Child Care Subsidies, Welfare Policies, and Child Development among School-Age Children

Kathryn Hynes & Kaylin Greene

118 South Henderson Building
Pennsylvania State University
University Park, PA 16802
kbh13@psu.edu

April 2010

This is a working paper, not for dissemination without the first author's permission

This paper was prepared for presentation at the Population Association of American annual meetings, Dallas, TX. Special thanks to Elizabeth Peters for helpful comments on earlier versions of this paper.

Child Care Subsidies, Welfare Policies, and Child Development among School-Age Children

Kathryn Hynes & Kaylin Greene
Pennsylvania State University

Abstract

During the late 1990s states made changes to their welfare policies and significantly expanded their expenditures on child care subsidies. Little research in this area has focused specifically on the impacts of these combined changes in child care expenditures and welfare policies on families with school-age children. This study fills a gap in the literature by using the National Survey of America's Families to examine the role of child care subsidy expenditures and welfare policies in maternal employment, self-care, aggravation in parenting, and children's behavior problems among single-parent families with school-age children. We do not find a strong association between child care expenditures and the work behavior of single mothers with school-age children, but more generous child care expenditures may reduce children's exposure to self-care. We find a positive association between strict welfare policies and parents' feelings of aggravation with parenting. Finally, our results about the association between subsidy expenditures, welfare policies, and child development are not robust across models, but where effects are observed they suggest that states' changes toward stricter welfare policies and more generous child care spending may be negatively associated with school-age children's behavior. Further research into the effects of child care subsidies on children's development is warranted to ensure that child care policies are designed in ways that support both employment and healthy child development.

Child Care Subsidies, Welfare Policies, and Child Development among School-Age Children

During the last decade of the 20th century, social policies in the United States underwent dramatic changes. Welfare policies became stricter and spending on child care was greatly increased, encouraging more women to enter the labor force. A substantial amount of research has examined the effects of these welfare policy changes. Results have shown that stricter welfare policies can increase work and do not have consistently negative effects on younger children but may pose risks for adolescents (Grogger, Karoly, & Klerman, 2002). However, far less research has examined the role of states' expanding child care expenditures on families. Some studies have examined the effects of increased child care spending on maternal employment (Bainbridge, Meyers, and Waldfogel, 2003) and others have examined formal child care use among young children (Magnuson, Meyers, & Waldfogel, 2007), but few studies focus specifically on the role of child care expenditures in families with school-age children. In addition, despite spending over $11 billion per year on child care subsidies in the U.S., little research directly examines the impacts of child care subsidies on children's development (Blau, 2003; Zaslow et al., 2006).

The present study examines whether, and how, states' expenditures on child care subsidies impact single-parent families with school-age children. Because the effect of child care subsidies may differ based on the welfare policies in a state, we also examine the interaction between child care expenditures and welfare policies. We hypothesize that limited spending on child care subsidies and strict welfare policies may place school-age children at-risk for poor outcomes. To test this hypothesis, we estimate a series of models examining the effects of

within-state changes in welfare policies and child care subsidy expenditures on maternal employment and exposure to self-care, as well as parenting and child behavior problems.

This study extends prior research in three major ways. First, we focus on families with school-age children. Approximately 35% of CCDF and TANF child care expenditures are spent on subsidies for school-age children (Administration for Children and Families, 2005), yet there are few studies explicitly focused on this age group. Child care costs are less of a barrier to work for mothers with older children, due to the free care provided by schools. But mothers with school-age children will be more likely to consider leaving their children in self-care than are mothers with younger children. Second, we examine a diverse array of outcomes. Because of the richness of the NSAF data, we can simultaneously examine employment, self-care, aggravation with parenting, and child behavior problems. This provides policy-makers with a more complete understanding of the impacts of states' child care expenditure decisions on low-income families with school-age children. Third, we simultaneously examine the impact of welfare and child care subsidies, rather than limiting our focus to one set of policy variables. In considering these policies together, we can more accurately capture the opportunities and constraints influencing the work-family decisions of low-income single mothers.

Conceptual Framework

Economic theories about women's employment predict that women will work when the value of their time in the labor market exceeds the value of non-market time (Becker, 1991). In the 1990s, social policies were changed to increase the value of market time and decrease the value of non-market time in hopes of moving low-income mothers off welfare and into the labor force. For instance, welfare policies were changed to allow mothers to combine income from welfare and work (income disregards), and the Earned Income Tax Credit was expanded. In

addition, child care subsidy funding was dramatically increased. Child care subsidies should increase the value of market time by offsetting child care costs. In addition to these incentives to work, many "strict" welfare policies were part of the legislation: Work requirements, sanctions, and time limits became standard components of states' welfare policies.

Variation in State Policies

Although the trend toward stricter welfare policies and greater child care expenditures occurred nationwide, there is considerable variation between states in their child care expenditures and their welfare policies. For instance, we estimate that in 2002 states spent an average of $1,008 on child care subsidies per poor school-age child, but the range in spending was quite large. Arkansas spent the least, at $197 per poor school-age child, and Connecticut spent the most at $2,495 per poor school-age child.[1] States also adopted considerably different welfare policies during the 1990s, with well-documented differences in terms of time limits, income disregards, exemptions from work requirements, and sanctions (Moffitt, 2003). Researchers have also documented considerable variation between states in how they *combine* their welfare policies and child care expenditures (Meyers, Gornick & Peck, 2001).

Understanding the variation between states in welfare and child care policies is important, as these policies shape the opportunities and constraints facing low-income families. Research documents that work-family choices are often malleable, with parents frequently making adaptations and adjustments to their work and child care arrangements (Gerson 1985; Moen & Wethington, 1992; Singley & Hynes, 2005). Thus shifts in these policies are likely to lead to changes in work-family arrangements, and may potentially impact children's outcomes.

Child Care Spending, Welfare Policies, and Maternal Employment

[1] Expenditure calculations were created by combining state expenditures from all sources (CCDF and TANF) in a given year, adjusting for the proportion of funds spent on school-age children, then dividing the funding for school-age children by Census estimates of the number of poor school-age children in a state in a given year.

Experimental research indicates that strict welfare policies such as work requirements and time limits encourage mothers to enter the labor market (Grogger, Karoly, & Klerman, 2002). However, research also demonstrates that child care costs are a barrier to employment (reviewed in Blau, 2003). Child care subsidies are designed to reduce the costs associated with child care and research shows that these subsidies effectively support maternal employment (Bainbridge, Meyers, & Waldfogel, 2003; Blau & Tekin, 2007; Meyers, Heintz, & Wolfe, 2002). When welfare reforms were put in place during the 1990s, expansions to child care subsidies were considered necessary to support women's transitions from welfare to work, and to keep low-income families from moving onto welfare in the future.

Few studies examine whether the effects of child care subsidies on employment differ by the age of the youngest child. However, child care costs should be less of an employment barrier for mothers with school-age children because of the free child care provided by school. Indeed, research documents that this free child care increases employment among single mothers by between 6 – 24 percent (Gelbach, 2002). Although mothers must arrange child care for work hours that do not overlap with the school day, mothers of school-age children often use informal, unpaid care arrangements, with only 37% of working families with school-age children paying for child care (versus 60% when the youngest child is 0 - 5) (Giannarelli & Barsimantov, 2000). Recognizing the free child care provided by schools and the use of informal care during non-school hours, we hypothesize that strict welfare policies will increase work among mothers with school-age children, but expenditures on child care subsidies will not be as strongly associated with the employment of mothers with school-age children.

C*hild Care Spending, Welfare Policies, and Self-care*

Child care subsidies are designed to maximize parental choice in the selection of child care (Blau, 2003). Previous research, mostly focusing on parents of young children, shows that child care subsidies increase children's enrollment in formal child care arrangements (center-based care or regulated family day care homes) (reviewed in Zaslow et al., 2006). When child care subsidies are not available, parents must rely on child care they can afford. Qualitative research documents the struggles of low-income working mothers as they try to arrange safe, stable, and affordable care for their children (Scott, London, & Hurst, 2005). Mothers often rely on a "patchwork" of informal arrangements involving multiple caregivers and some parents report leaving older children in self-care (Knox et al., 2003; Zippay & Rangarajan, 2007).

This unsupervised time is note-worthy as research suggests that self-care can be a risky care arrangement for children. Self-care has been associated with internalizing and externalizing behaviors as well as drug use and delinquency (e.g. Aizer, 2004; Roche et al., 2007). It is important to note that self-care is not universally risky. Indeed, as children age, self-care gradually becomes a normative experience, with 44% of 12-year olds experiencing self-care compared to eight percent of eight year-olds (Capizzano, Tout & Adams, 2000). Most of these children are in self-care for fewer than five hours per week, perhaps reflecting parents' concerns about self-care. Negative effects seem to occur when children are not mature enough, when peers are present, or when the surrounding neighborhood is unsafe (Beyers, Bates, Pettit & Dodge 2003; Galambos & Maggs, 1991; Steinberg, 1986). If strict welfare policies and limited child care expenditures lead parents to select self-care for children who are not developmentally ready, we may see negative effects on children's development.

Whether child care and welfare policies influence self-care is not well understood. Evidence from welfare demonstration projects is mixed. The New Hope project, characterized by

generous income disregards and child care support, found that New Hope children were more likely to be in structured activities at the two, five, and 8 year follow-ups than control-group children. New Hope children were also less likely to be unsupervised at both the two and five year follow-ups, but by the 8-year follow-up, these teenagers were more likely to spend unsupervised time with friends. Given the greater engagement of the New Hope adolescents, the authors suggest that this self-care may be developmentally appropriate (Huston et al., 2008).

In a second demonstration project examining self-care, Florida's Family Transition Program, strict time limits were enforced but intensive case management, income disregards, and extended child care assistance were provided. Although the reported use of self-care did not differ between control and experimental group, parents who were the least disadvantaged at random assignment reported lower levels of supervision for their school-age children and teenagers, and their children, in turn, had far worse behavioral and academic outcomes than comparable control group families (Bloom et al., 2000).

We know of no study that examines the association between states' expenditures on child care subsidies and school-age children's exposure to self-care. We hypothesize that limited expenditures on child care subsidies may be associated with higher rates of self-care among school-age children. This may be particularly true when states have adopted strict welfare policies that are pushing mothers to work.

Child Care Spending, Welfare Policies, and Child Well-being

Child care expenditures and welfare policies influence children's environments through a variety of pathways. These policies can bring about changes in multiple domains including maternal employment, family income, parenting behavior, and non-maternal care arrangements.

These different domains interact to create the cumulative context that influences children's development (Bronfenbrenner, 1989).

Despite the large increase in child care funding during the 1990s, only two studies have examined the associations between child care subsidies and child outcomes using data from the United States. The first study found that children who used subsidized child care in the year before kindergarten demonstrated *worse* academic and social outcomes throughout their kindergarten year than comparable children who had not used subsidies (Herbst & Tekin, forthcoming). The authors hypothesize that this finding results from greater exposure to nonmaternal care, instability of care, or the low quality care experienced by child care subsidy recipients. The second study documents a relationship between child care subsidy receipt in the year before Kindergarten and a higher likelihood of overweight and obesity during Kindergarten, a finding that appears to result from subsidy recipients' use of center-based care (Herbst & Tekin, forthcoming). No studies to date have examined the effects of subsidy expenditures on school-age children's development.

Experimental research on welfare demonstration projects indicates few consistent effects on school-age children (either positive or negative), but some negative effects on adolescents (Morris et al., 2002). Because the experimental studies were not designed to study the effects of child care policies, some of the variation in outcomes may result from differences in child care subsidy availability, use, and generosity. Additionally, it is worth mentioning that the negative outcomes for adolescents occurred two to five years after the parents began the program, so some of these "adolescents" experiencing negative outcomes were school-age children during the family's participation in the experimental welfare program.

Considering the limitations in the existing literature, we conclude that there is a strong need for research on the effects of child care subsidies on child outcomes. We hypothesize that both strict welfare policies and limited child care spending may produce negative outcomes – such as behavior problems - for school-age children. This may be particularly true if strict welfare policies and limited child care expenditures create significant stress for single mothers. Mothers who feel as though they have few opportunities and many constraints may be more aggravated, providing lower quality parenting to their children.

Method

Data

This study uses nationally representative data from the National Survey of America's Families (NSAF). The NSAF used a repeated cross-section design, collecting data in 1997, 1999, and 2002. For families with children, interviews were conducted with parents about one randomly selected child age 0 – 5 and a second randomly selected child age 6 – 17. The NSAF was developed to examine changes in state policies and social service use over time and thus is uniquely suited to the present analysis (Abi-Habib, Safir & Triplett, 2004). To facilitate state-level analyses, the NSAF over-sampled from 13 states that together include more than half of the nation's population and represent the various types of states and geographic regions in the country. The NSAF states are Alabama, California, Colorado, Florida, Massachusetts, Michigan, Minnesota, Mississippi, New Jersey, New York, Texas, Washington, and Wisconsin.

Sample

We focused our analyses on low-income single-mother families with children ages 6 – 12 living in the 13 over-sampled states. Because many school-age children have siblings, about 40% of these families also include siblings that are younger than six in the household. Families

were counted as "low-income" if their income-to-needs ratio was below 200% of the poverty line (based on their family income, the number of people in the family, and the poverty line in a given year). We have a total sample size of 5,101 (2,038 in 1997, 1,450 in 1999, and 1,613 in 2002). Even restricting the analysis to single mother families, nearly all state/year cells have over 100 observations in them. Due to a small amount of missing data on some of the dependent variables, some of the models have slightly fewer people in them. Individual and family level independent variables were imputed during the data creation before the release of the NSAF data files.

Dependent Variables

Maternal employment. Maternal employment was coded 1 if the target child's mother is employed and 0 if she is not.[2]

Self-care. Self-care occurs if the child is regularly exposed to *any* self-care. It is the parent's response to the question, "Sometimes children are able to spend time responsible for themselves, either at home or somewhere else, without anyone around to supervise. Not counting times when an adult is at home and (child) is outside playing, is (child) responsible for (himself/herself) after school on a regular basis?" A yes response was coded "1" and a no response was coded "0".

Aggravation with parenting. To assess parental feelings of frustration and anger during the past month, we used an index comprised of four questions (e.g. "How often in the past month have you felt your (child does / children do) things that really bother you a lot?" and "How much of the time during the past month have you felt you are giving up more of your life to meet your (child's/children's) needs than you ever expected?"). Parents responded on a scale from 1 (all of the time) to 4 (none of the time), yielding scores on the aggravation index ranging from four to

[2] In future analyses we plan to differentiate between part-time and full-time work.

16. Parents responded to this question about all of the children in the household, making this a global assessment of aggravation not an assessment of the challenges caring for a specific child. Because the measure was heavily skewed toward little aggravation in parenting, we dichotomized the index so that scores below 12 received a one (indicating parental aggravation) whereas scores 12 and higher received a zero (indicating no parental aggravation). We tested the implications of this cut-off on our results in our specification tests.

Child behavior problems. The NSAF asks parents six questions from the Behavior Problems Index (e.g. child doesn't get along with other kids; child has trouble staying focused/concentrating). For each question the parent responded about the child's behavior in the last month on a scale from 1 (often true) to 3 (never true). Answers to the items were created into a behavior problems index that ranges from 6 to 18, and was heavily skewed toward few behavior problems. We dichotomized this measure into two categories with 1 signifying the presence of behavior problems (or, scores below 13 on the index) and 0 signifying no behavior problems (or, scores 13 and above on the index). We tested the implications of this cut-off on our results in our specification tests.

Child and Family Control Variables

Maternal employment and child care choices are influenced by the following factors that we included as control variables: the number of other children in the household ages 0 – 5 and 6 – 18 (linear), child age (linear), child race (1 = White, 2 = African-American, 3 = Hispanic, and 4 = Other), child sex (0 = female, 1 = male), and maternal education (1 = less than high school, 2 = high school degree, 3 = more than a high school degree). Table 1 shows descriptive statistics for all individual and family variables in the models.

State-Level Variables

Child care expenditures. One of our primary independent variable was a measure of each state's expenditures on child care subsidies for school-age children, per poor school-age child in the state. To create this measure, we first calculated the amount that each state spent on child care subsidies in a given year through both the CCDF and direct TANF expenditures on child care subsidies (data from the Greenbook and the Administration for Children & Families). These expenditure estimates were then adjusted based on the proportion of the states' child care funding spent on school-age children (data from the Finance Project), and the number of poor school-age children in the state (data from U.S. Census Bureau) to create an annual measure of state-level spending per poor school-age child.

Welfare policy strictness. The challenges inherent in capturing relevant aspects of states' welfare policies are well-documented (e.g. McKernan, Bernstein, & Fender, 2005; Meyers, Gornick, & Peck, 2001). For this study, we conceptualized "strict" welfare policies as those that would increase work, reduce the likelihood that parents would use welfare benefits, and/or reduce the supports provided by welfare. Any of these three behaviors might increase the odds that parents make risky decisions about their children's care arrangements or struggle to manage their work and family roles with few resources and many constraints.

To generate our measure, we relied on publicly available data compiled by Chris Herbst that includes measures of various welfare policies in each state and year.[3] We coded each policy based on whether it was "strict" compared to other states and over time, and then we created a count variable of the number of strict policies each state had in place in each year. To ensure that policies were in place and potentially influencing behavior, we lagged our welfare policy measures by one year.

[3] Herbst is a researcher at Arizona State University. Welfare policy data is available through his website at http://chrisherbst.net/index_files/teaching_quantitative_approaches.htm. Data comes from the Greenbook and Administration for Children and Families reports on welfare policies.

We included in this measure policies that predict work *and* policies that may reduce welfare use or restrict access to benefits. For policies that predict work, states received one point each on the strictness scale if they: 1) require welfare recipients to work immediately on receipt of benefits, 2) require job search prior to benefit receipt, and 3) do not exempt people from work requirements if they cannot find jobs. We also included measures that may reduce welfare use or to restrict access to benefits. States received one point each on the strictness scale if they: 4) have lower than average benefit levels, 5) have an income disregard that is less generous than other states, 6) have a time limit that is shorter than 60 months, and 7) fully cut off benefits at the first sanction. We chose to include income disregards in this measure because less generous income disregards could theoretically increase self-care, increase aggravation in parenting, and increase behavior problems. Only for our model of maternal employment would *more* generous income disregards be associated with work, therefore in specification tests on the maternal employment models we tested an alternate welfare strictness variable that omits the income disregard measure. States' scores range from 0 – 6 on this scale (out of a maximum plausible score of 7).

To test the validity of our aggregate measure we, we ran a series of logistic regression models estimating the association between each individual welfare policy variable and both maternal employment and AFDC receipt (regressions also controlled for family characteristics, state-level controls, and year). Results (not shown) indicate that several of these measures perform as expected, with work-now policies and job search policies predicting employment, and work-now policies, job search policies, benefit levels, and income disregards predicting levels of AFDC use.

Combining welfare strictness and child care spending. Figure 1 plots states according to their welfare policy strictness and their expenditures on child care subsidies. All three years in

the data are plotted on the same graph: Red dots represent states' policies in 1997; blue dots represent policies in 1999, and green dots represent policies in 2002. As the graph shows, most states began the time period in the "lenient welfare policies, limited child care spending" quadrant. Between 1997 and 1999 they dispersed across the graph, both increasing their child care spending and tightening their welfare policies. Between 1999 and 2002, child care spending continued to grow, and welfare policies were adjusted in smaller ways, often to be a little more lenient.

We also compared our groupings in 2002 to the work of Meyers, Gornick, and Peck (2001). Our state policy classification largely overlaps with theirs. States such as Alabama and Mississippi are categorized in both studies as providing few supports, in our case, as providing strict welfare and limited child care spending. States like Minnesota, California, Colorado, Washington and Massachusetts are classified as providing more lenient welfare policies and more generous child care support. Because the Meyers, Gornick, and Peck typologies include a broader set of state policies, such as access to preschool, Medicaid, job training, and even tax policies, there are some differences between the two studies. For instance, New Jersey and Wisconsin are in the generous grouping by Meyers, Gornick, and Peck, but in our study they are in the "strict welfare, generous child care spending" category because of their work-oriented welfare policies.

Because several of our hypotheses indicate that strict welfare and limited child care spending may be particularly risky for school-age children, we created a dummy variable coded 1 if states had a welfare strictness score of 4 or higher (the median across states and years is 3) and spent less than $600 per poor school-age child on subsidies (the median across states and years is $569), 0 for all other welfare and child care combinations. Again, this measure varies

over time within states. This dummy variable allows us to test whether limited child care spending and strict welfare policies pose a unique risk, compared to all other welfare and child care policy combinations.[4]

Analysis Plan

We estimated a series of reduced form logistic regression models to examine associations between changes in states' child care expenditures and welfare policies and the four dependent variables of interest (maternal employment, self-care, parental aggravation, and child behavior problems). Our ideal model would include individual and family characteristics, year fixed-effects to control for patterns that vary over time in the same way across states, state fixed-effects to control for unobserved differences between states, and a series of state-level control variables to account for characteristics of states that may vary over time within a state. In our analyses however, there was a significant amount of collinearity between the state-level control variables and the state fixed-effects, therefore we could not include both sets of variables in the same models. Thus, we tested two models for all outcomes of interest: a) a model that includes individual and family controls, year fixed-effects, and state-level control variables (but not state-fixed effects), and b) a model that includes individual and family controls, year fixed-effects, and state-fixed effects (but not state-level control variables). We consider results suggestive if we see them in one model, and more robust if we see them consistently across both models. All analyses are weighted using the recommended jackknife replicate weights.

Our analysis proceeded in three phases. First, we computed main effects models in which child care subsidies and welfare policies predicted each dependent variable. We then

[4] We have also tested a four-part categorical variable coded 1 = lenient welfare, limited child care (omitted comparison group), 2 = strict welfare, limited child care, 3 = strict welfare, generous child care, and 4 = lenient welfare, generous child care. Results are consistent with those presented in the text therefore we rely on the more parsimonious measure in our results section.

estimated models for each dependent variable to test whether outcomes were uniquely risky when states adopted strict welfare policies and had limited child care spending, compared to all other policy arrangements. Finally, for each dependent variable we conducted specification tests as appropriate to help us understand whether our results were robust and to help us interpret our findings in light of previous literature.

Results

Tables 2 and 3 show the main results from our analyses. Throughout we rely on logistic regression models: Coefficients are odds ratios, therefore a value less than one is a negative association while a value greater than one is a positive association. Table 2 shows associations between welfare policy strictness, child care spending, and each dependent variable. Table 3 tests whether we see riskier outcomes for children when states adopt strict welfare policies and keep their child care expenditures limited. We discuss the results for each dependent variable below.

Maternal employment

We expected that child care expenditures might not have a clear association with maternal employment for single mothers with school-age children, given the free child care provided by school for much of the day. The first two columns in Table 2 support this hypothesis. We do not see clear associations between child care expenditures and maternal employment in these models. While 40% of these families do have at least one younger child in them, this sample does not include families with only preschool-age children. Families with primarily young children may be driving some of the associations in prior literature between child care expenditures and employment. In future work we plan to test this hypothesis by adding data on families with younger children to our analyses.

In our main effects models we also only see weak evidence of an association between welfare strictness and single mothers' employment: There is a significant association in the model that includes state control variables, but not in the model that includes state fixed-effects. Our measure of welfare strictness includes components that should increase work, but also includes components that make welfare less generous and may reduce welfare use, with unclear effects on employment. In particular, less generous income disregards are counted as "strict" policies. For our other dependent variables, this specification makes sense: Generous income disregards should increase the resources parents have available thereby reducing negative outcomes such as self-care, parenting aggravation, and behavior problems. But for employment, this does not make sense because generous income disregards have been shown to increase work. In specification tests, we removed the measure of income disregards from our welfare strictness variable. With this new measure of welfare strictness, we see a significant association between welfare policy strictness and single mothers' employment in both the state control models and the state fixed-effects models (results not shown).

For single parent families with school-age children, we did not expect to see that states with limited child care spending and strict welfare policies had lower than average rates of employment, again because child care spending may not be as much of a deterrent for these families. Results in Table 3 show no association between our dummy variable for limited child care spending and strict welfare policies, and maternal employment.

Self-care

We hypothesized that single parents may resort to self-care for their school-age children when faced with limited child care spending and strict welfare policies. In Table 2, we see some evidence that more generous child care spending is associated with less self-care. In the model

with state control variables, there is no significant association, but in the model with state fixed-effects, we do see a significant association. Results in Table 3, however, do not support our hypothesis. In neither model do we see an association between limited child care spending and strict welfare policies, and self-care among school-age children. To be sure that the dummy variable specification was not driving our results, we also added a linear interaction between the two policies into our main effects model and found no evidence that the association between child care spending and self-care is moderated by welfare policy strictness (results not shown).

High parenting aggravation

We expected that states with strict welfare policies and limited spending on child care subsidies could lead to higher parenting aggravation because both policies may increase the constraints under which single parents are operating as they try to balance their roles as breadwinners and caregivers. Results in Table 2 show a consistent association between welfare policy strictness and high parenting aggravation, but no main effect association between child care spending and high parenting aggravation. In specification tests, we slightly altered the cut-off on the parenting aggravation scale and found similar results (not shown). As with maternal employment, it may be that the welfare policies are influencing parents' perceptions of their opportunities and constraints more than the child care policies, when children are school-age. In Table 3, we see no evidence that limited child care spending and strict welfare policies are creating uniquely aggravated parents. As in the self-care model, we also found no effects when we used a linear interaction term in our main effects model.

Behavior problems in school-age children

We expected that strict welfare policies combined with limited child care spending may lead to negative outcomes for school-age children living with single parents. In Table 2, both

models show a *positive* association between child care spending and behavior problems. Model 1, with state control variables, also shows a positive association between welfare policy strictness and behavior problems, though the association is not significant in our state fixed-effects model. Contrary to our expectations, Table 3 shows no association between limited child care spending, strict welfare policies, and behavior problems.

We conducted a series of specification tests on these models predicting behavior problems; results are shown in Table 4. Only the coefficients on the child care and welfare variables are shown to allow us to show multiple specifications in the same table. Each set of coefficients represents a unique model that includes individual and family characteristics, year fixed-effects, and state fixed-effects. The top rows of the first column show the state fixed-effects results from Table 2 for ease of comparison.

The second column tests whether changing the cut-off for the behavior problems variable influences results. In the original variable, children with behavior problem scores less than 13 were coded as having high behavior problems. In the new dependent variable, children with scores less than 14 were coded as having high behavior problems. This moves 771 children (or 6.8% of the sample) from the "no behavior problem" group into the "behavior problem" group. With this slightly altered dependent variable, we see a significant association between welfare strictness and behavior problems, but no association between child care spending and behavior problems.

The third column tests whether results are sensitive to the way the welfare policy variable is specified. Prior research shows that it is often difficult to capture the "strictness" of a states' welfare policies and that results can be sensitive to the way the policy variables are specified. In column 3 we slightly change the policy variable by again removing the income disregard

measure from the count of welfare policy strictness. When we make this change, we see a positive association between behavior problems and both welfare policy strictness and child care spending. The fourth column combines the new behavior problem cut-off and the new welfare policy measure. Here we see just an association between welfare policy strictness and behavior problems, with no association between child care spending and behavior problems.

From these results, it is not clear whether the observed association is due to strict welfare policies or child care spending. As in other models, we used a linear term to test for an interaction between welfare expenditures and child care spending, but in none of the specifications did we see a significant interaction between the two policies. In ad-hoc analyses, we tested whether we would see a significant association if we simply used a dummy variable for strict welfare policies and *generous* child care spending, compared to all other welfare and child care policy environments. The final row of Table 4 shows that this dummy variable consistently predicted behavior problems in all four model specifications.

Because the main effects models appear to be sensitive to the specification of the dependent variable and the welfare policy variable, and because we see a significant interaction only in our dummy variable specification but not in our linear interaction test, we cannot draw firm conclusions from these analyses. However, this evidence is in line with some prior research that has shown negative effects of welfare policies on older children, and with a recent study showing negative effects of child care subsidy receipt during the year before kindergarten on subsequent behavior. While our study is inconclusive, these results indicate that further research on this topic is warranted.

Discussion

Results from this analysis show several main effects of welfare policies and child care spending on families with school-age children, but few interactions indicating that strict welfare policies and limited child care spending poses a uniquely risky environment for school-age children. Instead we find more evidence that these policies are acting separately. As other studies have shown, stricter welfare policies are associated with more work, but child care spending is not clearly linked to the employment of single mothers' when the sample focuses on families with school-age children, thereby excluding many families with the youngest children who require the most expensive child care arrangements. While limited child care spending does not appear to consistently keep single mothers with school-age children from working, there may be costs associated with the trade-offs these mothers are making. We found some evidence that limited child care spending may be associated with more self-care among school-age children. Results were not robust across models, making this an area that merits further research before a clear conclusion can be drawn. We also found evidence that among single mothers with school-age children, stricter welfare policies are associated with higher parenting aggravation. And while results are not robust across models, results indicate that more research is necessary to understand whether strict welfare policies and/or more child care spending are associated with behavior problems among school-age children.

Although there has been less research on families with school-age children, these results are in line with some of the earlier studies on the effects of welfare and child care policies. Qualitative studies highlight the challenges that single mothers face as they try to balance work and child care with few resources, and sometimes self-care is part of the child care arrangements (Knox et al., 2003; Zippay & Rangarajan, 2007). This study provides some evidence that self-

care may occur when child care spending is limited, regardless of the welfare policy environment.

Studies from welfare demonstration experiments have shown a link between stricter welfare policies and behavior problems for adolescents, with few positive or negative effects on preschool or school-age children (Morris et al, 2002). But it is important to keep in mind that when negative effects are reported for adolescents, they are often reported anywhere from 2 – 5 or more years after the parents began in the welfare program. Therefore some of the adolescents for whom negative outcomes have been observed may have been school-age children during the years their parents participated in the experimental welfare programs. Our study is also in line with a recent paper by Herbst and Tekin (forthcoming) that shows negative behavioral effects when children received child care subsidies in the year before kindergarten. These negative effects may be due to higher use of formal child care, of unknown quality, among parents with child care subsidies. In particular, these negative effects may be explained by several papers showing an association between more time in child care, particularly center-based care, and slightly more behavior problems in children (Magnuson, Ruhm, & Waldfogel, 2007; NICHD, 2003).

Unfortunately, our study was unable to disentangle whether the child care spending levels, the strict welfare policies, or some combination of the two is leading to higher rates of behavior problems. The NSAF data also cannot provide a longitudinal analysis of whether the increase in behavior problems is large enough to have any practical consequence, or whether, as others have argued, the increase in behavior problems are substantively small and may fade away over time (see Magnuson, Ruhm, & Waldfogel 2007 for a detailed discussion). But results

clearly suggest a need for more research on the effects of child care subsidies on school-age children's development.

Our findings should be considered in light of the strengths and limitations of the study. A major strength of the NSAF is the wide range of dependent variables are available, allowing us to examine employment, self-care, parenting, and child outcomes without having to move across data sources. In addition, studies with similar numbers of children and more state/year cells often rely on a very small number of children in each state/year cell for their estimates. The oversamples in the 13 NSAF states provide us with far more children in each state/year cell (over 100 in most state/year cells) than are typically found in studies of this kind. Unfortunately, the trade-off is that there are only 39 state/year cells in this study. While clear minimums have not been established in the econometric literature, certainly more states and years will lead to more robust estimates (Donald & Lang, 2001). It is particularly likely that the small number of states is contributing to our inability to disentangle the effects of child care spending from welfare policy strictness in our models of behavior problems. Therefore results from this analysis should only be considered suggestive. The limitation to 13 states not only interferes with the statistical model, but results are also based only on the observed experiences in a small number of states. The NSAF states were strategically selected and include states with a wide variety of social policies, but even so, results should be confirmed in samples that include other states.

The other main limitation to this analysis is the well-documented difficulty designing measures of welfare environments that truly reflect the "strictness" experienced by people in the state. While we have conducted some specification tests in this analysis, in future work we plan to test alternate measures of welfare strictness to ensure that our results are robust. We also anticipate running these analyses on a higher-income sample to be sure that our policy effects are

only apparent for families eligible for welfare and child care subsidies. Finally, we will add the sample of families with younger children to our analyses to ensure that our results indicating fewer effects of child care subsidies on maternal employment in a sample of families with school-age children is due to child age, not some aspect of the study design.

Despite these limitations this study suggests that more research is necessary on the role of child care expenditures in the families of school-age children. The United States currently spends over $11 billion per year on child care subsidies, but we have little knowledge about the impacts of child care subsidies on children's development (Blau, 2003; Zaslow et al., 2006). While findings from this study are not conclusive, they do indicate that further research in this area is warranted to ensure that child care policies are designed in ways that support both employment and healthy child development.

References

Abi-Habib, N., Safir, A., Triplett, T. (2004). *NSAF public use file user's guide*. Urban Institute Methodology Report #11.

Administration for Children and Families. (2005). FFY2002 CCDF data tables and charts: Percent of children served by age group. Accessed on 10/22/06 at (http://www.acf.dhhs.gov/programs/ccb/research/02acf800/table9.htm).

Aizer, A. (2004). Home alone: supervision after school and child behavior. *Journal of Public Economics, 88,* 1835-1848.

Bainbridge, J., Meyers, M., & Waldfogel, J. (2003). Child care policy reform and the employment of single mothers. *Social Science Quarterly, 84,* 771 – 791.

Becker, G. (1991). *A Treatise on the Family.* Cambridge, MA: Harvard University Press.

Beyers, J. M., Bates, J. E., Pettit, G. S., & Dodge, K. A. (2003). Neighborhood structure, parenting processes, and the development of youths' externalizing behaviors: A multilevel analysis. *American Journal of Community Psychology, 31*, 35-52.

Blau, D. (2003). Child care subsidy programs. In R. Moffitt (Ed). *Means-tested transfer programs in the United States.* Chicago, IL: University of Chicago Press, pp. 443 – 516.

Blau, D., & Tekin, E. (2007). The determinants and consequences of child care subsidies for single mothers in the USA. *Journal of Population Economics, 20,* 719 – 741.

Bloom, D., Kemple, J. J., Morris, P., Scrivener, S., Verma, N., & Hendra, R. (2000). *The Family Transition Program: Final report on Florida's initial time-limited welfare program.* New York: Manpower Demonstration Research Corporation.

Bronfenbrenner, U. (1989). Ecological systems theory. *Annals of Child Development*, 6:187-249.

Capizzano, J., Tout, K., & Adams, G. 2000. Child care patterns of school-age children with employed mothers. Urban Institute Occasional Paper #41.

Committee on Ways and Means. (2004). Green Book. Washington, D.C. Committee on Ways and Means.

Donald, S., & Lang, K. (2001). Inference with difference in differences and other panel data. Working Paper, University of Texas.

Galambos, N. L. & Maggs, J. L. (1991). Out-of-school care of young adolescents and self-reported behavior. *Developmental Psychology, 27*, 644-655.

Gelbach, J. (2002). Public schooling for young children and maternal labor supply. *American Economic Review, 92,* 307 – 322.

Gerson, K. (1985). *Hard choices: How women decide about work, career, and motherhood.* Berkeley: University of California Press.

Giannarelli, L. & Barsimantov, J. (2000). Child care expenses of America's families. Urban Institute Occasional Paper #40.

Grogger, J., Karoly, L., & Klerman, J. (2002). Conflicting benefits: Trade-offs in welfare reform. Santa Monica, CA., Rand Publications. Available on-line at *http://www.rand.org/publications/randreview/issues/rr.12.02/benefits.html*

Herbst, C., & Tekin, E. (forthcoming). Child care subsidies and child development. *Economics of Education Review.*

Herbst, C. & Tekin, E. (forthcoming). Child care subsidies and childhood obesity. *Review of Economics of the Household.*

Huston, A. C., Gupta, A. E., Bentley, A. C., Dowsett, C., Ware, A., & Epps A. R. (2008). New Hope's effects on social behavior, parenting, and activities at eight years. MRDC Working Paper.

Knox, V., London, A., Scott, E., & Blank, S. (2003). Welfare reform, work, and child care: The role of informal care in the lives of low-income women and children. MDRC Next Generation Policy Brief.

Lord, H. & Mahoney, J. L. (2007). Neighborhood crime and self-care: Risks for aggression and lower academic performance. *Developmental Psychology, 43,* 1321-1333.

Magnuson, K., Meyers, M., & Waldfogel, J. (2007). Public funding and enrollment in formal child care in the 1990s. *Social Service Review, 81,* 47 – 83.

Magnuson, K., Ruhm, C., & Waldfogel, J. (2007). Does prekindergarten improve school preparation and performance? *Economics of Education Review, 26,* 33 – 51.

McKernan, S., Bernstein, J. & Fender, L. Taming the best: Categorizing state welfare policies: A typology of welfare policies affecting recipient job entry. *Journal of Policy Analysis and Management, 24,* 443-460.

Meyers, M., Gornick, J., & Peck, L. (2001). Packaging support for low-income families: Policy variation across the United States. *Journal of Policy Analysis & Management, 20,* 457 – 483.

Meyers, M., Heintz, T., & Wolf, D. (2002). Child care subsidies and the employment of welfare recipients. *Demography, 39,* 165 – 179.

Moen, P. & Wethington, E. (1992). The concept of family adaptive strategies. *Annual Review of Sociology*, *18,* 233-251.

Moffitt, R. (2003). The Temporary Assistance for Needy Families Program. In R. Moffitt (Ed). *Means-tested transfer programs in the United States.* Chicago, IL: University of Chicago Press, pp. 291 - 364.

Morris, P., Knox, V., & Gennetian, L. (2002). Welfare policies matter for children and youth Lessons for TANF reauthorization. Manpower Demonstration Research Corporation Policy Brief.

NICHD. 2003. Does amount of time spent in childcare predict socio-emotional adjustment during the transition to kindergarten? *Child Development, 74*, 976 – 1005.

Press, J., Fagan, J., & Laughlin, L. (2006). Taking pressure off families: Child care subsidies lessen mothers' work hour problems. *Journal of Marriage and Family, 68,* 155 – 171.

Roche, K. M., Astone, N. M, & Bishai, D. (2007). Out-of-school care and youth problem behaviors in low-income, urban areas. *J Fam Econ Issues, 28,* 471-488.

Scott, E., London, A., & Hurst, A. (2005). Instability in patchworks of child care when moving from welfare to work. *Journal of Marriage and Family, 67,* 370 – 386.

Singley, S., & Hynes, K. (2005). Transitions to parenthood: Work-family policies, gender, and the couple context. *Gender & Society, 19,* 1 – 22.

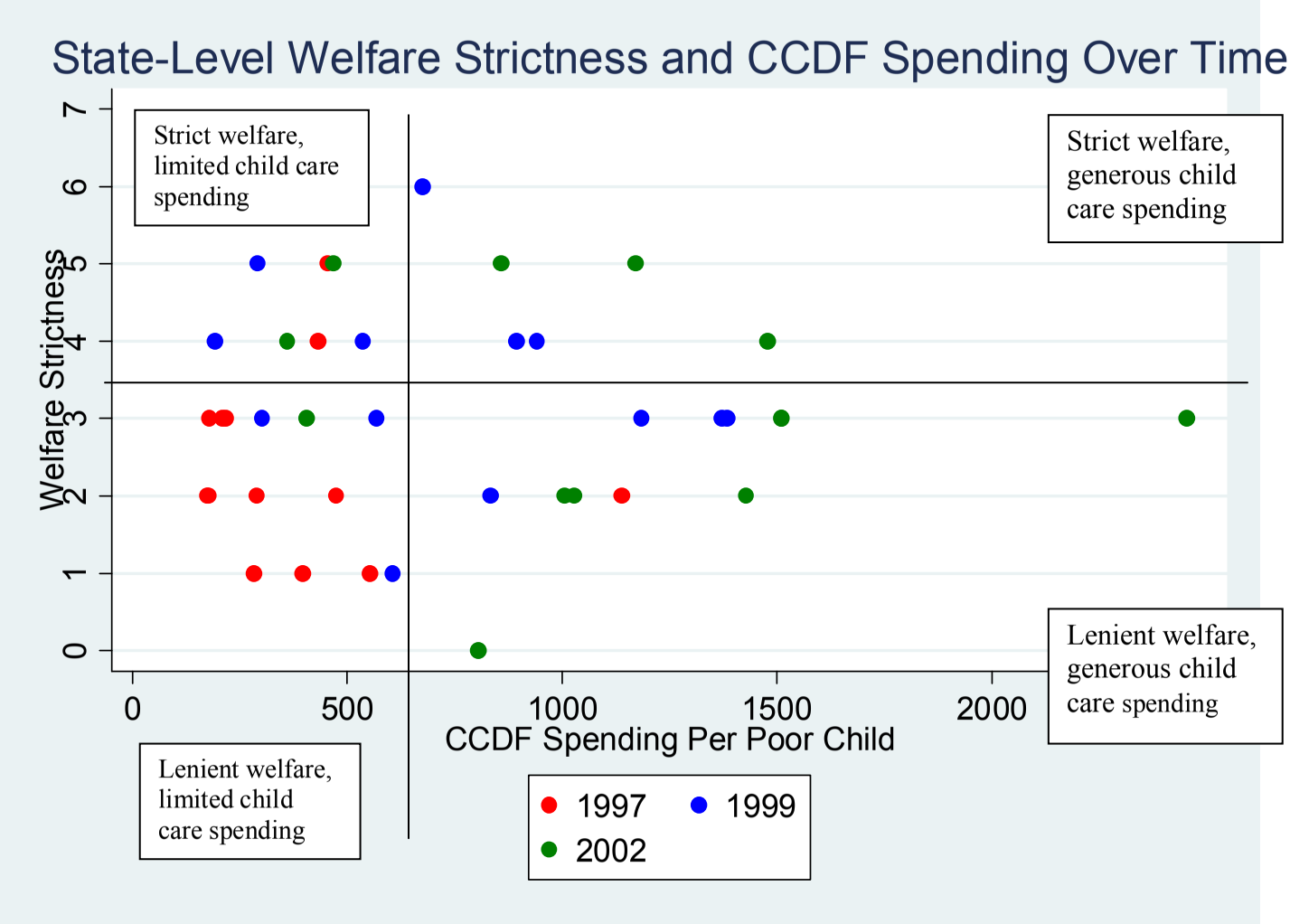
Steinberg, L. (1986). Latchkey children and susceptibility to peer pressure: An ecological analysis. *Developmental Psychology, 22,* 433-39.

US Census Bureau (2000). 1990 to 1999 Annual Time Series of State Population Estimates By Single Year of Age and Sex . Accessed on 9/31/09 at http://www.census.gov/popest/archives/1990s/st_age_sex.html

US Census Bureau (2009). State Single Year of Age and Sex Population Estimates: April 1, 2000 to July 1, 2008. Accessed on 10/15/09 at http://www.census.gov/popest/states/asrh/files/SC-EST2008-AGESEX-CIV.csv

Zaslow, M., Halle, T., Guzman, L., Lavelle, B., Keith, J. D., Berry, D., & Dent Ayonda. (2006). Review and synthesis of selected research reports submitted to the Child Care Bureau, U.S. Department of Health and Human Services. Accessed 5/05/09 on-line at: http://www.childcareresearch.org/SendPdf?resourceId=8720.

Zippay, A., & Rangarajan, A. (2007). Child care "packaging" among TANF recipients: Implications for social work. *Child and Adolescent Social Work Journal, 24,* 153 – 172.



Notes: Figure 1 is based on our count measure of welfare policy strictness and our measure of child care expenditures per poor school-age child. Only the 13 NSAF states are included. Red dots indicate states' combined welfare strictness and child care expenditures in 1997; blue in 1999; and green in 2002. The horizontal and vertical lines correspond to the cut-offs used in our analyses, therefore the upper left hand quadrant represents our categorization of strict welfare and limited child care subsidies.

Table 1. Descriptive statistics for variables in models, by year

	1997	1999	2002	Min	Max
Mother is employed (0,1)	0.55	0.59	0.62	0	1
Child is in any self-care (0,1)	0.11	0.12	0.15	0	1
High parenting aggravation (0,1)	0.22	0.16	0.20	0	1
High child behavior problems (0,1)	0.14	0.09	0.12	0	1
# of children in the house ages 0 – 5	0.69	0.53	0.57	0	5
# of children in the house ages 6 - 18	2.25	2.31	2.29	1	8
Mother has <high school education	0.29	0.31	0.30		
Mother has high school education	0.62	0.63	0.64		
Mother has more than high school	0.08	0.05	0.06		
Child is white	0.30	0.27	0.24		
Child is African-American	0.35	0.37	0.37		
Child is Hispanic	0.31	0.33	0.37		
Child is "other" race	0.05	0.03	0.02		
Focal child's age in years	8.77	8.84	9.13	6.00	12.00
State's unemployment rate	5.89	4.95	5.13	2.86	7.10
State's median household income (in thousands)	49.24	51.69	52.43	37.27	65.76
State's school spending per child (in thousands)	6.12	6.60	7.99	4.04	11.55
Maximum state + federal EITC (in thousands)	3.81	3.97	4.41	3.66	5.01
N	2038	1450	1613		

Source: National Survey of America's Families, 1997, 1999, and 2002
Notes: Sample is restricted to low-income single mothers living in the 13 oversampled states. N for dependent variables is slightly lower than N for control variables due to missing data. Maternal employment (n = 5101), self-care (n = 5090), aggravation (n = 4989), and behavior problems (n = 4972). All analyses are weighted.

Table 2. Logistic regression models testing association between welfare strictness, child care spending, and various outcomes

	Any Maternal Employment		Any Self-Care		High Parenting Aggravation		High Behavior Problems	
	M1	M2	M1	M2	M1	M2	M1	M2
Welfare policy strictness	1.091*	1.020	1.021	1.051	1.148**	1.210*	1.133+	1.183
	(0.046)	(0.050)	(0.073)	(0.117)	(0.058)	(0.104)	(0.078)	(0.121)
Child care spending (in '00s of dollars)	0.988	0.958	0.967	0.914*	1.023	1.018	1.070**	1.127**
	(0.017)	(0.029)	(0.020)	(0.040)	(0.020)	(0.038)	(0.017)	(0.042)
# children 0 – 5 in HH	0.698**	0.687**	0.790+	0.782+	1.137+	1.142+	1.105	1.109
	(0.049)	(0.048)	(0.100)	(0.100)	(0.080)	(0.080)	(0.116)	(0.118)
# children 6 – 17 in HH	0.959	0.954	1.069	1.068	1.147*	1.154*	1.053	1.058
	(0.044)	(0.044)	(0.086)	(0.086)	(0.065)	(0.067)	(0.082)	(0.084)
Mother has HS education	1.965**	1.968**	1.207	1.184	0.488**	0.478**	0.578**	0.574**
	(0.196)	(0.197)	(0.225)	(0.220)	(0.063)	(0.063)	(0.100)	(0.100)
Mother has > HS education	3.009**	3.003**	1.674+	1.650+	0.527*	0.514*	0.583+	0.579+
	(0.606)	(0.629)	(0.477)	(0.473)	(0.144)	(0.144)	(0.176)	(0.175)
Child is African-American	0.822	0.824	1.000	1.074	1.958**	2.009**	0.827	0.812
	(0.116)	(0.123)	(0.207)	(0.231)	(0.291)	(0.306)	(0.170)	(0.176)
Child is Hispanic	1.070	1.104	0.833	0.837	0.892	0.877	0.908	0.883
	(0.139)	(0.143)	(0.157)	(0.166)	(0.142)	(0.142)	(0.167)	(0.173)
Child is "other" race	0.870	0.876	0.407	0.398	1.773	1.827	0.933	0.896
	(0.268)	(0.271)	(0.239)	(0.235)	(0.717)	(0.740)	(0.438)	(0.414)
Focal child's age	1.042	1.042	1.609**	1.611**	1.015	1.014	1.093*	1.090*
	(0.028)	(0.028)	(0.063)	(0.064)	(0.031)	(0.031)	(0.039)	(0.040)
Panel is 1999	0.953	1.306	1.022	1.388	0.534**	0.513*	0.452**	0.339**
	(0.131)	(0.235)	(0.221)	(0.354)	(0.099)	(0.136)	(0.103)	(0.112)
Panel is 2002	1.188	1.653	1.269	2.068+	0.580*	0.732	0.513**	0.370**
	(0.211)	(0.423)	(0.322)	(0.797)	(0.150)	(0.241)	(0.124)	(0.130)
N	5101	5101	5090	5090	4989	4989	4972	4972
State controls	Yes	No	Yes	No	Yes	No	Yes	No
State FE's	No	Yes	No	Yes	No	Yes	No	Yes

Source: National Survey of America's Families, 1997, 1999, and 2002

*Notes: + p<.10; * p<.05. All models are weighted with jackknife replication weights. Coefficients are odds ratios (>1 indicates a positive association, <1 a negative association. Standard errors are in parentheses.*

Table 3. Logistic regression models testing association between limited child care spending and strict welfare and various outcomes

	Any Maternal Employment		Any Self-Care		High Parenting Aggravation		High Behavior Problems	
	M1	M2	M1	M2	M1	M2	M1	M2
Limited child care spending and strict welfare (versus all other policy environments)	1.145	0.984	0.846	1.271	1.071	1.240	0.891	0.914
	(0.184)	(0.135)	(0.216)	(0.295)	(0.172)	(0.208)	(0.174)	(0.168)
# children 0 – 5 in HH	0.699**	0.689**	0.789+	0.786+	1.145+	1.150+	1.114	1.111
	(0.049)	(0.049)	(0.101)	(0.100)	(0.082)	(0.082)	(0.112)	(0.114)
# children 6 – 17 in HH	0.957	0.954	1.070	1.070	1.140*	1.149*	1.048	1.052
	(0.044)	(0.044)	(0.086)	(0.086)	(0.064)	(0.065)	(0.079)	(0.081)
Mother has HS education	1.961**	1.967**	1.210	1.190	0.493**	0.480**	0.588**	0.577**
	(0.198)	(0.198)	(0.226)	(0.223)	(0.062)	(0.063)	(0.101)	(0.101)
Mother has > HS education	3.026**	3.006**	1.658+	1.657+	0.543*	0.521*	0.613	0.588+
	(0.613)	(0.627)	(0.470)	(0.476)	(0.146)	(0.146)	(0.184)	(0.179)
Child is African-American	0.828	0.824	1.019	1.069	1.958**	2.020**	0.825	0.821
	(0.118)	(0.123)	(0.214)	(0.229)	(0.293)	(0.306)	(0.174)	(0.180)
Child is Hispanic	1.071	1.103	0.848	0.836	0.856	0.881	0.833	0.893
	(0.134)	(0.144)	(0.157)	(0.165)	(0.136)	(0.142)	(0.156)	(0.174)
Child is "other" race	0.886	0.885	0.408	0.404	1.811	1.894	0.940	0.915
	(0.278)	(0.275)	(0.238)	(0.238)	(0.749)	(0.789)	(0.424)	(0.412)
Focal child's age	1.042	1.042	1.606**	1.608**	1.016	1.014	1.097*	1.092*
	(0.028)	(0.028)	(0.063)	(0.063)	(0.031)	(0.031)	(0.040)	(0.040)
Panel is 1999	0.998	1.138	0.973	1.051	0.612**	0.642**	0.553*	0.612*
	(0.125)	(0.128)	(0.190)	(0.182)	(0.096)	(0.097)	(0.125)	(0.137)
Panel is 2002	1.251	1.260*	1.115	1.181	0.763	0.878	0.818	0.856
	(0.158)	(0.143)	(0.217)	(0.193)	(0.138)	(0.144)	(0.144)	(0.144)
N	5101	5101	5090	5090	4989	4989	4972	4972
State controls	Yes	No	Yes	No	Yes	No	Yes	No
State FE's	No	Yes	No	Yes	No	Yes	No	Yes

Source: National Survey of America's Families, 1997, 1999, and 2002

*Notes: + p<.10; * p<.05. All models are weighted with jackknife replication weights. Coefficients are odds ratios (>1 indicates a positive association, <1 a negative association. Standard errors are in parentheses.*

Table 4. Specification tests on behavior problems models

High Behavior Problems				
	Original DV, original welfare variable	*Change DV cut-off, original welfare variable*	*Original DV, change welfare variable (6)*	*Change DV cut-off, change welfare variable (6)*
Main Effects				
Welfare policy strictness	1.183	1.157*	1.224*	1.192*
	(0.121)	(0.078)	(0.121)	(0.081)
Child care spending (in '00s)	1.127**	1.030	1.150**	1.048
	(0.042)	(0.036)	(0.045)	(0.039)
Main Effects + Interaction				
Welfare policy strictness	1.260	1.138	1.085	1.149
	(0.264)	(0.190)	(0.214)	(0.170)
Child care spending (in '00s)	1.163	1.022	1.078	1.027
	(0.121)	(0.084)	(0.100)	(0.078)
Interaction term: Welfare*child care	0.992	1.002	1.020	1.006
	(0.025)	(0.020)	(0.027)	(0.022)
Dummy variable				
Strict welfare, generous child care (versus all other policy environments)	3.115**	2.021**	2.593**	1.891**
	(0.809)	(0.473)	(0.715)	(0.430)

Source: National Survey of America's Families, 1997, 1999, and 2002
*Notes: + p<.10; * p<.05. All models are weighted with jackknife replication weights. Coefficients are odds ratios (>1 indicates a positive association, <1 a negative association. Standard errors are in parentheses. Each set of coefficients represents a separate logistic regression model and includes the individual and family characteristics, year fixed-effects, and state fixed-effects.*