The Complexity of Family Structure and Children's School Performance: Family Composition, Stability and Parental Involvement*

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Introduction

Over the past several decades there have been considerable changes in family structure and patterns of children's living arrangements. Some studies suggested a causal link between family structure and children's well-being while others looked to the importance of socioeconomic status, parental supervision and transitions associated with family structure (Astone and McLanahan, 1991; Lichter and Crowley, 2004). Research has since moved again to note the dramatic diversity hidden in simple typologies of family structure to recognize that children's well-being varies depending on whether their family structure comes about via divorce, cohabitation and/or non-marital fertility (Brown, 2004; Raley and Wildsmith, 2004). ,

Family composition takes on increasingly diverse forms in the lives of young children today. For example, non-parent familial caregiving has increased dramatically. "Skipped-generation households," those consisting of grandparents raising their grandchildren without the children's parents present, have become increasingly common (Casper and Bryson, 1998; Deleire and Kalil 2002; Pebley and Rudkin, 1999; Sun, 2003). Nearly 10 percent of all African American children, 6 percent of Hispanic children and 4 percent of non-Hispanic White children live in these households (Fields, 2003). Many of these grandparent-headed families are living in poverty, face serious health problems and show other signs of emotional distress (Angel and Angel, 1993).

Some relatives may take in children in order to keep them out of the foster care system. Indeed, social agencies have come to rely on children's kin as preferable sources of foster care. Nearly one quarter of all children in foster care are placed with a relative (National Clearinghouse on Child Abuse and Neglect, 2003). These children are particularly vulnerable because they (1) are coming from precarious environments

unable to support them and (2) may be going to homes with few resources to support them but who take them in out of a sense of family loyalty. Thus, these children living in other relatives' homes are conceivably more at risk than those living with an own parent.

What happens to children in various family forms? Much of the research in Sociology has focused on children living with single parents and disentangling the effects of single-parent living arrangements from the effects of divorce itself. Research on the effects of divorce on children's well-being repeatedly demonstrates that some of the negative results come from the decline in economic status following a divorce and the lower earning power of single mothers in general (i.e., never married or divorced) (Entwisle and Alexander, 1995; Furstenberg and Cherlin, 1991; McLanahan, 1997). Children in relative care may also have worse outcomes, in part, because they are more likely to live in or near poverty.

Another important component of family structure that may have an effect on children is the combination of adults available in the household. Two adults have better earning potential as well as time to offer children than does a single parent. Thus, many researchers assumed that single-parent households would result in worse child outcomes than stepparent households, for example. Although researchers have hypothesized that children in single-parent families do poorly because they lack the support and supervision from a second adult, more recent research has demonstrated that children in stepfamily households do not necessarily do better than those in single-parent households (McLanahan, 1999; Hanson, McLanahan, and Thomson, 1996). Some of the reasons for this seeming inconsistency include the disruption to the single-parent family when a stepparent is introduced into the equation, the possibility that a

stepparent is less devoted to the child than the child's biological non-residential parent, a decrease in time for the children that results when the biological parent—most often the mother—has to divide her attention between her children and her new spouse, and possible competition between the stepparent and the children (McLanahan, 1999). When family forms are compared, after controlling for race, gender, and SES, widowed-remarried and cohabiting family structures are associated with the worst outcomes for children's academic success (Jeynes, 2000). The adjustments children must make to a new parent, possible residential mobility, and/or stepsiblings may override the economic benefits of adding an adult to the household.

Other studies have also found that the disruption to the family caused by divorce or remarriage is detrimental to the well-being of children and that more disruptions (e.g., a divorce followed by a later remarriage) are associated with more problems for children's adjustment (e.g., Aquilino, 1996). Children living with relatives have experienced at least one transition—the transition from living with a parent(s) to living with a relative. And it is likely that they experienced other transitions before the move to a relative's home (i.e., they may have first experienced a divorce or the loss of a parental figure). It is important therefore, to examine longitudinally the number and types of changes that children experience to determine if, in fact, more changes in these children's family structure results in lower rates of academic achievement and/or increases in behavioral problems.

One way to investigate the possibility of differential outcomes for children based on their family structure is to expand the types of families under investigation and pay attention to the relatedness of adults to the children in their care. At the same time, the

marital status of parents, the types of transitions that occur in children's family structures and the extent of parental involvement may all contribute to differences in childrens' well being associated with simple typologies of living arrangements. This paper asks whether considering parental marital status, family instability over time and parental involvement (including involvement by non-residential parents) furthers understanding of variations in children's academic performance beyond simply addressing family structure at one point in time.

In this preliminary study, we take advantage of longitudinal data on a cohort of young children to examine these questions in a dynamic context. We explore the possibility that young children do not fare as well in kinship care (i.e., living with related adults who are not their parents) than in households headed by two biological/adoptive parents. We are particularly cognizant of the importance of including children living with relatives other than their parents as these households become more prevalent and yet less studied than stepparent, single-parent, and even cohabiting households (Deleire and Kalil, 2002; Pebley and Rudkin, 1999; Sun, 2003).

We also address the possibility that parental marital status may convey an advantage to children beyond that available to children with two parents or related adults present who are not married to one another (Brown, 2004). Finally, we address the importance of family-school connectivity and the possibility that children may benefit from parental involvement even if that involvement comes from non-residential parents. In this case, we may find that family structure serves primarily as a proxy for having more or fewer adults involved in school activities.

Academic performance in the early years of school forms a strong basis for predicting later achievement (Entwisle and Alexander, 1993). Mastery of early academic skills is an important predictor of ultimate educational attainment. Compared with children living with both biological parents, children living with only one biological parent (either in a single-parent family or in a stepfamily) do not do as well on measures of school achievement. They earn lower grades in school (Bogenschneider, 1997; Astone & McLanahan, 1991), and they perform less well on achievement tests (Pong, 1997; Dronkers, 1994). Stepchildren in particular are at higher risk of dropping out of school (Astone & McLanahan, 1991).

Here we present our initial results for a sample of young children living in various family structures. At this early stage, we identify children's family structure on the basis of their relatedness to the adults caring for them. We ask whether children living with two biological/adoptive parents perform better on an academic achievement test and/or have fewer externalizing behavior problems in the classroom than children living with neither parent but in the care of relatives. We then determine how much of these differences by family structure are merely a reflection of the socioeconomic disadvantage or other demographic traits associated with particular family forms. We also address parental marital status as a separate consideration from family structure itself. We then examine the extent to which the effect of initial family structure on subsequent academic outcomes is related to stability of family structure from Kindergarten to 3rd grade and the involvement of children's parents/guardians in their transition to formal schooling.

Data & Methods

This analysis uses data from the Early Childhood Longitudinal Study-Kindergarten Cohort (ECLS-K), a nationally-representative survey of children attending Kindergarten in 1998-1999 conducted by the U.S. Department of Education National Center of Education Statistics. The ECLS-K is designed to measure children's transition to the formal school environment. This nationally representative sample of children was followed longitudinally from their Kindergarten year (1998-1999 academic year) through the 5th grade (2003-2004 academic year). Students' teachers, school administrators, and parents completed questionnaires and/or were interviewed regarding the child's in-class and at-home behaviors, family's background information (including country-of-origin, family composition, socio-economic status, education of parents, parents' occupations, etc.), and the school environment and training of its teachers. Children's height, weight, and cognitive abilities in Reading, Mathematics, and Science were also measured. The sample also includes considerable numbers of children from diverse racial/ethnic and family backgrounds making it ideal for our purposes. All of our analyses include weights and adjust for design effects based on the stratified sample design.

Our sample includes children included in the spring wave of Kindergarten who were also followed up in the 1st and 3rd grade years (1998-1999; 1999-2000; and 2001-2002, respectively). There were 17,401 Kindergarteners in the beginning sample. After those cases missing the outcomes of interest (Mathematics IRT scores) and/or focal predictor and control variables were dropped, we retain a final sample of 12,721 children. When we examine our second outcome of interest (children's externalizing

problem behaviors), the beginning n of 17,401 is reduced to 10,445 when we drop those children missing the aforementioned outcome and/or key independent and control variables (refer to Table 1 for all descriptives).

Our focal predictor, the child's living arrangements/family structure in Kindergarten, is constructed from a question asking the parent (or guardian) respondent about the family's composition. The parent reported that the child was living with either both biological parents or two adoptive parents, with the biological or adoptive mother and her partner (married or not), the biological or adoptive father and his partner (married or not), a single mother, a single father, in the guardianship of a relative, or in the guardianship of a nonrelative. Families composed of a biological parent or an adoptive parent and his or her partner (whether married or not) will hereafter be referred to as stepparent families (though we recognize that the phenomena of the stepparent family is a complex one and may take many different forms, including cohabiting step-parent and married step-families). Also of interest to our analyses is the stability of children's living arrangements in terms of the number of adults available to the child within the home. Therefore, we identify whether or not a child has the same number of caregivers throughout the period of observation (i.e., from Kindergarten to 3rd grade). Specifically, we measure whether children who experienced any change in family structure across the waves of data collection experienced a net gain of a parental figure (e.g., addition of a stepparent or parent's partner or to a single-parent home from a kinship-care home); the net loss of a parental figure (e.g., loss of a biological/adoptive parent or stepparent or parent's partner); or change across family structures that did not result in the net gain or loss of a parent (e.g., moved from a single-mother to a single-

father home). Finally, we control for whether data regarding a child's family structure is missing (i.e., the parent/respondent did not provide information about the child's family structure), whether a child has been adopted and whether the child's parents were married at the time of the child's birth.

Previous research has demonstrated the considerable variation in economic security, stability and parental involvement across family structures. Thus, it seems likely that some of the variation in academic performance by family structure could be due to variations in the availability of adults or a result of the investment in these children by coresident adults. Therefore, we also include measures of socioeconomic status and residential parental/guardian and non-residential parent involvement in Kindergarten as predictors of our dependent variables. Specifically, we measure residential parent/guardian involvement as the number of school activities in which the parent/guardian took part (from no participation in any of the events to involvement in all three of the following activities: attendance at an "open house" event at the child's school; attendance at a Parent Teacher Association (PTA) meeting; and/or attendance at a regularly-scheduled parent/teacher meeting).

We also address the possibility that children may gain from having more parental figures involved in their schooling net of residential status. At this preliminary stage, we simply dichotomize non-residential parent involvement (i.e., children who had a non-residential parent either had a non-residential parent who exhibited involvement or had a non-residential parent who did not exhibit any involvement). Thus, non-residential parent involvement is defined as any participation by either the non-residential mother or the non-residential father in any of the following four activities: "open house"/back-to-

school night; school activity; regularly-scheduled parent/teacher conference; and/or volunteered at the child's school/served on a committee. Non-residential adoptive mothers and non-residential adoptive fathers were too few in number ($n < 10$) to include in our analyses of non-residential parent involvement.

Children's academic performance varies considerably by family resources. We take a measure of family socioeconomic status from a composite measure composed of family income, mother's and father's education, and mother's and father's occupational prestige. The variable is measured in quintiles. We include other demographic measures that may also be associated with variations in academic performance and family structure. Among our measures is a variable for racial/ethnic group. We identify the child's race from the parent or guardian's report of the child's race and Hispanic ethnicity at the Kindergarten survey. Children are coded as being non-Hispanic White, non-Hispanic Black, Hispanic, Asian/Pacific Islander, American Indian, or of mixed race.

In addition to these measures of family SES, parental/guardian involvement, family change and race/ethnicity, we include other control measures that may underlie some of the differences in academic performance. These include census region, sex, age, number of siblings, and whether the focal child attended public or private school. Finally, the use of non-familial care prior to Kindergarten is used as a control for experience prior to spring 2002 that may have influenced academic performance. Parents who reported that their child received part-time or full-time care from someone other than themselves prior to their enrollment in Kindergarten are included in this measure. In addition, we control for grade retention in order to determine if children who are held back in one or more grades between Kindergarten and 3rd grade do less

well on measures of academic achievement than do those children who do not have to repeat a grade.

Outcome Measures

There are many ways to assess progress in school in the United States and all have their merits and disadvantages. For example, grades have real consequences for students. Poor performance in class reflected by poor grades determines opportunities to proceed to higher grade levels. However, grades are likely to vary across schools and teachers within schools making it difficult to determine the extent to which academic performance varies due to differences among teachers and schools or other factors. To make matters more complicated, grades are more variable in the earlier school years where they are more likely to reflect behavioral issues rather than academic ability. Further, the comparison of the academic achievement of students from diverse social and educational settings is facilitated when one standardized measure is available. (Bankston and Caldas, 1996). For these reasons, analysis of academic progress is measured here with IRT-adjusted standardized Mathematics scores from the spring of 2002 when the majority of the sample was in third grade.

While substantively different than their performance on a standardized test, how children behave in the classroom also indicates how they are adjusting to the formal school environment. Therefore, teachers' reports of children's externalizing problem behaviors allow us to examine whether or not certain children exhibit more problem behaviors than others. We recognize that teachers may label some behaviors as 'problematic' in some children while viewing the same behavior as less problematic in

others. However, the Early Childhood Longitudinal Study employs the Externalizing Problem Behaviors scale adapted from the instrument entitled "Social Skills Rating Scale: Elementary Scale A ("How Often?")" by Gresham and Elliott (1990). This teacher-reported continuous scale of in-class behaviors is composed of six items in the 3rd grade (but is composed of five items in the children's Kindergarten and 1st grade years). These six items composing the scale include the frequency with which a child engages in specific activities including argues, fights, gets angry, acts impulsively, disturbs ongoing activities, and the frequency with which a child talks during quiet study time (this last measure is part of the 3rd grade scale only, having been added to increase the scale's variance). This scale uses the value of "1" to indicate no exhibition of the externalizing behavior and the value of "4" to indicate that the child displays the behavior "very often." Thus, teachers are asked about several specific behaviors that are less likely to be subjectively evaluated. The scale is frequently used in studies of children's early schooling (Gresham and Elliot, 1990; Pollack, Atkins-Burnett, Rock, and Weiss, 2005; US Department of Education, Working Paper No. 96-18; US Department of Education, Working Paper No. 2001-03).

Multivariate Analyses:

For our preliminary analyses, we employ OLS regression models (weighted and adjusted for design effects) to predict children's performance on a standardized-math test and their externalizing problem behaviors. Our first models simply examine the effects of family structure on these two outcomes. Because our findings are consistent for both test scores and externalizing behaviors, our discussion of the results combines

both outcomes. We will indicate when substantive differences have been obtained for the two outcome variables. We summarize our results for math scores in Table 2 and externalizing problem behaviors in Table 3. These early models indicate that only children from single-mother and kinship-care homes have significantly lower scores on the standardized-math test than do children from 2-biological/adoptive-parent families. Further, we see that children whose parents were married at the time of their birth scored significantly higher on the math test than children whose parents were not married when they were born. Results also show that, relative to children from two biological/adoptive parent homes, children from all other represented family structures exhibited a higher number of externalizing problem behaviors (with the exception of children from single-father families) while children whose parents were married at the time of their birth exhibited fewer of these behaviors.

Our second models add in socio-demographic controls for census region, sex, age, number of siblings, race, and SES. In addition we add measures for prior school experience including whether the child was ever in non-familial care prior to Kindergarten, whether the child was retained at a grade level one or more times between Kindergarten and 3rd grade and whether the child attended a private school in 3rd grade. We see substantial changes in our math score coefficients when we add in these demographic controls. Specifically, the coefficients for children from single-mother and relative caregiver-families were reduced to non-significance. However, the negative coefficients for children from two family structures—stepfamily and non-relative caregiver—become significant in the second model suggesting that these structures may be less beneficial than other family forms once socioeconomic status is controlled.

Children who had been adopted also scored significantly lower than children who had not been adopted.

For externalizing problem behaviors, adding the control variables to our models did not significantly change our family structure coefficients. The one noteworthy exception to this pattern, however, was that while children whose parents had been married at the time of their birth exhibited fewer problem behaviors in Model 1, their coefficients were reduced to non-significance in Model 2. That is, when we control for differential resources, children whose parents were married when they were born did not exhibit a significantly lower number of these externalizing problem behaviors than did children whose parents were not married at the time of their birth.

Even at this young age, we see gender-based differences in our outcomes. In Model 2 we note that boys already score higher on standardized math tests than do girls and they also exhibit more externalizing problem behaviors. We also see that while Black, Hispanic, and American Indian children fare worse than White children on standardized math scores, only Black children are reported to exhibit more problem behaviors than White children. Contrary to this pattern but consistent with previous literature on teacher perceptions by race, Asian children were reported to exhibit fewer problem behaviors than the children in the reference group. As hypothesized, relative to the highest quintile of SES, children from all other socio-economic backgrounds scored significantly lower on their standardized tests and exhibited greater numbers of externalizing problem behaviors. Finally, our models alert us to the significantly lower math scores and higher numbers of externalizing problem behaviors of children who had been retained one or more times between Kindergarten and 3rd grade.

In Model 3 we add a measure for the type of change in a child's family structure between Kindergarten and 3rd grade. Recall that the measure employed here captures whether the child experienced the net gain of a parent into his/her life (e.g., addition of a stepparent to a single-parent home); the net loss of a parent (e.g., loss of a biological/adoptive or stepparent due to divorce); or change from one family structure to another that did not result in the net gain or loss of a parent, hereinafter referred to as "other change" (e.g., moved from a single-mother to a single-father home). All coefficients from the previous model remained statistically significant for both math scores and externalizing problem behaviors. Children who gained a parental figure to their household between Kindergarten and 3rd grade and those who experienced an "other change" did not differ significantly from children who did not experience any change. Children who "lost" a parent or parental figure over the course of the study had lower math scores and exhibited higher levels of externalizing problem behaviors than those who did not lose a parent over the same time period, an effect that we see persist in our final two models.

Living with both of their biological parents, or in a home with a biological parent and a parental substitute, does not automatically ensure parental involvement in the child's academic life. Therefore, we question whether children who have parents who exhibit more involvement in the academic lives of their children achieve more academic success than children whose parents are less involved even if the "parent" is a relative and both parents are absent. Therefore, Model 4 involves the addition of a measure for residential parental/guardian involvement. Recall that this measure is operationalized as the number of school activities in which the parent/guardian took part (from no

participation in any of the events to involvement in all three of the following activities: attendance at an “open house” event at the child’s school; attendance at a Parent Teacher Association (PTA) meeting; attendance at a regularly-scheduled parent/teacher meeting). We note the elevated math test scores and slightly lower levels of externalizing problem behaviors of those children whose residential parents participated in these activities.

Model 5 adds our final component: non-residential parental involvement. Recall that at this early stage, this is dichotomized as any participation by either the non-residential mother or the non-residential father in any of the following four activities: attendance at an “open house”/back-to-school night; participation in a school activity; attendance at a regularly-scheduled parent/teacher conference; volunteering at the child’s school/serving on a committee. Our regression analyses indicate that adding a measure for non-residential parent involvement does not result in higher predicted standardized-math scores or lower externalizing problem behaviors. This result could be an effect of our rudimentary definition of non-residential parent involvement, an issue we address in our concluding statements.

Discussion and Plans for Final Paper:

Researchers have long noted the variations in children’s outcomes by family structure. But the meaning behind these patterns and the appropriate causal attributions for these differences remains contested not only in the academic world but in the policy realm as well. This paper takes advantage of a large longitudinal dataset to explore variations in children’s academic performance not only contrasting one and

two-parent families but keeping an eye to the increasing numbers of children living without parents present and to those children living with a parent and a parent's partner. We find that considerable variation exists but that much of the variation in outcomes for children are attributable not to their initial family structure per se but to the economic security and (somewhat) to the family structure stability and parental/guardian involvement associated with family forms. Although family structure differences persist in the full models for standardized-math test scores (i.e., significantly lower math scores for children living in stepfamily homes and those residing with nonrelative caregivers), overall differences are reduced when we take into account the resources each family type is likely to provide. However, when we examine externalizing problem behaviors, we find that differences remain even when we control for race and children's differential economic backgrounds. These preliminary analyses point to the ability of family structure to have a greater influence on behavioral outcomes than on standardized test scores, a result that warrants further attention in our upcoming analyses.

These models are a step forward in our efforts to disentangle the lower academic performance of children living in various family structures, with particular attention to those associated with less advantaged situations, including living with relatives without a parent present. These children are more likely to face changing family structures over time and to move into single-mother households that may also be economically marginalized (results not presented here). Further analysis of this group will explore the extent to which these children experience multiple changes and the economic security of the families to which they move rather than relying on a static measure of SES and parental/guardian involvement from Kindergarten.

Overall, the results presented here both confirm results from previous research and yield insight into the many different changes in family structure children experience from early to middle childhood. Our next steps will examine the likelihood that children make more than one transition in living arrangements from Kindergarten to third grade and pay even closer attention to changes in other family members in the household. We will ask whether our measures of "gain" or "loss" of a parental figure are specific to parental structure or whether children are at risk when any adult is removed from the household. For example, are children living with two parents and a grandparent at similar risk for declines in well-being if the grandparent leaves the household as a child living with two parents who has a parent leave the household. This is a particularly crucial question for children residing in kinship care with neither parent present. Many of these children with neither parent present in Kindergarten do have contact with parents and some move in with parents during the years under observation.

We will also extend our current measures of non-residential parental involvement to mirror our definition of residential parent involvement in order to determine if outcomes vary for children based on the involvement of an "absent" parent in their lives. In this way, we will examine whether children who have parents who are involved in their lives, regardless of whether they are living together in the same household, have significantly different outcomes than children who do not experience the involvement of their parent or parents. We can also expand our definition of non-residential parent involvement to include measures for the amount and type of contact children have with their non-residential parents. And we will examine some of the complexities inherent in

children’s contact with these non-residential parents, such as time since last contact and whether non-residential parents miss previously-scheduled visits.

Table 1: Characteristics of Children included in Sample

	MATH IRT		EXTERNALIZING	
	N	%	N	%
Family Structure				
2 Biological/Adoptive Parents	9014	65.75	7594	67.52
1 Biological/Adoptive Parent + Partner	943	9.05	779	9.11
Single Mother	2210	21.14	1719	19.68
Single Father	192	1.7	161	1.62
Relative Caregivers	212	1.8	162	1.63
Non-Relative Caregivers	42	0.56	30	0.43
Adopted[a]	173	1.18	139	1.07
Married[b]	7614	55.55	6468	57.65
Census Region				
Northeast	2388	17.91	1969	18.36
Midwest	3261	23.31	2928	25.94
South	4152	36.52	3436	35.93
West	2812	22.25	2112	19.77
Male	6372	51.22	5247	50.8
Female	6241	48.79	5198	49.2
Age[f]		74.65		74.69
		4.42		4.39
Public School	10175	88.45	8200	87.09
Private School	2438	11.55	2245	12.91
Race				
White	7461	59.04	6600	63.13
Black	1532	15.04	1160	13.48
Hispanic	2201	18.82	1591	17.01
Asian	890	3.13	684	2.87
American Indian	198	1.61	149	1.45
Mixed	331	2.36	261	2.07
SES				
1st quintile	2105	19.62	1532	17.6
2nd quintile	2322	20.04	1907	19.58
3rd quintile	2541	20.66	2169	21.52
4th quintile	2678	19.3	2316	20.06
5th quintile	2967	20.38	2521	21.24
Preschool Care	10357	81.66	8677	82.81
Retained[c]	1033	10.68	800	10.48
Change in Family Structure[d]				
Gained Parent	572	6.08	440	5.64
Lost Parent	1570	12.95	1246	12.43
Other Change	327	3.18	258	2.9
Parental Involvement[e]				
Residential Parent Involvement[f]		1.91		1.94
		0.83		0.81
Non-residential Parent Involvement	851	7.65	710	7.53
Total N	12721		10445	

*p <= .05; **p <= .01

[a]measures whether child was ever adopted

[b]measures whether child's biological parents were married at the time of the child's birth

[c]measures whether the child was ever retained in a grade between Kindergarten and 3rd Grade

[d]measures whether a change in child's family structure between Kindergarten resulted in the net gain of a parent (e.g., move from a single-parent to a 2-parent family); the net loss of a parent (e.g., move from a 2-parent to a single-parent family; or other type of change that resulted in neither the net gain or the net loss of a parent(e.g., moving from a single-mother to a single-father family)

[e]residential parental involvement is a cumulative measure of the residential parent's involvement (or lack thereof) in one or more school activities (open house; parent/teacher conference; PTA); non-residential involvement is a dichotomous measure of any involvement by the non-residential mother or father in any 1 of 4 school activities (open house; parent/teacher conference; school activity; volunteering)

[f]means with SD

Table 2: Results of Regression Models Predicting Math IRT Scores[a]

	Model 1		Model 2		Model 3		Model 4		Model 5	
Family Structure										
(vs. 2 Biological/Adoptive Parents)										
1 Biological/Adoptive Parent + Partner	-2.02		-2.25	**	-2.47	**	-2.35	**	-2.44	**
Single Mother	-4.05	**	-0.40		-1.00		-0.90		-1.01	
Single Father	0.54		-1.44		-0.85		-0.52		-0.68	
Relative Caregivers	-7.71	**	-1.87		-2.61		-2.43		-2.59	
Non-Relative Caregivers	-7.24		-6.75	*	-7.04	*	-6.96	*	-7.01	*
Adopted[a]	-3.61		-7.51	**	-6.26	**	-6.45	**	-6.44	**
Married[b]	5.78	**	1.23		1.04		0.97		0.97	
Census Region (vs. Northeast)										
Midwest			1.17		1.16		1.12		1.11	
South			2.53	**	2.56	**	2.55	**	2.55	**
West			-0.01		-0.03		-0.04		-0.04	
Male			4.13	**	4.12	**	4.09	**	4.09	**
Age			0.04		0.04		0.04		0.04	
Number of Siblings			-0.40	*	-0.40	*	-0.40	*	-0.40	*
Private School (vs. Public School)			-1.41	*	-1.48	*	-1.49	*	-1.50	*
Race (vs. White)										
Black			-9.29	**	-9.13	**	-9.06	**	-9.04	**
Hispanic			-3.77	**	-3.76	**	-3.75	**	-3.74	**
Asian			-1.55		-1.41		-1.25		-1.24	
American Indian			-6.48	**	-6.18	*	-6.15	*	-6.15	*
Mixed			-2.16		-2.13		-2.10		-2.10	
SES (vs. 5th quintile)										
1st quintile			-17.47	**	-17.24	**	-16.82	**	-16.80	**
2nd quintile			-12.58	**	-12.39	**	-12.13	**	-12.13	**
3rd quintile			-9.48	**	-9.37	**	-9.19	**	-9.19	**
4th quintile			-5.49	**	-5.42	**	-5.36	**	-5.37	**
Preschool Care			0.92		0.96		0.94		0.94	
Retained[c]			-17.19	**	-17.06	**	-16.97	**	-16.95	**
Change in Family Structure[d]										
Gained Parent					0.53		0.44		0.43	
Lost Parent					-2.08	**	-2.00	**	-2.01	**
Other Change					-1.75		-1.76		-1.73	
Parental Involvement[e]										
Residential Parent Involvement							0.75	**	0.74	**
Non-residential Parent Involvement									0.41	
Intercept	82.10		90.58		90.68		89.11		89.08	
R^2	0.06		0.33		0.33		0.33		0.33	

*p <= .05; **p <= .01

[a]measures whether child was ever adopted

[b]measures whether child's biological parents were married at the time of the child's birth

[c]measures whether the child was ever retained in a grade between Kindergarten and 3rd Grade

[d]measures whether a change in child's family structure between Kindergarten resulted in the net gain of a parent (e.g., move from a single-parent to a 2-parent family); the net loss of a parent (e.g., move from a 2-parent to a single-parent family; or other type of change that resulted in neither the net gain or the net loss of a parent(e.g., moving from a single-mother to a single-father family)

[e]residential parental involvement is a cumulative measure of the residential parent's involvement (or lack thereof) in one or more school activities (open house; parent/teacher conference; PTA); non-residential involvement is a dichotomous measure of any involvement by the non-residential mother or father in any 1 of 4 school activities (open house; parent/teacher conference; school activity; volunteering)

Table 3: Results of Regression Models Predicting Externalizing Problem Behaviors[a]

	Model 1		Model 2		Model 3		Model 4		Model 5	
Family Structure										
(vs. 2 Biological/Adoptive Parents)										
1 Biological/Adoptive Parent + Partner	0.16	**	0.14	**	0.15	**	0.14	**	0.16	**
Single Mother	0.20	**	0.12	**	0.15	**	0.15	**	0.17	**
Single Father	0.01		0.01		0.01		0.00		0.03	
Relative Caregivers	0.20	**	0.13	*	0.16	**	0.15	*	0.19	**
Non-Relative Caregivers	0.61	**	0.57	**	0.59	**	0.58	**	0.59	**
Adopted[b]	0.19	*	0.22	**	0.16	*	0.17	*	0.17	*
Married[c]	-0.10	**	-0.05		-0.04		-0.04		-0.04	
Census Region (vs. Northeast)										
Midwest			0.10	**	0.10	**	0.10	**	0.10	**
South			0.03		0.03		0.03		0.03	
West			0.08	*	0.08	*	0.08	*	0.08	*
Male			0.27	**	0.27	**	0.27	**	0.27	**
Age			0.00		0.00		0.00		0.00	
Number of Siblings			-0.01		-0.01		-0.01		-0.01	
Private School (vs. Public School)			-0.02		-0.01		-0.01		-0.01	
Race (vs. White)										
Black			0.20	**	0.19	**	0.19	**	0.19	**
Hispanic			-0.03		-0.03		-0.03		-0.03	
Asian			-0.10	**	-0.11	**	-0.11	**	-0.11	**
American Indian			-0.01		-0.02		-0.02		-0.02	
Mixed			-0.03		-0.04		-0.04		-0.04	
SES (vs. 5th quintile)										
1st quintile			0.19	**	0.17	**	0.16	**	0.15	**
2nd quintile			0.12	**	0.11	**	0.10	**	0.1	**
3rd quintile			0.12	**	0.11	**	0.11	**	0.11	**
4th quintile			0.06	**	0.06	*	0.06	*	0.06	*
Preschool Care			0.05	*	0.05	*	0.53	*	0.05	*
Retained[d]			0.13	**	0.13	**	0.13	**	0.12	**
Change in Family Structure[e]										
Gained Parent					-0.02		-0.02		-0.01	
Lost Parent					0.10	**	0.09	**	0.10	**
Other Change					0.04		0.04		0.03	
Parental Involvement[f]										
Residential Parent Involvement							-0.03	*	-0.03	*
Non-residential Parent Involvement									-0.08	
Intercept	1.72		1.52		1.51		1.57		1.57	
R^2	0.05		0.13		0.13		0.13		0.13	

*p <= .05; **p <= .01

[a]measures whether child was ever adopted

[b]measures whether child's biological parents were married at the time of the child's birth

[c]measures whether the child was ever retained in a grade between Kindergarten and 3rd Grade

[d]measures whether a change in child's family structure between Kindergarten resulted in the net gain of a parent (e.g., move from a single-parent to a 2-parent family); the net loss of a parent (e.g., move from a 2-parent to a single-parent family; or other type of change that resulted in neither the net gain or the net loss of a parent(e.g., moving from a single-mother to a single-father family)

[e]residential parental involvement is a cumulative measure of the residential parent's involvement (or lack thereof) in one or more school activities (open house; parent/teacher conference; PTA); non-residential involvement is a dichotomous measure of any involvement by the non-residential mother or father in any 1 of 4 school activities (open house; parent/teacher conference; school activity; volunteering)

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