results for achievement scores.

Table 8
Multivariate Effects of Family Status and Parent Involvement on Achievement Scores

Variable	DF	F	Sig.	Eta^2
Status	5/55	2.996	.018	.214
Involvement	10/110	1.867	.057	.145
Status X Involvement	5/55	2.374	.051	.178

These data show that children from different family status groups differ in their achievement. On the other hand, children from families with different parent involvement do not differ in achievement.

Univariate analysis of variance tests were conducted as a follow-up to the significant multivariate test. There were significant group differences for the family

status variable. There was no significance difference between groups of parent involvement. Table 9 summarizes the univariate between-subjects effect results.

Table 9
Univariate Effects of Family Status and Parent Involvement on Achievement Scores

Independent Variable	Dependent Variable	F	Sig.	Eta ²
Status	Total	3.908	.053	.062
	Reading	3.530	.065	.056
	Math	7.904	.007	.118
	Language	4.414	.040	.070
	Spelling	3.340	.069	.055
Involvement	Total	1.505	.230	.049
	Reading	2.165	.124	.068
	Math	.545	.583	.018
	Language	1.820	.171	.058
	Spelling	.403	.670	.013

There was a significant main effect for family status on two sub-areas of the achievement tests. There were no significant main effects for parent involvement. The first univariate main effect was for math ($F=7.904$, $p<.01$). Analysis of mean differences found that children from the divorced group ($M=59.70$, $SD=29.963$) had lower math achievement scores than those in the married group ($M=82.83$, $SD=18.225$).

A significant main effect was also indicated for language ($F=4.414$, $p<.05$). Analysis of mean differences found that, like with math, children from the divorced

group (M=62.20, SD=32.006) had lower language achievement than those from the divorced group (M=86.09, SD=17.668).

Again, univariate η^2 values indicated strong practical significance. For this analysis, η^2 values showed that family status accounted for seven percent of the variance in language achievement and eleven percent of the variance in math.

Question Two

Although time since divorce was originally considered as a covariate, it was removed from the equation. Because time since divorce was not found to be highly correlated with achievement ($r=.349$, $p>.05$) and TRAAM scores ($r=.186$, $p>.05$), MANCOVA is not recommended (Cone & Foster, 2001, p. 186; Stevens, 2002, p. 367). As Cone and Foster (2001) explain, covariates that have little relationship with the dependent variable are unlikely to be feasible counter-explanations for any group differences. Furthermore, a degree of freedom is wasted when an unnecessary covariate is used, and power is lost.

MANCOVA statistics were used to examine the differences between children from different family status and with differing parental involvement on standardized achievement tests and the TRAAM when the variance accounted for by SES is removed. The dependent variables motivation and achievement were evaluated separately.

Motivation (TRAAM)

MANOVAS for TRAAM scores were examined first with SES covaried. Scores utilized as dependent variables were Total TRAAM, Amotivation, Mastery, Cognitive Skills, and Work Completion. SES, as measured by annual income, served as the covariate. A significant interaction between family status and parent involvement was

indicated (Wilk's Lambda = .865; $F=2.965$; $p < .05$). As in Question 1, the combined effect of family status and parent involvement impacts a child's motivation regardless of their socioeconomic status.

Significant main effects were indicated for income (Wilk's Lambda=.826; $F=4.011$; $p < .01$) family status (Wilk's Lambda = .748; $F = 2.963$; $p < .01$) and parent involvement (Wilk's Lambda = .785; $F=2.438$; $p < .01$).

Eta² values were calculated as a way of indicating effect size and practical significance. The multivariate effect sizes for the covariate income (Eta²=.174), family status (Eta² = .136), parent involvement (Eta² = .114), and the interaction (Eta² = .135) showed high practical significance. Thirteen percent of the variance in TRAAM scores were accounted for by family status and eleven percent was accounted for by parent involvement. Table 10 summarizes the multivariate effect results for TRAAM scores.

Table 10
Multivariate Effects of Family Status and Parent Involvement on TRAAM Scores with Income Covaried

Variable	DF	F	Sig.	Eta ²
Income	5/95	4.011	.002	.174
Status	10/190	2.963	.002	.135
Involvement	10/190	2.438	.009	.114
Status X Involvement	5/95	2.965	.016	.135

Analysis of these data indicated that children from families of different status and with differing levels of parental involvement have significantly different levels of motivation even when the variance associated with SES is removed.

Univariate analysis of variance tests were conducted as a follow-up to the significant multivariate test. There were significant group differences on both dependent variables. Table 11 summarizes the univariate between-subjects effect results.

Table 11
Univariate Effects of Family Status and Parent Involvement on TRAAM Scores with Income Covaried

Independent Variable	Dependent Variable	F	Sig.	Eta ²
Status	Total TRAAM	4.144	.019	.077
	Amotivation	5.046	.008	.093
	Mastery	3.608	.031	.068
	Cognitive Skills	1.721	.184	.034
	Work Completion	11.310	.000	.186
Involvement	Total TRAAM	2.983	.055	.057
	Amotivation	2.165	.120	.042
	Mastery	.978	.380	.019
	Cognitive Skills	.715	.492	.014
	Work Completion	8.746	.000	.150

The main effects for family status and parent involvement indicated in Question 1 remained when SES was covaried. There remained a significant main effect for family status on the same factors of the TRAAM that were significant when SES was not removed from the equation. Specifically, the following factors were significant: Total (F=4.144, $p < .05$); Amotivation (F=5.046, $p < .01$); Mastery (F=3.608, $p > .05$); and Work Completion (F=11.310, $p < .001$). The main effect for parent involvement on Work Completion also remained significant (F=8.746, $p < .001$).

Univariate η^2 values again indicated strong practical significance. Between six and 18 percent of the variance in the dependent variables was accounted for by the independent variables.

Achievement

MANCOVAs for achievement scores were also examined. Academic sub-area scores utilized in the analysis included total achievement, reading, math, language and spelling.

Findings were very similar to those when SES was not covaried. Significant multivariate main effects were found for family status (Wilk's Λ =.811; F =2.156; p <.05). No significant main effects for income (Wilk's Λ =.918; F =.964; p >.05) or parent involvement (Wilk's Λ =.770; F =1.508; p >.05) were indicated. Also, no significant interaction was found (Wilk's Λ =.841; F =1.508; p >.05). Table 12 summarizes the multivariate effect results for achievement scores when SES was covaried.

Table 12
Multivariate Effects of Family Status and Parent Involvement on Achievement Scores with Income Covaried

Variable	DF	F	Sig.	η^2
Income	5/54	.964	.448	.082
Status	5/54	2.516	.040	.189
Involvement	10/108	1.508	.146	.123
Status X Involvement	5/54	2.036	.088	.159

These data show that even when SES is covaried, differences in achievement exist between groups of family status. As with Question 1, parent involvement groups did not

significantly differ in child achievement. The multivariate effect sizes for family status ($\text{Eta}^2 = .189$), parent involvement ($\text{Eta}^2 = .123$), and the interaction ($\text{Eta}^2 = .159$) show high practical significance of these results (Cohen, 1977).

Univariate analysis of variance tests were conducted as a follow-up to the significant multivariate test. As in the analysis for Question 1, there were significant group differences for the family status variable. There were still no significant differences between groups of parent involvement. Table 13 summarizes the univariate between-subjects effect results with income covaried.

Table 13
Univariate Effects of Family Status and Parent Involvement on Achievement Scores with Income Covaried

Independent Variable	Dependent Variable	F	Sig.	Eta^2
Status	Total	2.216	.142	.037
	Reading	1.851	.179	.031
	Math	5.366	.024	.085
	Language	2.562	.115	.042
	Spelling	2.521	.118	.042
Involvement	Total	1.060	.353	.035
	Reading	1.533	.225	.050
	Math	.708	.497	.024
	Language	.955	.391	.032
	Spelling	.244	.784	.008

There was a significant main effect for family status on only one sub-area of the achievement tests when SES was covaried. The significant univariate main effect was for

math achievement ($F=5.366$, $p<.05$). Analysis of mean differences found that children from the divorced group ($M=59.70$, $SD=29.963$) had lower math achievement scores than those in the married group ($M=82.83$, $SD=18.225$). A significant main effect no longer existed for language ($F=2.562$, $p>.05$). There were no significant univariate main effects for parent involvement.

Again, univariate Eta^2 values indicated strong practical significance. For the significant main effect in math, large Eta^2 values indicated that family status accounted for up to 8% of the variance in math achievement scores.

Question Three

Multivariate analysis of variance (MANOVA) was used to analyze group differences for Question 3. Parent adjustment was measured by the Divorce Adjustment Scale Revised (DAS-R).

Motivation (TRAAM)

TRAAM Total and factor scores were examined for differences between groups of post-divorce parent involvement and adjustment. Significant multivariate main effects were found for both parent involvement (Wilk's Lambda = .403; $F=3.563$; $p<.05$) and parent adjustment (Wilk's Lambda = .324; $F=5.005$; $p<.01$). There was no significant interaction between parent involvement and parent adjustment ($p >.05$). Eta^2 values were calculated as a way to estimate effect size. The multivariate effect sizes for parent involvement ($\text{Eta}^2 = .597$) and parent adjustment ($\text{Eta}^2 = .676$) showed extremely high practical significance (Cohen, 1977). Table 14 summarizes the multivariate effect results for TRAAM scores.

Table 14
Multivariate Effects of Parent Involvement and Parent Adjustment on TRAAM Scores

Variable	DF	F	Sig.	Eta ²
Involvement	5/12	3.563	.033	.597
Adjustment	5/12	5.005	.010	.676

Analysis of these data indicated that children from divorced homes with differing levels of parental involvement and parent adjustment have significantly different TRAAM scores. Univariate analysis of variance tests were conducted as a follow-up to the significant multivariate test. There were significant group differences on both dependent variables. Table 15 summarizes the univariate between-subjects effect results.

Table 15
Univariate Effects of Parent Involvement and Parent Adjustment on TRAAM Scores

Independent Variable	Dependent Variable	F	Sig.	Eta ²
Involvement	Total TRAAM	1.526	.234	.087
	Amotivation	.340	.568	.021
	Mastery	2.369	.143	.129
	Cognitive Skills	7.541	.014	.320
	Work Completion	16.059	.001	.501
Adjustment	Total TRAAM	1.136	.302	.066
	Amotivation	.166	.689	.010
	Mastery	.383	.544	.023
	Cognitive Skills	26.758	.000	.626
	Work Completion	.172	.683	.011

Univariate analysis found a significant main effect for parent involvement on two factors of the TRAAM. The first univariate main effect was for the Cognitive Skills factor ($F=7.541, p<.05$). An evaluation of means indicated that on the Cognitive Skills scale, children from divorced homes with high parent involvement ($M=26.90, SD=2.331$) scored higher than children with low parent involvement ($M=21.50, SD=3.536$).

A significant univariate main effect was also indicated for the Work Completion scale ($F=16.059, p<.001$). Highly involved parents ($M=17.80, SD=2.573$) had children with higher scores than lesser involved parents ($M=10, SD=.000$).

A single TRAAM score was found to be significantly different in groups of parent adjustment. A significant main effect was found for Cognitive Skills ($F=26.758; p<.001$). An examination of group means indicated that parents who had high adjustment scores had children who were scored higher on TRAAM Cognitive Skills ($M=26, SD=3.162$) than parents with low adjustment scores ($M=20.43, SD=2.637$). No other TRAAM factors showed significant differences between parent adjustment groups.

As with the multivariate Eta^2 values, univariate Eta^2 values indicated extremely high practical significance. The highest Eta^2 value, parent adjustment, was shown to contribute 63% of the total variance in Cognitive Skills. Parent involvement also highly contributed to Cognitive Skills and Work Completion.

Achievement

MANOVAs for achievement scores were also examined. Academic sub-area scores utilized in the analysis included total achievement, reading, math, language and spelling. There was no significant multivariate main effects for parent involvement (Wilk's $\Lambda=.442; F=.756; p>.05$) or adjustment (Wilk's $\Lambda=.298; F=1.412;$

$p > .05$). Univariate analysis of variance tests were also examined. There were significant differences between groups of parent adjustment in math scores ($F=6.715$, $p < .05$) and language scores ($F=8.322$, $p < .05$). An examination of group means found that highly adjusted parents had children with higher math test scores ($M=60$, $SD=28.284$) than parents who were poorly adjusted ($M=42.40$, $SD=27.835$). Similarly, highly adjusted parents had children with higher language scores ($M=81.50$, $SD=9.192$) than poorly adjusted parents ($M=57.38$, $SD=34.234$). Effect sizes for these findings were extremely; (math $\text{Eta}^2 = .490$) and (language $\text{Eta}^2 = .543$). Table 16 summarizes univariate statistics for the effects of parent involvement and parent adjustment on achievement scores.

Table 16
Univariate Effects of Parent Involvement and Parent Adjustment on Achievement Scores

Independent Variable	Dependent Variable	F	Sig.	Eta ²
Involvement	Total	.096	.766	.014
	Reading	.008	.931	.001
	Math	1.635	.242	.189
	Language	.094	.768	.013
	Spelling	.012	.917	.002
Adjustment	Total	3.945	.087	.360
	Reading	5.182	.057	.425
	Math	6.715	.036	.490
	Language	8.322	.023	.543
	Spelling	3.637	.098	.342

Question Four

Because previous analyses indicated no strong correlation between time since divorce and achievement ($r=.349, p>.05$) or motivation ($r=.168, p>.05$), the variable was not used a covariate in the analyses for Question 4, although originally considered. SES (measured as annual income), however, did show significant correlation with achievement ($r=.438, p<.01$) and motivation ($r=.192, p<.05$) and was examined as a covariate. MANCOVA analyses were used to address Question 4.

Motivation (TRAAM)

MANCOVA statistics indicated a significant main effect for DAS-R (parent adjustment) scores (Wilk's Lambda=.323, $p<.05$). Unlike the previous analysis that found a multivariate main effect for parent involvement, when SES was covaried, no significant effect was indicated ($p>.05$). There was neither a significant main effect for income ($p>.05$) nor a significant interaction effect ($p>.05$). Table 17 summarizes multivariate effect results.

Table 17
Multivariate Effects for Involvement and Achievement on TRAAM Scores with Income Covaried

Variable	DF	F	Sig.	Eta ²
Income	5/11	.575	.719	.207
Adjustment	5/11	4.613	.016	.677
Involvement	5/11	2.712	.078	.552

These data show that when the variance associated with annual income (SES) is removed from the analysis from Question 3, divorce adjustment continues to have

significant effect on child motivation. Eta^2 values show that the practical significance of this relationship is extremely high ($\text{Eta}^2 = .677$).

Univariate analysis of variance tests were conducted as a follow-up to the significant multivariate test. There were significant group differences on both dependent variables when SES was covaried. Table 18 summarizes the univariate between-subjects effect results.

Table 18
Univariate Effects of Parent Involvement and Parent Adjustment on TRAAM Scores with Income Covaried

Independent Variable	Dependent Variable	F	Sig.	Eta^2
Involvement	Total TRAAM	1.696	.213	.102
	Amotivation	.378	.548	.025
	Mastery	1.735	.208	.104
	Cognitive Skills	5.859	.029	.281
	Work Completion	13.575	.002	.475
Adjustment	Total TRAAM	1.102	.310	.068
	Amotivation	.160	.695	.011
	Mastery	.356	.559	.023
	Cognitive Skills	25.069	.000	.626
	Work Completion	.167	.689	.011

Univariate analyses of between-subjects effects found that in divorced families parent involvement has a significant effect on Cognitive Skills ($F=5.859$, $p<.05$). An evaluation of group means shows that children with highly involved parents had better Cognitive Skills ($M=24.24$, $SD=4.055$) than children with less involved parents

($M=21.50$, $SD=3.536$). This relationship is the same for children from divorced homes with and without SES covaried.

Univariate significance was also indicated for parent involvement on Work Completion ($F=13.575$, $p<.01$). Like in Question 3, children with highly involved parents ($M=17.59$, $SD=2.526$) were rated higher on Work Completion than those with less involved parents ($M=10$, $SD=000$).

When examining parent adjustment with SES covaried, there was a significant main effect for Cognitive Skills ($F=25.069$, $p<.001$). An examination of group means indicated that well-adjusted parents ($M=26$, $SD=3.162$) had children with higher levels of Work Completion than poorly adjusted parents ($M=20.43$, $SD=2.637$). Once again, this is the same finding with and without the variance associated with SES removed.

The practical significance was also examined. The effect size for all three effects were high ($\text{Eta}^2 = .281, .475, .626$). The highest practical significance was for the effects of parent adjustment on Work Completion (.626).

Achievement

MANCOVA statistics utilizing SES as a covariate continued to find no significant multivariate effects for parent involvement (Wilk's Lambda=.073; $F=8.524$; $p>.05$) or adjustment (Wilk's Lambda=.232; $F=2.205$; $p>.05$). Univariate tests were also examined. In comparison with the results of Question 3, when SES was covaried different univariate results were found. Income was found to have a significant effect on total achievement ($F=8.095$, $p<.05$), reading ($F=12.190$, $p<.05$), math ($F=23.914$; $p<.010$), and language ($F=10.723$; $p<.05$). The significant effects for parent adjustment on math and language no longer existed. The analysis, however, did indicate a

significant relationship between parent involvement and math achievement ($F=20.374$; $p<.05$). An examination of group means found that highly involved parents had children with higher math scores ($M=60$, $SD=28.284$) than those with uninvolved parents ($M=48$, $SD=34.006$). Table 19 summarizes the univariate statistics for the effects of parent involvement and parent adjustment on achievement scores when SES was covaried.

Table 19
Univariate Effects of Parent Involvement and Parent Adjustment on Achievement Scores with Income Covaried

Independent Variable	Dependent Variable	F	Sig.	Eta ²
Income	Total	8.095	.047	.669
	Reading	12.190	.025	.753
	Math	23.914	.008	.857
	Language	10.723	.031	.728
	Spelling	.019	.173	.407
Involvement	Total	3.046	.156	.432
	Reading	4.511	.101	.530
	Math	20.374	.011	.836
	Language	3.964	.117	.498
	Spelling	.372	.575	.085
Adjustment	Total	.015	.908	.004
	Reading	.739	.438	.156
	Math	.243	.648	.057
	Language	3.161	.150	.441
	Spelling	.274	.628	.064

The effect size for the significant relationship between parent involvement and math achievement scores was high ($\text{Eta}^2=.836$). This Eta^2 score indicates that parent involvement contributed 83% of the variance in achievement scores.

SUMMARY OF DATA

Significant interactions were found for parent involvement and family status on TRAAM scores, regardless of SES. The combined effects of divorce and low parent involvement negatively impacted the motivation of children.

Children from divorced homes were scored lower by their teachers on the TRAAM, including Total Motivation, Amotivation, Mastery, and Work Completion than children from intact or separated families. In addition, children with low parent involvement scored lower on work completion than highly involved parents. An examination of achievement scores found that children from divorced homes scored lower in the areas of math and language than children from intact homes. No significant differences were found in achievement scores between parent involvement groups.

Because annual income (one component of SES) is correlated with motivation and achievement, the previously noted relationships were reexamined with the variance associated with annual income removed. The relationship previously indicated between children from divorce and low motivation remained salient. Also, parent involvement continued to have a significant effect on Work Completion. For achievement scores, divorced children continued to have significantly lower math scores, but the effect in language scores no longer existed when SES was covaried.

In divorced families, highly adjusted parents were found to have children with higher Cognitive Skills (a TRAAM factor) than the children of poorly adjusted parents. Similarly, children with highly involved parents were found to have higher Cognitive Skills and Work Completion than other children. In addition, math and language achievement scores were significantly higher in children with highly adjusted parents. No significant differences were found in achievement scores for parent involvement groups.

When the variance associated with SES was removed, the multivariate effects for parent involvement and parent adjustment on TRAAM became significant. The effects of parent involvement and parent adjustment on TRAAM Work Completion and Cognitive Skills remained salient. In addition, when SES was covaried, highly involved parents were shown to have children who scored higher in math achievement. The practical significance of these relationships was high.

CHAPTER 5

DISCUSSION

The current study investigated the impact of several post-divorce factors on a child's academic achievement and motivation. The influence of parent involvement (an important aspect of parent-child relationships) and parent adjustment on child motivation and achievement was examined. The goal of the study was to examine school success measures in children from divorced homes and pinpoint family factors that may buffer negative outcomes. It was hypothesized that academic achievement and motivation are lower in children from divorced homes with low parental involvement and poor parental post-divorce adjustment. This study contributes to the empirical literature on child divorce adjustment by examining factors rarely studied, namely achievement motivation and parental involvement.

The outcomes of this study suggest that there are clear differences in the school success of children from divorced and intact homes. Parent involvement and post-divorce adjustment were also shown to be important to child motivation and achievement regardless of SES.

Research Question One

Are there significant differences between children from divorced and intact homes with high, medium, or low parental involvement in academic achievement and achievement motivation?

Family status and parent involvement did show to impact motivation. The combined effect of divorce and parent involvement was shown to have a significant impact on a child's motivation. Specifically, children from divorced homes had lower motivation (as perceived by teachers) than children from intact homes. This study suggests that children from divorce homes may be expected to have lower rates of work completion when unprompted (TRAAM Work Completion), be more likely to avoid tasks and demonstrate little academic effort (TRAAM Amotivation), and be less likely to try new and challenging tasks or persist in the face of failure (TRAAM Mastery) than children from married families. These areas of motivation are shown to be indicators of performance, rather than skill, deficits (Stinnett, Oehler-Stinnett & Stout, 1991). The TRAAM score that indicates a skill deficit, Cognitive Skills, did not differ between groups of family status. Therefore, children in divorced homes may have the academic skills necessary to succeed, but are not motivated to perform.

In addition, analyses for this question found that children from divorced homes performed more poorly on math and language portions of standardized achievement tests than children from intact homes. No differences in overall achievement or other academic areas were noted. Math tasks may require more higher-order thinking, calculation, and concentration than other academic areas. If a child is distracted or preoccupied by family change, it may impact math performance.

Achievement scores did not differ between parent involvement groups. Children whose parents were highly involved did not have better achievement scores than those with the lowest involvement. Motivation scores, particularly Work Completion, were lower in families with uninvolved parents. It is not surprising that parents who do not take interest in their child's work would have children less likely to complete tasks unprompted. This finding supports Grolnick and Slowiaczek's (1994) suggestion that parent involvement impacts a child's motivation in an important way.

It should be noted that the effect sizes for the relationships found in Question One were moderate to high. Therefore, these findings have practical significance in addition to statistical significance.

The hypothesis that divorced families with low parental involvement would have children with lower achievement and motivation was supported. Children with low motivation existed between groups of family status and parent involvement. Also, some areas of low achievement were found to be influenced by family status and parent involvement.

Research Question Two

Are there significant differences between children from divorced and intact homes with high, medium, or low parental involvement in academic achievement and achievement motivation when socioeconomic status and time since the divorce are covaried?

Because SES and time since divorce have been shown in previous studies to impact child divorce adjustment, (Blechman, 1982; Kurtz, 1994; Nelson, 1993; Sun & Li, 2002) the current study examined the previous findings from Question 1 with the

variance associated with SES and the time since divorce removed. After preliminary analyses, time since divorce was removed as a consideration because it was not found to be correlated with academic achievement or motivation. SES (annual income), however, did show correlation with both school success measures.

The multivariate significance found for TRAAM scores in Question 1 continued to be significant when variance associated with SES was removed. Even when the effects of SES were removed, parental divorce and low parental involvement combined to negatively impact child motivation.

All TRAAM variables previously shown to be significant continued to be significantly lower in divorced homes. Children from divorced homes were rated by teachers as having lower overall motivation, less mastery of tasks, less determination to finish projects and work without prompting, and less perseverance towards goals regardless of their socioeconomic status.

TRAAM scores continued to be significantly different between groups of parent involvement when the variance associated with SES was removed. Families with low parent involvement had children who completed their work less frequently than families with high levels of involvement. This finding was true in children with low parent involvement regardless of socioeconomic status.

With achievement scores, math achievement continued to be lower in divorced families. However, language scores were no longer different between family status groups. Language scores were likely to be impacted by socioeconomic status. This finding is consistent with much research that suggests that children from lower SES have lower achievement scores (Sirin, 2005). However, math scores in this study were not

influenced as much by socioeconomic status as language scores and were influenced more by family divorce.

The data suggests that the influence of SES on achievement and motivation is not strong enough to account for group differences. Divorce continues to be important to a child's motivation, specifically areas indicating a performance rather than skill deficit, regardless of the child's socioeconomic status. Divorce is also important to math achievement in children from all SES backgrounds. Furthermore, children from all economic statuses with uninvolved parents are less likely to complete their academic work unprompted than those with involved parents. This study indicates that divorce may be more important to a child's motivation and math achievement than SES.

Effect sizes for the relationships indicated in Question Two were high, showing great practical significance of the results. The hypothesis that there would still be differences in achievement and motivation in divorced families and less involved families when SES was accounted for was supported by this study.

Research Question Three

Are there significant differences between children from divorced homes with high or low parent adjustment and high, medium, or low parent involvement in academic achievement and achievement motivation?

It was hypothesized that divorced families with low parent involvement and low parent adjustment would have children with lower achievement and motivation. This hypothesis was partly supported by the current study.

Children from divorced homes with low parental involvement and poor parental post-divorce adjustment had lower motivation scores. Specific findings showed that

there is a relationship between parent involvement and a child's ability to complete work unprompted. This finding that parent involvement is important to a child's work completion is consistent with Questions 1 and 2. Furthermore, it supports a basic foundation of this study that, as Grolnick and Slowiaczek (1994) suggest, parent involvement helps improve child motivation. Because motivation and work completion are tied to academic success, it is important for parents to understand the impact of their involvement on their child's academic progress.

This study also found that for children from divorced homes, parent involvement and adjustment has a relationship with a child's academic and cognitive skill. The TRAAM Cognitive Skills scale is a measure of academic skill deficit, and low scores could indicate a child is having academic difficulties due to a knowledge deficit rather than a performance deficit. One possible reason for this finding could be that uninvolved and poorly adjusted parents do not take time to check their child's work, review material and reinforce learning. Grolnick and Slowiaczek's suggestion that parent involvement is important to a child's motivation, which in turn impacts achievement, is once again supported by this study.

Parental post-divorce adjustment was also shown to significantly impact math and reading achievement scores. On the other hand, parent involvement in divorced families was **not** shown to impact achievement scores. This finding is consistent with Question 1, but not with much literature that ties parent involvement to child academic success (Christensen & Hurley, 1997; Grolnick & Slowiaczek, 1994; O'Shea, O'Shea, Algozzine, & Hammitte, 2001). This study suggests that for divorced children, parent adjustment is possibly more important than parent involvement for academic achievement. When a

child's parent is having trouble adjusting following a divorce, the child may have to take on more responsibilities or may worry more about their parent and, in turn, spend less time devoted to their academics.

Finally, it should be noted that the effect sizes for the analyses in Question 3 were high. Thus, there is not only statistical significance for these findings, but great practical significance. All in all, the hypothesis that children in divorced families with highly adjusted and involved parents would have better achievement and motivation than other groups was supported.

Research Question Four

Are there significant differences between children from divorced homes with high or low parent adjustment and high, medium, or low parent involvement in academic achievement and achievement motivation when socioeconomic status and time since the divorce are covaried?

In consideration of the findings in Question 3, it was expected that when the impact of SES was removed from the analyses, differences between families with varying parent adjustment and parent involvement would still exist. Time since divorce was removed from the analysis due to low correlations with motivation and achievement. Annual income served again as a measure of SES because of its correlations with both motivation and achievement.

When examining motivation scores between the groups of parent involvement and adjustment with SES covaried, the results from Question 3 remained salient. Post-divorce parent involvement and adjustment significantly contributed to a child's

cognitive skills. Parent involvement was also important to a child's work completion. These findings are true in divorced families regardless of their SES.

Income, the measure of SES, was found to impact most achievement areas. The relationships previously indicated for parent adjustment no longer existed when SES was covaried.

Another additional finding that emerged when SES was covaried was for parent involvement on math achievement scores. As research indicates, SES does have some impact on achievement (Guidubaldi, et al., 1983; Mulholland et al., 1991, Wadsby & Svedin, 1996). But, when the variance associated with SES is removed, this study once again shows the importance of parental involvement.

The effect size indications for this analysis were high. These findings have practical importance and are not just statistically significant. Thus, the hypothesis that children from divorced families with low parental adjustment and low parent involvement would have significantly lower achievement and motivation from other groups when SES was covaried was partially supported.

Summary of Findings

The results of this study show that divorce in itself influences a child's school success, regardless of parental involvement or adjustment. Children from divorced homes were shown to have lower motivation and math achievement than children from intact homes. Uninvolved parents, regardless of family status, have children with lower levels of work completion.

In divorced families, parent involvement is important to a child's work completion and overall ability to succeed academically. Divorced parents who are poorly

adjusted have children with more skill deficits and lower math, language and reading achievement scores. Most of these findings were consistent when differences associated with SES were removed. The only finding that was impacted by SES was for the achievement scores of children with different levels of parent involvement and adjustment.

Therefore, this study shows that divorce, parent involvement, and parent post-divorce adjustment are important to a child's school success. Many of the results show that parents who are uninvolved or poorly adjusted to divorce will have children who have performance deficits such as difficulty completing work unprompted, finding mastery on academic tasks and persevering toward an academic goal. In divorced families, poor involvement and adjustment is related to cognitive skills deficits. In turn, achievement scores in several areas are impacted by parent involvement and adjustment.

The theoretical model adopted by this study accounts for a complex, transactional influence of variables on divorce adjustment (Hetherington, 1988; Stolberg, 1987). In addition, it was proposed that parental adjustment and involvement are important buffering factors. The present study supports a complicated, transactional influence of variables on the school performance of children. The results strongly show a relationship between parent involvement and adjustment with motivation and achievement.

Limitations of Study

As proposed in Questions 2 and 4, it would have been best to examine time since divorce in relation to child outcomes. As Hetherington (1991) suggested, in the first two years following divorce, parents are likely to have poorer adjustment and to be more inconsistent and less affectionate. In the present study, however, sample size in the

divorce group was low, and the proposed analyses could not be conducted. Correlations were low between time since divorce and child motivation and achievement, although previous research indicated that there would be a high correlation.

Small sample size in the divorce sample is likely due to sensitivity to the topic. Divorced families may feel reluctant to give information about their divorce either because they would not like to not recall hurtful memories, they feel some shame about being divorced, or they feel defensive about their post-divorce adjustment. Custodial parents may be under scrutiny by ex-spouses and other people about their ability to be a good parent. Parents might have found the requested information too sensitive because it focused on parent adjustment and parent-child relationships. Noncustodial parents failed to show any interest in the study. This may be because families choosing to participate had little contact with noncustodial parents or noncustodial parents did not want to voluntarily get involved in a project initiated by their ex-spouse.

Selection bias may have also contributed to both the small divorce sample and the overall results of the study. Selection bias was likely on a large-scale (school selection) and small-scale (individual participants). First, many school districts were not interested in participating in the research. Even when districts gave approval, individual schools often were not interested in having teachers and students participate in another project. Schools are bombarded with special projects and programs, and some schools were resistant to becoming involved in “one more thing.” Some principals left it up to individual teachers to decide about participation. In these cases, there were few participants. Teachers had lower return rates than parents, even when offered incentives. Teachers have many responsibilities and duties, and many felt like they did not have the

time to complete the necessary forms. Also, teachers generally had more forms to complete, especially if more than one of their students was involved in the study.

Many participants came from a suburban school, where divorce rates were low. Return rates in urban schools were much lower. Parents in low income, urban schools have many pressures that limit their time to complete questionnaires. Also, in one urban school with a large Spanish-speaking population, language was a barrier; the forms were not available in Spanish.

Divorced parents choosing to participate in the study may not have been representative of the entire population. It is likely that the parents willing to disclose about their adjustment were well-adjusted and therefore had nothing to be reserved about. Parents with extremely poor adjustment may have been uncomfortable with the parent adjustment scale and, in turn, chose not to participate. It is likely that even the topic of divorce dissuaded some participants.

While selection bias might have occurred, its effects on the current study are indefinite. Achievement rates might have been higher than in the overall population due to the involvement of a high achieving suburban school. Divorce group participants may have been few, and data affected, due to selection bias of schools, teachers, and parents reluctant to talk about divorce. Divorce adjustment scores might have been higher than in the entire population if only well-adjusted and less defensive parents chose to participate. None of these possibilities are definite, however.

Another limitation of the study involves the use of parent and teacher self-report measures. The questionnaires used in the study were subjective measures of parent adjustment, parent involvement, and child motivation. Parent and teacher perceptions

may have been influenced by other factors and suffer from lower than optimal validity and reliability. One possible implication of this is that a teacher's perception of a child's personality may influence their rating of that child's motivation; i.e, a reserved, shy child may be rated as less motivated than an outgoing, inquisitive child. Motivation, which is often an internal characteristic, may not be adequately observed by an outside source.

Implications for Research

Despite limitations, the present study provided new information about the post-divorce school adjustment of children. Primarily, the relationship between divorce and child achievement motivation, which has been largely overlooked in the literature, has been clarified. There is an indication that divorced children have lower achievement. Future research should consider looking closer at this finding to determine the relative impact of time since divorce and other familial, individual, and environmental factors.

Further research should also examine other aspects of parent-child relationships, such as communication, discipline, autonomy, support, etc. This research did not find the expected effects of parent involvement. It is possible that the current study's focus was too narrow, and many aspects of parent-child relationships work together in impacting child divorce adjustment.

Finally, the theoretical model adopted by this study should be further examined. The model adopted by this study accounts for a complex, transactional influence of variables on child divorce adjustment. Although the present research was able to support the model, it was not able to adequately determine the validity of the model. Further research should investigate many other familial, environmental, and individual variables such as time since divorce, support systems, and personality characteristics.

Implications for Practitioners

Divorce is not a discrete event. As Wallerstein and Lewis (2004) report from their 25-year study of divorce adjustment, parental divorce has life-long effects. Young adults raised in divorced families often suffer from special problems handling conflicts within their own marriages. Wallerstein and Lewis conclude that “parental divorce impacts detrimentally the capacity to love and be loved within lasting, committed relationships” (2004, p. 359). Moreover, hardly any participants in their longitudinal study reported a happy childhood. Divorce adjustment problems in childhood are likely to carry out through the lifespan. Therefore, it is crucial to understand how divorce impacts children and intervene early. School psychologists are optimal professionals for addressing school adjustment issues.

The results of this study show professionals working in schools that parent involvement and parent adjustment are influential in divorce adjustment. These factors should be considered when consulting with parents and teachers and when designing interventions. Early intervention with children of divorced families where parent involvement is low or parents are having adjustment problems is crucial in preventing life-long negative consequences. Parents should be encouraged to help their children stay motivated by emphasizing the importance of education, helping them complete their work, practice skills at home, and buffer them from family stress. School psychologists can provide newly divorced families with ideas for maintaining or increasing parent involvement, organizing and managing custody schedules so that a consistent homework time is maintained, and for establishing open communication. Parents may also need

referrals for divorce support groups, parenting classes, or divorce care groups for their children.

School psychologists should consider the findings of this study when making educational decisions about children from divorced homes. The work completion and skill mastery should be monitored in children of divorce and academic interventions may be warranted. As this study shows, a child from a divorced family may have academic problems that are due to performance deficits rather than skill deficits. The school psychologist should work with the parents, teacher, and child to develop a plan to increase motivation, possibly by utilizing incentives or praise.

Mental health professionals in schools need to be proactive in helping children who are undergoing family change. School psychologists need to work with parents and teachers to ensure school success and long-term positive adjustment.

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Appendix A: Informed Consent Form - Parent

I am a doctoral student in the School Psychology program at Oklahoma State University. I would like to invite you to participate in a research study. As part of a research project for my dissertation, I am examining the impact of parent involvement and different family types on children's performance in school. This research project is designed to determine what kind of family influences are associated with children who are successful at school. One particular influence is family form, including single-parent, married, divorced, and remarried families. Each family form has its unique strengths and stressors. Understanding these factors may help schools better meet the needs of children and families.

What is involved in the study?

- Participation in this study would involve completing an information sheet and two to three questionnaires (two parent-child relationships questionnaires, and if applicable a divorce adjustment questionnaire). The information sheet asks about your family status, race, socioeconomic status and child's age and gender. On the parent-child relationships questionnaires, you will be asked to mark responses that best describe your recent experiences when caring for your child. If you are divorced, you will be asked to complete a separate questionnaire where you will respond to questions about your post-divorce experiences. We will also be asking your child's teacher for some information about their motivation and achievement (grades) in school and get information about your child's achievement from standardized test results located in their cumulative file.

How much time will this study take?

- Completing the questionnaires will typically take no more than 45 minutes.

What will happen after I give consent?

- If you give consent, your child's teacher will be given a questionnaire and information sheet to obtain information about your child's achievement and motivation in school. We will also get information about your child's achievement from standardized test results located in their cumulative file.
- If you give consent, a researcher will contact you to answer any questions and clarify how the questionnaire packet will be delivered to you. A stamped, addressed envelope will be provided with the questionnaires do that you may mail them to the researcher free of charge when you are complete. You may also drop them off in the sealed envelope with your signature across the seal to a designated contact person at your child's school, who will not see your answers.

How will you keep others from having the information you get from this study?

- All the information you provide is completely confidential. When your consent form is received, you will be given an identification number. From that point on, you will be recognized solely by your identification number. You will not write your name anywhere on the questionnaires. This consent form will be kept separate from your completed questionnaires to maintain confidentiality of your responses. All completed questionnaires will be destroyed after the study is complete and combined results are reported.

Are there any possible risks? Benefits?

- There are no foreseeable risks of participating in this study. However, some participants may view certain questions as personal and sensitive in nature. Possible benefits of participating in this study include an increased awareness of how family factors can influence children’s school performance.
- For your participation, you will receive a packet of information about parent involvement, parent-child relationships, and if applicable, adjustment following divorce. Also, your name will be entered in a drawing for a \$100 gift certificate at Walmart!

What are my rights?

- Your participation in this study is completely voluntary. You are free to withdraw your participation in the project at any time.

Whom do I call if I have questions or problems?

If you have any questions about this study, you can contact the researchers of this study, April Bertram M.S., and Judy Oehler-Stinnett Ph.D. at the School of Applied Health and Educational Psychology, 434 Willard Hall, Oklahoma State University, at (405) 744- 6960. You may also contact Dr. Carol Olson at the OSU Institutional Review Board at 415 Whitehurst (405) 744-5700. If you would like further assistance about adjustment to divorce, we will provide you with a referral to appropriate services.

Thank you for your interest in the project. We appreciate your participation!

I agree to participate in this study. I sign it freely and voluntarily. I give permission for the investigator to gather school achievement information from my child’s teacher and from standardized test results.

Signature _____ **Date** _____

Your child’s name _____

Contact phone number(s) _____ ; _____

Child’s Teacher _____

School _____

Grade _____

I do not wish to participate in this study.

Signature _____ **Date** _____

Appendix B: Informed Consent Form – Teacher

I am a doctoral student in the School Psychology program at Oklahoma State University. You are invited to participate in a research study. As part of a research project, I am examining the impact of parental involvement and different family types on children's academic achievement and motivation. This research project is designed to determine what kind of familial influences are associated with children who are successful at school. One particular influence is family form, including single-parent, married, divorced, and remarried families. Each family form has its unique strengths and stressors. Understanding these factors may provide insight into ways of helping children and the school environment support children and their families according to these unique situations.

- The child's parent has already given consent for participation. However, your participation is strictly voluntary.

What is involved in this study?

- Participation in this study would involve completing an information sheet and one questionnaire about the child's achievement motivation. The information sheet asks about the child's current grades. The achievement motivation questionnaire will require you to answer questions about the child's current motivation in school.

How much time will participation in this study take?

- Completing the questionnaires will typically take no more than 45 minutes.

What will happen after I give consent?

- If you give consent, a researcher will bring you a packet of the questionnaires with a reminder of the identification of the target child. The packet of questionnaires will be picked up in two weeks by the examiner.

What about confidentiality and privacy?

- Parents will have the opportunity to view the achievement and motivation information obtained about their children upon their request. Otherwise, the information you provide is confidential. You will be recognized solely by an identification number. You will not write your name anywhere on the questionnaires. This consent form will be kept separate from your completed questionnaires to maintain confidentiality of your responses.

Are there any possible risks? Benefits?

- There are no foreseeable risks of participating in this study. However, some participants may view certain questions as personal and sensitive in nature. Possible benefits of participating in this study include an increase awareness of how family status and interaction can influence children's school performance.
- For participation in the study your school will receive packets of information on increasing parent involvement and serving children following divorce.

What are my rights?

- Your participation in this study is completely voluntary. You are free to withdraw your participation in the project at any time.

Whom do I call if I have questions or problems?

If you have any questions about this study, you can contact the researchers of this study, April Bertram M.S., and Judy Oehler-Stinnett Ph.D. at the School of Applied Health and Educational Psychology, 434 Willard Hall, Oklahoma State University, at (405) 744- 6960. You may also contact Dr. Carol Olson at the OSU Institutional Review Board at 415 Whitehurst (405) 744-5700.

Thank you for your interest in the project. We appreciate your participation!

I agree to participate in this study. I sign it freely and voluntarily.

Signature _____ **Date** _____

Name of children whom you ARE willing to provide information about:

I do not wish to participate in this study.

Names of children whom you are NOT willing to provide information about:

Signature _____ **Date** _____

Appendix C: Parent Information Sheet

1. Age of your child: _____
2. Gender of your child: Female
 Male
3. Your relation to the child:
 Mother
 Father
4. Race: (You can check more than one box if this describes your family's race)
 African American/Black
 American Indian/Native American
 Asian/Asian American
 Hispanic/Latino(a)
 White, non-Hispanic
 Other: _____
5. Family status:
 Married (never divorced)
 Single Parent (never married)
 Separated
 Divorced
 Blended (remarried)
 - a. If divorced:
 - i. How long (in months and years) since the divorce?

 - ii. How long (in months and years) since the original separation?

 - iii. Who is the custodial parent?
 Mother
 Father
 Other _____
 - b. If separated:
 - i. How long (in months and years) since the separation?

 - ii. Who does the child live with?
 Mother
 Father
 Other _____
6. Please estimate the number of hours per week you work.

7. Please note any circumstances or factors that influence or limit the amount of time you spend with your child. _____

8. Annual income:

- under \$20,000
- \$20,000-\$50,000
- \$50,000-\$100,000
- \$100,000 and over

9. Highest level of education completed:

- Grade 11 or less
- Grade 12 or GED
- 1-3 years college or technical school
- 4 or more years of college or technical school

10. Occupation _____

Appendix D: Teacher Information Sheet

1. Date of last grade report _____
2. Student letter grade or corresponding rating on last grade report (check/circle one for each subject). Because the “0” rating is not an option on the grade reports, please give an estimate for the 1 or 0 range according to percent of time the child is successful in that area.

Reading:

- 3 (Consistently successful, 85-100%)
- 2 (Progressing, 70-84%)
- 1 (Area of concern 70- 60%)
- 0 (Failing 60% and below)
- Not applicable

Math:

- 3 (Consistently successful)
- 2 (Progressing)
- 1 (Area of concern)
- 0 (Failing)
- Not applicable

Spelling:

- 3 (Consistently successful)
- 2 (Progressing)
- 1 (Area of concern)
- 0 (Failing)
- Not applicable

Language Arts:

- 3 (Consistently successful)
- 2 (Progressing)
- 1 (Area of concern)
- 0 (Failing)
- Not applicable

Science:

- 3 (Consistently successful)
- 2 (Progressing)
- 1 (Area of concern)
- 0 (Failing)
- Not applicable

Social Studies:

- 3 (Consistently successful)
- 2 (Progressing)
- 1 (Area of concern)
- 0 (Failing)
- Not applicable

Appendix E: Achievement Test Data Form

ID # _____

Achievement Test Data Form

Date collected _____

Name of test (ITBS preferred) _____

Date test taken _____

	Standard Score	Percentile
Broad Achievement	_____	_____
Reading	_____	_____
Math	_____	_____
Language	_____	_____
Spelling	_____	_____
Listening Comp.	_____	_____

Research team member's initials _____

**Oklahoma State University
Institutional Review Board**

Protocol Expires: 10/21/2004

Date: Wednesday, October 22, 2003

IRB Application No ED0430

Proposal Title: The Relationship of Parent Involvement, Post-Divorce Adjustment, and Time Since Divorce to the Academic Achievement and Achievement Motivation of School-Aged Children

Principal Investigator(s):

April N. Bertram
702 E. Redbud Ct.
Stillwater, OK 74075

Judy Oehler-Stinnett
434 Willard
Stillwater, OK 74078

Reviewed and Processed as: Expedited (Spec Pop)

Approval Status Recommended by Reviewer(s): Approved

Dear PI :

Your IRB application referenced above has been approved for one calendar year. Please make note of the expiration date indicated above. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval.
2. Submit a request for continuation if the study extends beyond the approval period of one calendar year. This continuation must receive IRB review and approval before the research can continue.
3. Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of this research; and
4. Notify the IRB office in writing when your research project is complete.

Please note that approved projects are subject to monitoring by the IRB. If you have questions about the IRB procedures or need any assistance from the Board, please contact me in 415 Whitehurst (phone: 405-744-5700, colson@okstate.edu).

Sincerely,


Carol Olson, Chair
Institutional Review Board

VITA

April Noelle Bertram

Candidate for the Degree of

Doctor of Philosophy

Thesis: THE RELATIONSHIP OF PARENT INVOLVEMENT AND POST-DIVORCE
ADJUSTMENT TO THE ACADEMIC ACHIEVEMENT AND
ACHIEVEMENT MOTIVATION OF SCHOOL-AGED CHILDREN

Major Field: Educational Psychology

Biographical:

Education: Graduated from Chase High School, Chase, Kansas May 1996; received Bachelor of Science degree in Psychology from Washburn University, Topeka, Kansas in May 2000; received Masters of Science in Applied Behavioral Studies from Oklahoma State University, Stillwater, Oklahoma in May 2001. Completed the requirements for the Doctor of Philosophy with a major in Educational Psychology at Oklahoma State University in December 2005.

Experience: Raised in Raymond, Kansas; employed by Oklahoma State University, School of Applied Health and Educational Psychology as a graduate teaching assistant, 2000 to 2004. Employed by Dallas Independent School District, as a psychology intern and Licensed Professional in School Psychology, 2004 to present.

Name: April Noelle Bertram

Date of Degree: December 2005

Institution: Oklahoma State University

Location: Stillwater, Oklahoma

Title of Study: THE RELATIONSHIP OF PARENT INVOLVEMENT AND POST-DIVORCE ADJUSTMENT TO THE ACADEMIC ACHIEVEMENT AND ACHIEVEMENT MOTIVATION OF SCHOOL-AGED CHILDREN

Pages in Study: 160

Candidate for the Degree of Doctor of Philosophy

Major Field: School Psychology

Scope and Method of Study: The American family has changed dramatically from the two-parent nuclear family common prior to the late 20th century. Along with a dramatic increase in divorce rate, there has been an escalation in children involved in divorce. Children from divorced families have a greater likelihood for referral for psychological treatment. Familial variables have been shown to have a large influence on the divorce adjustment of children. The goal of this study was to examine the role of parent post-divorce adjustment and parent involvement on the school performance of children, namely their academic achievement and motivation. 107 parents and teachers of third to fifth grade children in Oklahoma and Texas participated in the study. Parents completed questionnaires including the Parent Child Relationship Inventory and the Divorce Adjustment Scale. Teachers completed the Teacher Rating of Academic Achievement Motivation. In addition, standardized achievement test data was collected for participating children.

Findings and Contributions: The results of this study indicated that divorced children have lower motivation and achievement than children from intact homes. Specifically, children from divorced families were less likely to complete work unprompted, persevere with difficult tasks and master academic material. Math and language scores were lower in divorced children. These findings were mostly unchanged when SES was covaried. The study also found children with uninvolved parents were less likely to complete academic work than those with involved parents. In divorced families, low cognitive skills, work completion and math achievement scores were associated with uninvolved and poorly adjusted parents across socioeconomic levels. This study shows the importance of encouraging parental involvement and promoting positive post-divorce parent adjustment. School psychologists should consider the findings of this study when intervening with children from divorced homes.

Advisor's Approval: Judy Oehler-Stinnett, Ph.D.