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**Children's Time Use And  
Parental Involvement In Low-Income Families**

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FAMILIES

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## CHILDREN'S TIME USE AND PARENTAL INVOLVEMENT IN LOW-INCOME FAMILIES

Despite evidence of a small decline in child poverty during the second half of the 1990s, recent reports from the United States Census Bureau have shown that the number of children living in poverty increased by nearly one-half million in one year. In 2002, 16.7% of children lived in households where total household income was below the official federal poverty line. Children under age six and living in female-headed households are particularly vulnerable to poverty. In 2002, 48.6% of these children lived in households where total household income was below the official federal poverty line. This is five times the rate of poverty for children under age six living in households with two married parents (U.S. Bureau of the Census, 2003). Another recent trend that has significant policy implications is the steady increase in the percentage of poor children who live with working parents (Child Trends Databank, 2003). Twenty-seven million American children live in families in which their parents make less than twice the official federal poverty line, and more than 85% of these children have at least one working parent (National Center for Children in Poverty, 2004).

Recent welfare reform policies which have increased the work requirements of welfare recipients raise important and new questions regarding parents' work-family tradeoffs and the effects of these tradeoffs on children's well-being. While some researchers and policymakers argue that children will benefit from the regularity and routine provided by working parents, others express concern over the likely negative consequences of employment policies which could potentially lead to a reduction in the amount of time that parents spend with their children (Huston, 2002).

Low-income families, including many single-parent families and working poor two-parent families, face the challenge of supervising their children and spending time with their children on developmentally appropriate activities. Like other parents, low-income parents may make tradeoffs between their work hours and their time spent with children. However, when employed, low-income parents often have less control over their work schedules and have fewer resources to purchase quality child care services and provide for children's developmental needs. Thus, they are likely to experience intense work-family conflict. Scheduling conflicts, coupled with daily economic pressures may be detrimental to parents' psychological well-being, making them anxious or depressed, which in turn may lead to diminished energy in their provision of supportive interaction and a stimulating environment for children (McLoyd, 1990; Yeung, Linver, & Brooks-Gunn, 2002). On the other hand, employment can be beneficial to children if it results in additional income to provide better food, housing, medical care, a more stimulating and supportive environment for children, or improved parental psychological well-being, and a positive role model for children.

One potentially important aspect of children's well-being that has received little attention in poverty research is children's time use. Research has shown that children's productive use of time in activities such as reading, studying, extracurricular activities, and volunteer work tends to contribute to successful development (Eccles & Barbers, 1998; Leone & Richards, 1989; Timmer, Eccles, & O'Brien, 1985). Further, the time that children spend with parents, siblings, peers, and relatives is indicative of the quality of the social support network surrounding children, and it relates importantly to children's achievement. Time use studies, when used to complement traditional statistical information such as demographics, parents' earnings and

employment, can provide an otherwise unavailable glimpse of children's organization of life and social connections across multiple contexts (Folbre, 1997).

Our study uses both time diary data and non-diary data to address two research questions: (1) Do children in low-income families spend less time with parents or in activities that are conducive to learning or in activities that are associated with behavior problems? (2) Do low-income working mothers have a lower level of involvement with children than nonworking low-income mothers?

### Literature Review

Results from existing research on maternal employment and children's well-being have yielded mostly negligible or positive effects (Belsky, 1990; Parcel & Menaghan, 1994; Perry-Jenkins et al., 2000), except for maternal employment during the very early stages of children's lives (Han, Waldfogel, & Brooks-Gunn, 2001; Rhum, 2004). Maternal employment is found to be associated with better maternal mental health (Hoffman & Yungblade, 1999). Much of this body of literature, however, has focused on middle-class two-parent families (Brooks-Gunn, Han, & Waldfogel, 2002; Harvey, 1999). Among low-income families, results from the literature range from no effect (Zaslow, McGroder, Cave, & Mariner, 1999) to a modest but overall positive effect of maternal employment on children's cognitive and social development (Moore & Driscoll, 1997; Vandell & Ramanan, 1992; Zaslow & Emig, 1997). Research examining parental work schedules shows that parents who work split shifts in order to reduce their paid child care costs sacrifice important time with one another (Kiser 2002; Presser 1994). Research investigating the processes and mechanisms through which maternal employment affects children's well-being is more limited.

This chapter examines how maternal employment affects parents' psychological well-being and parent-child interaction. Maternal employment is seen to have a direct impact on family income, parent's psychological well-being, and their parenting behavior. Based on a large body of literature (Conger, et al., 1992; Conger, Patterson, & Ge, 1995; McLoyd, 1990; McLoyd, Jayaratne, Ceballo, & Borquez, 1994), we hypothesize that a family's financial resources reduces economic pressure and parents' emotional stress, which in turn affects parenting behavior. Parents who have a healthy psychological well-being are more likely to be supportive of and involved with their children. We conceptualize parenting behavior broadly to include how parents structure their children's lives, parents' emotional support, as well as parents' involvement in their children's daily activities and in providing materials and experiences that are conducive to children's healthy development. These are important mechanisms identified in the literature through which income affects children's well-being (Demo & Cox, 2000; Guo & Harris, 2000; Mayer, 1997; Shonkoff & Phillips, 2000; Yeung, et al., 2002).

A study on children in some local Head Start programs indicated that increased parental work hours and earnings are associated with improved maternal mental health and reduced punitive parenting behavior (Raver, 2003). Other studies, however, found that unless employment leads to a reduction in financial strain, mothers tend to become less supportive of and less involved in their children's lives (Jackson, Brooks-Gunn, Huang, & Glassman, 2000). These studies are limited in their generalizability because of the selective samples used.

Family income may also have a direct impact on parenting behavior as the time parents spend caring for children carries an opportunity cost of both wages forgone and human capital accumulation forgone (Mincer & Polacheck, 1974). Hence, parental involvement with children, particularly in the quantity of time with a child, may be reduced as parents' earning power

increases. Studies by Hill and Stafford (1974) and Leibowitz (1974, 1977), however, indicate that mothers with high socioeconomic status spend significantly more time caring for their preschool children than do mothers with low socioeconomic status. A few recent studies also show that the substitution between income and time with children is on a more limited scope as a desire for interaction with children leads parents in families with high-income to spend more time with children during nonworking hours, particularly on weekends (Hallberg & Klevmarken 2003; Yeung & Stafford, 2003).

Spending time with children is an important way for parents to channel critical resources and values to children. Research in developmental psychology demonstrates that children of parents who provide a supportive environment and who spend direct time on important developmental activities have higher levels of cognitive skills and self-esteem (Eccles, Wigfield, & Schiefele, 1997; Maccoby & Martin, 1984). Recent research has also noted the potentially positive implications of family routines and rituals for children (Crouter & McHale, 2003; Fiese, et al., 2002). These studies find that adolescents who are in families that share dinner together several nights a week or that share certain holiday rituals tend to do well in school, to report lower levels of anxiety, and are less likely to engage in risky behavior.

Early sociological studies reveal that parents from different socioeconomic levels have different parenting practices (Kohn, 1969). Children's time use patterns reflect parents' values, resources, and constraints. More recent studies indicate that children of highly educated parents study and read more, watch TV less (Bianchi & Robinson, 1997; Yeung & Stafford, 2002), and participate in more organized activities (Hofferth & Sandberg, 2001; Lareau, 2002).

In summary, we propose that the key to understanding how parental employment affects children's well-being is through an analysis of how parents' employment affects their own

psychological well-being, which in turn affects how parents structure their children's lives and the extent to which they are involved in their children's various activities. We use the data collected from children's time diaries to examine parental involvement in children's activities. Our effort in this paper focuses only on how employment and income affect parents' psychological well-being and parenting behavior. In future work, we will examine how parents' psychological well-being and parenting behavior affect various measures of children's well-being. Details on the data used are described in the next section.

### Data and Measures

We examined these issues through the study of children's time diaries and stylized survey data collected in the Panel Study of Income Dynamics (PSID). The PSID has collected annual data on the socioeconomic characteristics of a nationally representative sample of about 5,000 families since 1968. In 1997, the PSID conducted a Child Development Supplement (PSID-CDS), which contains child development information for approximately 3,600 children aged 0 to 12 years in 1997.

#### *Children's Time Dairy Data*

Unique to this data set is the detailed information about children's daily activities, which was collected in a time diary format in the spring and the fall of 1997. Each family was asked to complete a diary for up to two children about what a child did, where the child was, who did the activity with the child, who was present but not involved, and what else the child was doing at that time. The diaries were collected for a random weekday and a random weekend day for each child<sup>1</sup>. From these diaries, researchers can construct children's activities over a week, and the role of caregiver, peers, kinship, and others in children's lives. The response rate for the time



diary data was about 80%. Approximately 60% of these diaries were completed by the mother of the target child alone, 12% were completed by the mother and the target child together, 6% were completed by the target child alone, 6% with the father present, and 12% were completed by someone else. We use all the diary data that are available for the analyses in this paper.

The validity of the time diary data has been assessed extensively in previous literature (Juster, 1985). This method is generally regarded as preferable to other methods of measuring time use in large samples. More traditional stylized questions that ask directly about the frequency and duration of time spent in various activities are affected by the pre-defined categorization of activities and possibly by systematic over- or under-estimation on the part of respondents of the actual time spent in those activities (Robinson, 1985; Stafford & Duncan, 1985). Time diaries have been found to be as accurate as, and possibly more accurate than, more expensive methods that assess time use sampled on a real-time basis. These include observationally based data and data from pager studies or Experience Sampling Methods (National Academy of Sciences, 2000). A schematic view and discussion of the coding system used for the PSID children's diaries and a detailed description of the codes is contained within the Child Development Supplement to the Panel Study of Income Dynamics Coding Manual available at the study website (<http://psidonline.isr.umich.edu/CDS/TDqnaires.html>).

We examined how much time children spent in schools, in day care, by themselves, and in various activities such as studying, reading, working on computers, watching TV, participating in arts or sports activities, sleeping, eating, doing housework, participating in religious activities, and in leisure activities. In addition, we examined time with parents, siblings, grandparents, other relatives, non-relatives, and friends.

#### *Non-diary Data on Parenting Behavior*

To supplement children's time diary data so that we could obtain a more complete picture of factors that affect parents' involvement in children's lives, we used other non-diary data such as parental involvement in various activities and parental monitoring behavior. Unfortunately, all of these involvement measures have been collected only for the primary caregiver of the target child, which is the mother in 95% of the cases. Therefore, our analysis is mostly limited to mother's behavior and well-being.

Parental monitoring behavior is assessed with an index based on the primary caregiver's knowledge of the child's close friends and with whom the child is when he or she is not at home. This index ranges from one to five, with five indicating the highest level of parental monitoring. Parental school involvement is measured by an index created from the average score of 11 items such as the frequency of volunteering in the child's school, observing the child's classroom, attending the child's school events, meeting with the child's teacher and principal, and attending Parent Teacher Organization (PTO) or other such meetings. These items are measured on a three-point scale, with one indicating not having done the school activity in the current school year and three indicating having done the school activity more than once in the current school year.

Two other measures of parental involvement were used. They are based on the HOME scale (The Home Observation for Measurement of the Environment-Short Form from the Caldwell and Bradley HOME Inventory, Caldwell & Bradley, 1984). This scale assesses the cognitive stimulation and emotional support parents provide to children. The items are age-specific. The emotional support subscale includes interviewer's observation of the interaction between the child and the primary caregiver regarding the affection, warmth, and emotional support from the parent as well as reports from the primary caregiver about how often the parent

spends time with the child, how close the child feels to the parents, and the parents' disciplinary approach. The subscale for cognitive stimulation is based on a number of measures including the amount of time parents spend with children in outdoor activities, meal-eating, and outings to museums, theaters, or libraries; whether the child has access to toys, CD players or recorders, newspapers and magazines, or other materials to help learn; whether older children are engaged in extracurricular activities or read for enjoyment. Both subscales for emotional support and cognitive stimulation range from 2 to 14. For more detailed information about these measures, see the User's Guide for the PSID-Child Development Supplement (Hofferth, Davis-Kean, Davis & Finkelstein, 1997).

### *Measures of Maternal Psychological Well-being*

Maternal emotional stress was assessed with the Composite International Diagnostic Interview (CIDI) (Kessler & Mroczek, 1994). Mothers responded to ten questions, all prefaced by the question, "During the past 30 days, how often did you. . . ?" Example response-items include, "Feel tired out for no good reason," "Feel depressed," "Feel nervous," and "Feel worthless." Responses were on a Likert scale ranging from zero (none of the time) to four (all of the time). An index was created by calculating the mean of all items (Cronbach's alpha was .90). This construct does not measure depression in a clinical sense, but rather mother's depressive affect or emotional distress. A second measure of maternal psychological well-being examined in this chapter is an index of parental aggravation, measured by the extent to which the parent agreed to the following statement (one equals not at all true and five equals completely true): "[The child] seems to be harder to care for than most children," "There are some things that the child does that really bother me a lot," "I find myself giving up more of my life to meet [the

child's] needs than I ever expected," "I often feel angry with [the child]," and "I would be doing better in my life without [the child]."

### Results: Descriptive Analyses

Using children's time diaries, we examined children's time spent with parents, family, and non-relatives, and their time allocated to various activities. We constructed children's weekly time based on diary data collected for a randomly chosen weekday and a weekend day by calculating the sum of weekday time multiplied by five and weekend time multiplied by two. Two levels of involvement are reported here, one accounts for only the time that a child is directly engaged with another person, the other includes the time that someone is available to the child but is not directly engaged with him or her in a certain activity. Following Lamb's convention (Lamb, Pleck, Charnov, & Levine, 1985), we refer to these two levels of involvement as "engaged time" and "accessible time." We compare the time use patterns for children across families at three poverty thresholds: (1) below the federal poverty level for the respective family size (\$16,036 for a family of four in 1996), (2) at or above the federal poverty level, but at or below twice the federal poverty level for the respective family size, and (3) above twice the federal poverty level for the respective family size. The first two groups are both considered low-income families in this work. Whereas the first group falls under the official poverty definition, the second group also faces great challenges in caring for children but has received less attention in the literature and in policy considerations. We will call these three groups "poor," "near-poor," and "non-poor" in subsequent sections.

Descriptive analyses reveal significant differences among income groups in both time allocated to various types of activities and in time children spend with kin and non-kin. We

present data for preschoolers (aged 0 to 5 years) and school-age children (aged 6 to 12 years) separately as children's time use differs substantially by children's ages.

*With Whom do Children Spend Their Time?*

Tables 1 and 2 show children's mean weekly hours spent with parents, step-parents, siblings, grandparents, other relatives, non-relatives, and friends for preschool age children and school-age children respectively. The top panel presents data for engaged time only while the bottom panel presents data for engaged and accessible time. The most striking differences revealed in these tables are in the time that children from different income groups spend with their biological fathers. On average, preschool children in the poor group spend about five hours per week engaged with their fathers. This figure triples for non-poor children, as they spend an average of 16 hours per week engaged with their fathers. Children from near-poor families spend about 14 hours per week with their fathers. This pattern is also exhibited in the time that fathers are not only engaged with, but accessible to, their children. Children under age six from poor families spend an average of about nine hours with their fathers either engaged with, or accessible to them. The corresponding level of time for non-poor families is about 28 hours.

[Insert Table 1 about here]

[Insert Table 2 about here]

While children's time spent with fathers varies significantly across the three income groups, children's time spent with mothers does not. On average, mothers of children under age six spend about 30 hours engaged with their child and about 52 to 55 hours if we include the time when mothers are accessible to, but not directly engaged with, their child. This is more than

twice the amount of time a child spends with his or her father, with the discrepancy particularly large for poor families as the majority of these families are single-mother families.

Tables 1 and 2 also reveal differences in the amount of time children spend with relatives, friends, and siblings. Children from poor or near-poor families spend significantly more time with relatives than do children from non-poor families. On average, children in the two lower income groups spend about eight hours per week directly engaged with grandparents and about seven hours per week directly engaged with other relatives, while children in non-poor families spend about two to three hours less per week with grandparents and with other relatives. When we include the time that these relatives are accessible to them, the differences become magnified, with those in the non-poor group spending about 9.5 hours less with grandparents and about 5.5 hours less with other relatives per week. These results suggest that grandparents and other relatives often serve as child care providers for parents who have scarce financial resources. A more detailed examination of the data reveals that this is particularly true for children under the age of two in poor or near-poor families who spend 8 to 10 hours per week directly engaged with a grandparent and 20 to 22 hours per week if we include the time a grandparent is accessible to them (data not presented). The implication of children's time with relatives and their well-being warrants future research. While children may benefit from the kin support network, research shows that the quality of child care by relatives, in-home babysitters, and other informal providers is not always highly rated (Kontos, Howes, Shinn, & Galinsky, 1995).

No statistically significant differences are found across groups in children's time spent with others. On average, children aged zero to five years spend 26 to 29 hours per week directly engaged with siblings, about five hours engaged with friends, and 16 to 19 hours engaged with other non-relatives.

When we look at the patterns for children aged 6 to 12 in Table 2, we see that, consistent with previous literature, parents' time involvement decreases as children become older. This is mainly due to a decrease in children's need for personal care as they spend substantially more time in school. Data show that children who live in poverty continue to have a much lower level of contact with fathers in middle childhood than those in non-poor families.

Mothers of older children spend about 15 to 18 hours directly engaged with their school-age child, 35 to 37 hours if we include the time that a mother is accessible to the child. As with younger children, there are no statistically significant differences among income groups in the amount of time mothers spend with their older children, though mothers who live in poverty spend about two hours less with each child than do non-poor or near-poor mothers. This pattern suggests that mothers who live in poverty, most of them single mothers, experience greater constraints in meeting their children's time needs or that their psychological well-being leads them to be less involved with their children. This is also supportive of some recent findings that parents with high incomes substitute market child care services for their own child care time only in a limited scope, i.e. they use high levels of child care services on weekdays but also spend a substantial amount of time with children themselves, especially on weekends (Hallberg & Klevmarken, 2003; Yeung & Stafford, 2003).

As to time with relatives, school-age children spend a substantially lower amount of time with grandparents than children under six - about two and a half hours of engaged time per week for those in poverty and those who are above two times the official federal poverty level, twice as high when counting the accessible time. However, children from near-poor families spend twice the amount of time with grandparents, perhaps indicative of a great number of working poor parents in this group who are in need of low-cost child care but who do not qualify for

government subsidies. As with children under age six, school-age children in the two low-income groups also spend more time with other relatives. They spend about seven hours per week directly engaged with or in the vicinity of other relatives, as compared to the three hours for 6 to 12-year-olds from non-poor families, reflecting a higher level of time children in non-poor families spend in formal after school care and extracurricular activities. These findings are consistent with recent ethnographic studies' findings that children in lower SES groups spend more time with their extended kin (Lareau, 2002). Older children in poverty spend significantly more time engaged with their siblings and less time with their friends than do children in non-poor families. Interestingly, this pattern is not exhibited for younger children.

Table 2 also shows that children in poverty spend more time alone than do those in non-poor families: 3.6 hours as opposed to 2.3 hours per week. The amount of time children are alone increases by children's age. Children aged ten or older from poor and near-poor families average five hours alone per week, while children aged ten or older from non-poor families average 3.7 hours alone per week (data not presented).

### *What Do Children Do?*

Tables 3 and 4 reveal that across the income groups, children's lives are structured quite differently as well. For children under six, those in non-poor families spend more time reading and working on computers. On average, younger children from upper-income families spend about 1.7 hours per week reading, whereas younger children in poverty spend about .73 hours per week reading. These differences are also observed for school-age children. Children under the age of six who live in poverty spend about 13 hours per week watching television, compared to 10 hours for children in non-poor families. The same pattern is exhibited for older children. Older children who live in poverty spend an average of 16 hours per week watching television,



whereas children in upper-income families spend an average of 12 hours per week watching television. These results suggest that we may be able to trace gaps in children's cognitive and developmental outcomes to children's differential experiences at a very early age.

[Insert Table 3 about here]

[Insert Table 4 about here]

Three differences between younger and older children stand out. They are a large increase in the amount of time older children spend in school, a modest increase in their studying time, and a decrease in their leisure time by about 50%. There are also significant differences across income groups in the amount of time children spend in school, in daycare, and in visiting others. Poor children under the age of six spend more time in school than do near-poor children. This may be due to Head Start, a federally-funded program which provides some preschool to young children from families that have an income level under the official poverty line. Older children from poor families similarly spend more time in school than do children from near-poor families. There are also significant differences among income groups in the amount of time children spend in daycare. Across ages, children from poor families spend less time in formal daycare than do children from the other two income groups, perhaps suggestive of parents from these families relying more on grandparents and other relatives for their daycare needs.<sup>2</sup>

We also note that school-age children spend about six to seven hours per week in arts and sports, with those in poverty spending about 5.8 hours and those in the non-poor group spending about 7.6 hours in these activities, or about a third of the time they spend watching TV. Another interesting difference is that children in non-poor families spend more time in household work and in shopping, averaging about 6 hours per week, compared to 3.8 hours for children in poor

families. No significant difference is found across income groups in sports, eating, personal care, and other leisure activities.

### *Low-income Families*

In the following sections, we provide a more detailed analysis of children from low-income families, defined in this paper as all children who reside in households with total family income under two times the official federal poverty line (both the poor and near-poor groups in previous tables). As children's time allocation may vary substantially by family structure and parents' work status, we examine children's circumstances separately for those in single-parent families and those in two-parent families (including both biological and step parents). For each type of family structure, we distinguish between working poor and nonworking poor families. We define working poor families as those that have a family income below two times the official federal poverty line and two parents who work the equivalent of a full-time job (40 hours or more per week) or a single parent who works at least 20 hours per week.<sup>4</sup> This group accounts for 62% of the single-mother low-income families and 73% of the two-parent low-income families.

Table 5 presents data for these low-income families. Comparing children from single-parent working poor families to children from single-parent nonworking poor families, we see that children in working poor families spend significantly less time with fathers, less time with both parents together, and less time with their friends, but more time with non-relatives, perhaps daycare providers or neighbors. They also spend two hours more per week watching TV and two hours less per week in sports and arts activities than do children from nonworking poor single-parent families. In addition, children in single-mother working poor families spend four hours more per week in daycare than do children from nonworking single-mother families. However,

the total weekly time that children are engaged with their mothers is at a similar level for children from both working poor and nonworking poor single-mother families. Although working poor single mothers spend on average about one hour less with their children than do nonworking single mothers, this difference is not significant.

[Insert Table 5 about here]

There is no significant difference in the monitoring behavior of working and nonworking poor single mothers. However, working poor single mothers are less involved in their children's school – they volunteer and make presentations in class and attend PTO meetings less often than do nonworking poor single mothers. They are also more likely to cite work schedule conflicts and day care problem as barriers for becoming involved in schools. About 69% of working poor single mothers, as opposed to 40% of nonworking single mothers, report that their work schedule has impeded their involvement in their children's school more than once over the past school year. There are also significant differences between working poor and nonworking poor single mothers' psychological well-being. Working poor single mothers report less aggravation over caring for their child, and report less emotional stress than nonworking poor single mothers.

When we compare the single mothers to two-parent low-income families, we see substantial discrepancies in the amount of time that children spend with their fathers, as well as the amount of time that children spend with both parents. Children from single parent homes spend about 1.5 to 2 hours per week with both parents, whereas children from two-parent homes spend about 8 to 10 hours more per week with both parents. Children in two-parent low-income families spend less time in daycare than do children in single-parent low-income families. Parents in two-parent low-income families also have higher school involvement, provide higher

emotional support and more stimulating interaction with their children, and report less emotional stress.

In the following, we provide a comparison between children from two-parent working poor families and children from two-parent nonworking poor families. Surprisingly, we find that children from working poor two-parent families spend more time with both their mother and their father than do children from nonworking poor two-parent families. It is unclear why this is the case. It is possible that working poor families value time with children more and make a special effort to spend more time with children during nonworking hours. However, it is also possible that the difference is a function of small sample sizes in these groups. With a response rate of 80%, we only have about 90 children in two-parent nonworking poor families in our sample. Children from working poor two-parent families spend about twice as much time with grandparents than do children from nonworking poor two-parent families (six hours as opposed to three hours per week). There is no significant difference in children's allocation of time to various activities between two-parent working and nonworking poor families. Parents in nonworking poor two-parent families are more involved in their children's school than are parents in working poor two-parent families, with a larger proportion of mothers in two-parent working poor families reporting that work schedule is a barrier for becoming involved in school in the past year. When we examine the psychological well-being of mothers, again we see that those in working poor families report significantly less emotional stress than do those in nonworking poor two-parent families.

In summary, the descriptive statistics suggest substantial differences by family structure within low-income families, particularly in relation to the amount of time that children spend with their fathers and in daycare. Within each family type, working poor mothers are less

involved in their children's school, though they are not less involved in monitoring their children's behavior or in spending time with their children. Mothers in working poor families also seem to have better psychological well-being and provide more emotional support to their children.

### Results: Multivariate Analysis

In this section, we report results from multivariate analyses aimed at furthering our understanding of the relationship between parental employment and mother's involvement with children. Employment and family income data are measured for the year prior to the Child Development Supplement: 1996. We measure weekly work hours as both a continuous variable and as a categorical variable. As results suggest that a nonlinear relationship exists, we present findings from the models with categorical work hour variables. We also include a variable indicating whether the family is a working poor family or not. We experimented with different definitions of "working poor" with three cutoffs of the official poverty line: under 1, under 1.5, and under 2. As results are similar with these three different measures, we present the version with a cutoff of twice the poverty line to be consistent with our descriptive analyses presented earlier. Our income measure is the total pre-tax income of all family members, inflated to 1997 price levels using the Consumer Price Index (CPI-UX1). We used a logarithmic transformation of family income in our multivariate analysis.

Our dependent variables include six measures: maternal psychological well-being, child's weekly engaged time with the mother, mother's provisioning of stimulating interactions, mother's provisioning of emotional support, mother's school involvement index, and mother's monitoring behavior index. We conduct Tobit analysis for the model of child's weekly engaged time with the mother, and Ordinary Least Squares (OLS) regression for models with the other

dependent variables. One limitation of the PSID data is that maternal psychological well-being is assessed at the same time as the collection of time diary data and other parenting behavior measures. These contemporaneous measures make it impossible to establish their causal relationship.

An important consideration is the extent to which selection effects (or omitted variables) obscure the relationship between maternal work and the processes through which employment affects children's well-being. In other words, there may be unobservable factors that lead parents to be employed in the labor market and to be more involved in childrearing. We address this issue in a limited way given that we only have one wave of Child Development Supplement data. A set of child and family characteristics is included in the analyses as control variables. Children's characteristics included in the model are age, gender, and whether the child was born with a low birth weight. Mother's characteristics include education, her verbal test score that approximates her IQ (after controlling for her education), and whether or not she has received AFDC at the time of the child's birth to capture her past economic well-being. These factors may potentially select mothers into different patterns of labor force participation and may also affect their parenting practices. Several other family characteristics are also controlled for – total family wealth collected in 1994<sup>5</sup>, the number of children under age 18 in the family, ethnicity of the family head, and family structure in 1997 categorized as two-parent families, single-mother families, mother with stepfather families, and other family structures.

We include families at all income levels in the analyses. Table 6 presents results for the entire sample with family structure variables as predictors in the models. Tables 7 and 8 present results for single-mother families and two-parent families separately. Table 6 shows that, controlling for child and a set of family characteristics, parents' work hours (combined work

hours for two-parent families) have no effect on maternal emotional stress level and little effect on parental involvement, except that those who work 41 to 60 hours a week are significantly more likely to provide stimulating interaction to children and those who work 20 to 40 hours a week are significantly less likely to be involved in children's schools when compared to families with combined work hours of less than 20 hours a week. However, working poor status is associated with less stimulating parent-child interaction. Family income is negatively associated with mother's emotional stress, but also negatively associated with both mother-child engagement time and the monitoring behavior index. High maternal emotional stress is significantly associated with four of the five parental involvement measures: less stimulating interaction, less emotional support, less school involvement, and less monitoring. Factors other than employment, however, are important predictors of maternal emotional stress. Mothers with a higher educational level have a lower level of emotional stress and black mothers have significantly higher emotional stress when compared to white mothers.

Family structure variables are also significantly associated with most of the parental involvement measures. Single mothers and mothers in stepfather families have higher levels of emotional stress than do those in two-parent families. Single mothers also provide less emotional support, are less involved in their children's school and in monitoring their children's daily activities. There are other variables that are significantly associated with mother's involvement with their child. Other than child's age and gender, human capital variables (education and verbal test scores) are positively associated with the provisioning of stimulating interaction, emotional support, the level of school involvement, and parental monitoring behavior. When compared to white mothers, black mothers provides less stimulating interaction, less emotional support, and are less involved in monitoring child's behavior.

[Insert Table 6 about here]

Table 7 shows similar results for single-mother families. Mother's work hours have no effect on her psychological well-being and most involvement levels, except for a negative effect of school involvement for those who work 35 hours or more a week. Working poor status has a marginally significant negative association with mother's provisioning of stimulating interaction to child. Mothers with a higher income have lower emotional stress, but spend less time engaged with their child and are less involved in monitoring their child's whereabouts and friends.

[Insert Table 7 about here]

In Table 8, we see that the amount of time mothers spend at work is negatively associated with the amount of time mothers engage with their children and with their children's schools. The working poor status is again negatively associated with stimulating parent-child interaction, and marginally associated with parental monitoring behavior. Family income has little effect on maternal involvement, except for a marginally positive effect on emotional support. We also see that maternal emotional stress is negatively associated with most of the involvement measures.

[Insert Table 8 about here]

## Discussion

In this initial exploration of children's time use and parental involvement in low-income families, we find two marked differences between children from low-income families and children from upper-income families, both of which most likely affect their overall well-being. First, we find that children from low-income families have substantially lower levels of involvement with their fathers and substantially higher levels of involvement with other kin, such as grandparents and other relatives. While research on the positive effect of father's involvement is more readily available (Harris & Mariner, 1996; Lamb, 1997; Marsiglio, Armato, Day, &



Lamb, 2000; Popenoe, 1996; Snarey, 1993; Yeung, Duncan, & Hill, 2000; Yeung, 2004), children's involvement with relatives and the consequences to their well-being warrant more investigation in the future. Second, we find that school-age children from low-income families spend less time studying, reading, or in computer activities, and more time watching TV. These activities have been shown to have salient implication for children's school performance.

Our multivariate analyses provide little evidence that an increase in mothers' work hours compromises their involvement with their children, or lead to higher levels of emotional stress. Several previous studies also show that women's increased labor force participation has not affected the amount of time that they spend with their children (Bianchi, 2000; Bianchi, Milkie, Sayer, & Robinson, 2000; Booth, Clarke-Stewart, Vandell, McCartney, & Tresch, 2002; Chase-Lansdale, et al., 2003). Working mothers may find ways to remain involved in their children's lives by cutting back on sleep, housework, and leisure activities, or by engaging more intensively in selective activities that are conducive to child development during nonworking time such as on weekends. Our multivariate analyses do indicate lower levels of involvement in children's schools if children are from single mother full-time working families, or if children are from two-parent families where parents work more than 60 hours combined per week. A higher income is also associated with a lower level of maternal emotional stress, particularly for single-mothers, though it also has a negative association with two of the five parental involvement measures.

When we compare working poor and nonworking poor families, there is little evidence that working poor mothers are more emotionally stressed or less involved with their children. Working poor status is significantly associated with only one of the parental involvement measures--the provisioning of stimulating interaction to their child, but not with the other four

child-involvement measures. Working poor single-mothers, in particular, tend to be less involved in their children's school and more often cite their work schedule as a barrier for becoming involved in their children's school. Children in working poor families do spend significantly more time in daycare than do those in nonworking poor families, especially those in working poor single-mother families. Our results indicate a crucial need for policies attending to the quality of daycare for children and allowing more flexibility for parents to participate in school activities in working poor families. Making some current programs, such as Head Start, accessible to families with working parents that do not live under the official federal poverty line but near that line would benefit both parents and children.

Maternal emotional stress is a critical factor in mothers' involvement behavior. Our results, however, indicate that factors other than employment have a stronger effect on maternal psychological well-being and involvement with children. Family income, mother's education, family structure, and ethnicity are significant predictors of maternal psychological well-being. More educated mothers tend to be less emotionally stressed and more involved with their children. Single mothers in general are more stressed and less involved with their children. However, working poor single mothers are less stressed and not less involved with their children, except for school involvement, than nonworking single mothers. Hence, the critical policy considerations for low-income families should focus less on mothers' work hours, and more on increasing the human capital of low-income parents, providing adequate child care and flexible work hours to low-income parents, and providing adequate wages, particularly to single working poor mothers. The lack of time for low-income working parents to be involved in schools is a serious cause of concern.

Our data do not allow us to examine the impact of parental work shifts, which are an important consideration for low-income families. In future work, we will construct better maternal work histories and incorporate maternal occupational status to examine in greater detail how maternal employment in low-income families affects their psychological well-being, family time use, and children's well-being.

## Notes

<sup>1</sup> There may be potential confusion in the time diary reports of school time and daycare time so that these data may not be the most reliable source of data on children's time in these institutions.

<sup>2</sup> Acs, Ross-Phillips, and McKenzie (2000) used 200% of the federal poverty line and half-time employment as a cut off. In defining working poor families, we also attempted different cut-off points of poverty levels including under 100% and under 150% as used by Wertheimer (1999). Due to sample size constraint, we decided to include in our analyses families that are under 200% of the federal poverty level.

<sup>3</sup> We used the PSID data collected in 1994 about the value of owner occupied real estate, real estate other than main home, vehicles or other assets on wheels, farm or business assets, shares of stock in publicly held corporations, mutual funds or investment trusts, including stocks in IRAs, checking and savings accounts, money market funds, certificates of deposit, savings bonds, treasury bills, and other investments in trusts or estates, bond funds, life insurance policies, special collections. Family wealth is measured as the sum of all above items minus the value of debts other than mortgages, such as credit cards, student loans, medical or legal bills, or personal loans. We use a logarithmic transformation of family wealth in the multivariate analysis.

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**Table 1: Time Children Aged 0-5 Spend with Others, by Income Group**

| <b>Total Weekly Engagement Hours (mean)</b> | <b>Income Group</b> |                    |                    |
|---|---------------------|--------------------|--------------------|
|   | <b>Poor</b>         | <b>Near-poor</b>   | <b>Non-poor</b>    |
| Mother                                      | 29.64               | 33.56              | 30.92              |
| Father                                      | 5.01 <sup>bc</sup>  | 14.03 <sup>a</sup> | 16.27 <sup>a</sup> |
| Stepmom                                     | 0.13                | 0.12               | 0.03               |
| Stepdad                                     | 0.28                | 0.40               | 0.14               |
| Siblings (biological or step)               | 29.27               | 28.28              | 26.43              |
| Grandparents                                | 7.87                | 8.08 <sup>c</sup>  | 5.57 <sup>b</sup>  |
| Other relatives                             | 6.67 <sup>c</sup>   | 6.85 <sup>c</sup>  | 4.03 <sup>ab</sup> |
| Other non-relatives                         | 16.36               | 17.42              | 19.41              |
| Friends                                     | 5.40                | 3.69               | 5.35               |
| Number of Observations                      | 213                 | 202                | 803                |

| <b>Total Weekly Engagement + Accessible Hours (mean)</b> | <b>Income Group</b> |                     |                     |
|--|---------------------|---------------------|---------------------|
|  | <b>Poor</b>         | <b>Near-poor</b>    | <b>Non-poor</b>     |
| Mother   | 52.91               | 55.35               | 51.97               |
| Father   | 8.89 <sup>bc</sup>  | 20.43 <sup>ac</sup> | 28.45 <sup>ab</sup> |
| Stepmom  | 0.22                | 0.15                | 0.06                |
| Stepdad  | 0.56                | 0.57                | 0.26                |
| Siblings (biological or step)                            | 43.10               | 38.55               | 39.97               |
| Grandparents   | 19.36 <sup>c</sup>  | 17.51 <sup>c</sup>  | 10.02 <sup>ab</sup> |
| Other relatives  | 12.40 <sup>c</sup>  | 12.96 <sup>c</sup>  | 7.08 <sup>ab</sup>  |
| Other non-relatives                                      | 36.72               | 34.88               | 40.52               |
| Friends  | 6.68                | 4.44                | 6.41                |
| Alone  | 0.34                | 0.29                | 0.47                |
| Number of Observations                                   | 213                 | 202                 | 803                 |

<sup>a</sup>Significantly different from mean of poor group at .05 level

<sup>b</sup>Significantly different from mean of near-poor group at .05 level

<sup>c</sup>Significantly different from mean of non-poor group at .05 level

**Table 2: Time Children Aged 6-12 Spend with Others, by Income Group**

| <b>Total Weekly Engagement Hours (mean)</b> | <b>Income Group</b> |                    |                     |
|---|---------------------|--------------------|---------------------|
|   | <b>Poor</b>         | <b>Near-poor</b>   | <b>Non-poor</b>     |
| Mother                                      | 15.49               | 17.74              | 17.82               |
| Father                                      | 5.19 <sup>bc</sup>  | 7.83 <sup>ac</sup> | 11.70 <sup>ac</sup> |
| Stepmom                                     | 0.00                | 0.14               | 0.06                |
| Stepdad                                     | 0.07                | 0.27               | 0.34                |
| Siblings (biological or step)               | 29.02 <sup>c</sup>  | 28.01              | 24.47 <sup>a</sup>  |
| Grandparents                                | 2.21 <sup>b</sup>   | 4.14 <sup>ac</sup> | 2.24 <sup>ac</sup>  |
| Other relatives                             | 6.59 <sup>bc</sup>  | 6.79 <sup>a</sup>  | 3.00 <sup>a</sup>   |
| Other non-relatives                         | 37.93               | 35.52 <sup>c</sup> | 38.99 <sup>b</sup>  |
| Friends                                     | 7.47 <sup>bc</sup>  | 11.90 <sup>a</sup> | 13.05 <sup>a</sup>  |
| Number of Observations                      | 242                 | 240                | 881                 |

| <b>Total Weekly Engagement + Accessible Hours (mean)</b> | <b>Income Group</b> |                     |                     |
|--|---------------------|---------------------|---------------------|
|  | <b>Poor</b>         | <b>Near-poor</b>    | <b>Non-poor</b>     |
| Mother   | 34.46               | 36.37               | 37.00               |
| Father   | 8.88 <sup>bc</sup>  | 14.54 <sup>ab</sup> | 23.52 <sup>ac</sup> |
| Stepmom  | 0.04                | 0.33                | 0.09                |
| Stepdad  | 0.26                | 0.53                | 0.68                |
| Siblings (biological or step)                            | 40.75               | 42.02 <sup>c</sup>  | 37.05 <sup>b</sup>  |
| Grandparents   | 4.65 <sup>b</sup>   | 9.29 <sup>ac</sup>  | 4.05 <sup>b</sup>   |
| Other relatives  | 9.70 <sup>c</sup>   | 10.67 <sup>c</sup>  | 4.76 <sup>ab</sup>  |
| Other non-relatives                                      | 74.65               | 68.69 <sup>c</sup>  | 79.41 <sup>b</sup>  |
| Friends  | 9.38 <sup>bc</sup>  | 13.90 <sup>a</sup>  | 14.69 <sup>a</sup>  |
| Alone  | 3.60 <sup>c</sup>   | 2.83                | 2.29 <sup>a</sup>   |
| Number of Observations                                   | 242                 | 240                 | 881                 |

<sup>a</sup>Significantly different from mean of poor group at .05 level

<sup>b</sup>Significantly different from mean of near-poor group at .05 level

<sup>c</sup>Significantly different from mean of non-poor group at .05 level

**Table 3: Time Allocated to Various Activities for Children Aged 0 to 5, by Income Group**

| Total Weekly Hours on Activities (mean) | Income Group       |                    |                    |
|---|--------------------|--------------------|--------------------|
|   | Poor               | Near-poor          | Non-poor           |
| Studying                                | 0.31               | 0.43               | 0.28               |
| Reading                                 | 0.73 <sup>c</sup>  | 0.80 <sup>c</sup>  | 1.66 <sup>ab</sup> |
| Computer                                | 0.03 <sup>c</sup>  | 0.28               | 0.52 <sup>a</sup>  |
| TV                                      | 13.03 <sup>c</sup> | 13.66 <sup>c</sup> | 9.69 <sup>ab</sup> |
| Art                                     | 1.56 <sup>bc</sup> | 0.21 <sup>ac</sup> | 0.89 <sup>ab</sup> |
| Sports                                  | 2.86               | 3.02               | 3.46               |
| School                                  | 9.05 <sup>b</sup>  | 4.45 <sup>a</sup>  | 6.6                |
| Daycare                                 | 5.79 <sup>bc</sup> | 10.82 <sup>a</sup> | 9.91 <sup>a</sup>  |
| Sleep                                   | 82.23              | 81.16              | 80.42              |
| Conversation                            | 0.96               | 0.68               | 1.06               |
| Eating                                  | 11.11              | 10.17              | 10.33              |
| Household work & shopping               | 3.88 <sup>c</sup>  | 4.61               | 5.81 <sup>a</sup>  |
| Market work                             | 0.01               | 0.01               | 0                  |
| Religious Activities                    | 0.29 <sup>bc</sup> | 0.96 <sup>a</sup>  | 0.88 <sup>a</sup>  |
| Other Leisure                           | 22.76              | 22.43              | 24.34              |
| Personal Care                           | 9.33               | 9.1                | 8.75               |
| Visiting                                | 2.34 <sup>b</sup>  | 4.43 <sup>ac</sup> | 2.66 <sup>b</sup>  |
| Number of Observations                  | 213                | 202                | 803                |

<sup>a</sup>Significantly different from mean of poor group at .05 level

<sup>b</sup>Significantly different from mean of near-poor group at .05 level

<sup>c</sup>Significantly different from mean of non-poor group at .05 level

**Table 4: Time Allocated to Various Activities for Children Aged 6 to 12, by Income Group**

| Total Weekly Hours on Activities (mean) | Income Group       |                    |                     |
|---|--------------------|--------------------|---------------------|
|   | Poor               | Near-poor          | Non-poor            |
| Studying                                | 2.82               | 2.01 <sup>c</sup>  | 2.96 <sup>b</sup>   |
| Reading                                 | 1.03               | 0.60 <sup>c</sup>  | 1.33 <sup>b</sup>   |
| Computer                                | 0.18 <sup>c</sup>  | 0.73               | 1.10 <sup>a</sup>   |
| TV                                      | 16.30 <sup>c</sup> | 14.69 <sup>c</sup> | 12.05 <sup>ab</sup> |
| Art                                     | 0.62               | 0.76               | 0.98                |
| Sports                                  | 5.16               | 6.48               | 6.58                |
| School                                  | 35.24 <sup>b</sup> | 30.64 <sup>a</sup> | 32.96               |
| Daycare                                 | 0.43 <sup>c</sup>  | 0.40 <sup>c</sup>  | 1.35 <sup>ab</sup>  |
| Sleep                                   | 70.06 <sup>c</sup> | 69.75              | 68.19 <sup>a</sup>  |
| Conversation                            | 0.32               | 0.37               | 0.52                |
| Eating                                  | 7.58               | 7.45               | 7.6                 |
| Household work & shopping               | 3.80 <sup>c</sup>  | 5.08               | 5.81 <sup>a</sup>   |
| Market work                             | 0.15               | 0.32               | 0.24                |
| Religious Activities                    | 1.13               | 1.34               | 1.47                |
| Other Leisure                           | 11.78              | 13.82              | 13.36               |
| Personal Care                           | 7.99               | 8                  | 7.93                |
| Visiting                                | 2.42 <sup>c</sup>  | 3.82               | 3.72 <sup>a</sup>   |
| Number of Observations                  | 242                | 280                | 881                 |

<sup>a</sup>Significantly different from mean of poor group at .05 level

<sup>b</sup>Significantly different from mean of near-poor poverty group at .05 level

<sup>c</sup>Significantly different from mean of non-poor group at .05 level



**Table 5: Children's Time Use and Parental Involvement for Children who Reside in Low-Income Households (poor and near-poor)**

|   | <b>Single-mother families</b> |                        | <b>Two-parent families</b> |                        |
|---|-------------------------------|------------------------|----------------------------|------------------------|
|   | <b>Working Poor</b>           | <b>Nonworking poor</b> | <b>Working Poor</b>        | <b>Nonworking poor</b> |
|   | (n=369)                       | (n=229)                | (n=319)                    | (n=119)                |
| <b><u>Children's Weekly Time With Others (in hours)</u></b> |                               |                        |                            |                        |
| Time engaged with mother                                    | 22.5                          | 23.4                   | 27.01*                     | 22.51*                 |
| Time engaged with father                                    | 2.03*                         | 3.7*                   | 15.25*                     | 10.41*                 |
| Time engaged with both parents                              | 1.28+                         | 2.05+                  | 10.67+                     | 8.21+                  |
| Time engaged with siblings                                  | 29.36                         | 25.7                   | 29.03                      | 29.6                   |
| Time engaged with friends                                   | 7.32                          | 10.12                  | 7.27                       | 5.13                   |
| Time engaged with grandparent(s)                            | 3.95                          | 5.8                    | 5.52*                      | 3.06*                  |
| Time engaged with other relatives                           | 6.65                          | 6.16                   | 5.97                       | 7.58                   |
| Time engaged with other non-relatives                       | 33.29*                        | 27.91*                 | 23.93*                     | 30.53*                 |
| <b><u>Children's Weekly Time in Various Activities</u></b>  |                               |                        |                            |                        |
| achievement-related (studying & reading)                    | 2.22                          | 2.3                    | 2.39                       | 3.18                   |
| watching TV   | 15.66                         | 13.68                  | 13.03                      | 13.91                  |
| arts, sport, and music                                      | 5.06*                         | 7.10*                  | 4.89                       | 4.68                   |
| Other leisure activities                                    | 16.57                         | 14                     | 18.66                      | 18.71                  |
| in day care   | 6.14*                         | 2.51*                  | 3.18                       | 1.28                   |
| <b><u>Non Time Diary Involvement Measures</u></b>           |                               |                        |                            |                        |
| PCG monitoring/supervision behavior (1=low, 5=high)         | 3.77                          | 3.85                   | 4.05                       | 3.95                   |
| % PCG volunteered in school more than once                  | 10.26*                        | 14.72*                 | 19.17*                     | 28.22*                 |
| % PCG attend PTA and like meetings more than once           | 13.65*                        | 31.6*                  | 23.01                      | 31.41                  |
| Emotional support index (2-14)                              | 8.01*                         | 7.71*                  | 10                         | 9.4                    |
| Providing stimulating interaction (2-14)                    | 8.52                          | 9.06                   | 9.5                        | 9.8                    |
| <b><u>Barriers for School Involvement</u></b>               |                               |                        |                            |                        |
| % work schedule a barrier more than once                    | 0.69*                         | 0.40*                  | 0.46*                      | 0.29*                  |
| % day care a barrier more than once                         | 0.15*                         | 0.03*                  | 0.05*                      | 0.13*                  |
| <b><u>PCG Psychological Well-being</u></b>                  |                               |                        |                            |                        |
| parental aggravation (4-25)                                 | 8.60*                         | 9.90*                  | 8.16                       | 8.93                   |
| Primary caregiver emotional stress (0-4)                    | 0.78+                         | 0.91+                  | 0.56*                      | 0.81*                  |

\* group means significantly different at .05 level

+ group means significantly differently at .10 level

**Table 6: Estimates for Parental Involvement in All Families**

|   | emotional<br>stress | time with<br>mother<br>(marginal<br>effects) | stimulating<br>interaction | emotional<br>support | school<br>involvement | monitoring<br>behavior |
|---|---------------------|--|----------------------------|----------------------|-----------------------|------------------------|
| Combined weekly work hours of<br>parents: |                     |  |                            |                      |                       |                        |
| 20-40                                     | 0.00                | -0.97  | 0.28                       | 0.19                 | -0.27+                | 0.07                   |
| 41-60                                     | 0.05                | 0.06   | 0.67*                      | 0.28                 | -0.16                 | 0.02                   |
| 60 & more                                 | 0.01                | -1.22  | 0.41                       | 0.30                 | -0.42*                | 0.01                   |
| Log family income                         | -0.05*              | -.75*  | -0.01                      | 0.03                 | -0.02                 | -0.05**                |
| whether working poor                      | 0.04                | -0.57  | -0.64***                   | -0.08                | 0.10                  | -0.11                  |
| PCG emotional stress                      | n.a.                | -0.73  | -0.23**                    | -0.32***             | -0.11+                | -0.10***               |
| Child's age                               | 0.00                | -1.54***                                     | 0.15***                    | 0.41***              | -0.02                 | -0.02**                |
| whether girl                              | 0.06*               | 2.61***                                      | 0.12                       | 0.07                 | -0.1+                 | 0.05+                  |
| whether low birth weight                  | 0.08                | -1.20  | 0.16                       | -0.11                | -0.08                 | -0.05                  |
| Black                                     | -0.12*              | -0.90  | -0.49***                   | -0.53***             | -0.03                 | -0.17***               |
| Hispanic                                  | -0.07               | 1.74   | -0.82+                     | 0.31                 | 0.89                  | -0.02                  |
| Log family wealth                         | -0.01               | 0.10   | 0.02                       | 0.00                 | 0.01                  | 0.00                   |
| parental education                        | -0.02*              | 0.18   | 0.19***                    | 0.08***              | 0.07***               | 0.01                   |
| PCG verbal test scores                    | -0.01+              | -0.03  | 0.05***                    | 0.02*                | 0.00                  | 0.02***                |
| received AFDC when child born             | 0.06                | -0.80  | 0.05                       | 0.30*                | 0.04                  | 0.00                   |
| number of children                        | 0.01                | -1.59***                                     | -0.08+                     | 0.04                 | 0.00                  | 0.01                   |
| single-mother family                      | 0.19**              | -1.72  | 0.17                       | -1.40***             | -0.32***              | -0.14*                 |
| mother-stepfather family                  | 0.16*               | -2.27*                                       | -0.05                      | 0.23                 | -0.18                 | -0.17*                 |
| other family structure                    | -0.05               | -15.01***                                    | 0.08                       | -0.57**              | -0.04***              | -0.18*                 |
| whether in metropolitan                   | 0.04                | 0.23   | 0.01                       | -0.08                | -0.03                 | -0.05                  |
| _constant                                 | 1.65                |  | 4.77                       | 5.35                 | 1.91                  | 4.26                   |
| R-squared/Wald chi-2                      | 0.10                | 550***                                       | 0.24                       | 0.64                 | 0.08                  | 0.11                   |

\*\*\* significant at .001 level; \*\* significant at .01 level; \* significant at .05 level; + significant at .10 level

**Table 7: Estimates for Parental Involvement in Single-mother Families**

|                               | emotional<br>stress | time with<br>mother<br>(marginal<br>effects) | stimulating<br>interaction | emotional<br>support | school<br>involvement | monitoring<br>behavior |
|-------------------------------|---------------------|--|----------------------------|----------------------|-----------------------|------------------------|
| Parent's weekly work hours    |                     |  |                            |                      |                       |                        |
| 1-34 hours                    | -0.07               | -1.66  | -0.27                      | 0.02                 | -0.09                 | 0.04                   |
| 35 hours or more              | 0.08                | 0.61   | -0.31                      | 0.03                 | -.36*                 | -0.03                  |
| whether working poor          | 0.13                | 1.44   | -.51+                      | -0.10                | -0.01                 | -0.03                  |
| Log family income             | -0.09**             | -.77*  | -0.02                      | -0.04                | -0.03                 | -0.06**                |
| PCG emotional stress          | n.a.                | 0.21   | -0.10                      | -0.29**              | -0.04                 | -0.06                  |
| Child's age                   | -0.02               | -1.55***                                     | 0.08**                     | 0.29***              | 0.00                  | -0.05***               |
| whether girl                  | 0.11                | 2.84**                                       | 0.41*                      | 0.20                 | -0.22*                | 0.03                   |
| whether low birth weight      | 0.05                | -4.25*                                       | 0.35                       | 0.09                 | -0.08                 | 0.02                   |
| Black                         | -0.21+              | 0.15   | -0.83**                    | -0.77***             | 0.14                  | -0.22*                 |
| Hispanic                      | -0.20               | -4.07  | -2.05*                     | -0.59                | -0.30**               | 0.03                   |
| Log family wealth             | 0.00                | 0.12   | 0.01                       | -0.02                | 0.01                  | 0.00                   |
| parental education            | -0.04               | -0.13  | 0.20***                    | 0.05                 | 0.06**                | 0.02                   |
| PCG verbal test scores        | -0.02+              | -0.05  | 0.08*                      | 0.03*                | -0.01*                | 0.02*                  |
| received AFDC when child born | -0.01               | 2.24   | 0.17                       | 0.21                 | 0.02                  | -0.01                  |
| number of children            | 0.02                | -1.61*                                       | -0.19*                     | -0.08                | -0.03                 | -0.03                  |
| whether in metropolitan       | -0.07               | 1.69   | -0.46*                     | 0.07                 | 0.07                  | -0.13                  |
| _constant                     | 2.83                |  | 5.12                       | 5.92                 | 1.85                  | 4.45                   |
| R-squared/Loglikelihood       | 0.088               |  | 0.218                      | 0.488                | 0.097                 | 0.113                  |

\*\*\* significant at .001 level; \*\* significant at .01 level; \* significant at .05 level; + significant at .10 level

**Table 8: Estimates for Parental Involvement in Two-parent Families**

|                               | emotional<br>stress | time with<br>mother<br>(marginal<br>effects) | stimulating<br>interaction | emotional<br>support | school<br>involvement | monitoring<br>behavior |
|-------------------------------|---------------------|--|----------------------------|----------------------|-----------------------|------------------------|
| Parental weekly work hours    |                     |  |                            |                      |                       |                        |
| head work hours               | 0.00                | -0.01  | 0.00                       | 0.00                 | 0.00                  | 0.00                   |
| wife work hours               | 0.00                | -.08***                                      | 0.00                       | 0.00                 | -0.01*                | -0.00+                 |
| whether working poor          | -0.02               | 1.52   | -0.68**                    | 0.04                 | 0.14                  | -0.16+                 |
| Log family income             | -0.03               | -0.29  | -0.02                      | 0.11+                | 0.01                  | -0.01                  |
| PCG emotional stress          | n.a.                | -2.56***                                     | -0.49***                   | -0.36***             | -0.13                 | -0.17***               |
| Child's age                   | 0.01                | -1.55***                                     | 0.17***                    | 0.44***              | -0.04*                | -0.01                  |
| whether girl                  | 0.03                | 2.05**                                       | 0.14                       | 0.07                 | -0.07                 | 0.07                   |
| whether low birth weight      | 0.10                | 0.12   | 0.05                       | -0.23                | -0.03                 | -0.10                  |
| Black                         | -0.07               | -1.17  | -0.56***                   | -0.51***             | -0.02                 | -0.17***               |
| Hispanic                      | -0.04               | 3.86   | -0.60                      | 0.90*                | 0.26                  | -0.07                  |
| Log family wealth             | -0.01               | 0.085  | 0.03                       | 0.02                 | 0.00                  | 0.00                   |
| parental education            | -0.03*              | 0.093  | 0.23***                    | 0.10***              | 0.05*                 | 0.01*                  |
| PCG verbal test scores        | 0.00                | 0.039  | 0.02                       | 0.01                 | 0.01                  | 0.01**                 |
| received AFDC when child born | 0.18+               | -3.23  | -0.52                      | 0.18                 | -0.13                 | -0.23                  |
| number of children            | 0.00                | -2.34***                                     | -0.01                      | 0.10                 | 0.03                  | 0.04+                  |
| whether in metropolitan       | 0.05                | -0.54  | 0.18                       | -0.08                | -0.06                 | 0.00                   |
| _constant                     | 1.36                |  | 5.36                       | 4.56                 | 1.31                  | 3.98                   |
| R-squared/Wald chi-2          | 0.06                | 341.03***                                    | 0.22                       | 0.62                 | 0.06                  | 0.12                   |

\*\*\* significant at .001 level; \*\* significant at .01 level; \* significant at .05 level; + significant at .10 level