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Parental Job Loss and Children's Academic Progress in Two-Parent Families

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Abstract

We use data from approximately 4,500 school-age children drawn from the 1996 Survey of Income and Program Participation to examine children's grade repetition and suspension/expulsion as a function of maternal and paternal job loss and unemployment in married-couple families. Drawing on weekly work histories, collected at 4-month intervals, we identify parents who were underemployed, had one job loss, had multiple job losses, or were persistently unemployed over a two-year period. We distinguish involuntary from voluntary job losses. We further examine whether parental job experiences relate to children's academic progress through income instability and source or parental stress and emotional care. Mothers' employment is never significantly associated with children's academic progress. In contrast, we found significant adverse associations between fathers' job losses on children's probability of grade repetition and school suspension/expulsion. In the case of grade repetition, this effect was only true for involuntary losses and was mediated by family income instability. In the case of school suspension/expulsion, multiple job losses that were either voluntary or involuntary had adverse effects. The associations between fathers' job losses and grade repetition are especially true for lower-income and younger children, whereas the associations between fathers' job losses and suspension/expulsion are apparent for higher-income children in particular.

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The effects of parental job loss on the well-being of American children have rarely been more relevant than in the current economic climate. During the period 2001-2003, 11.4 million people were displaced from jobs, representing the greatest sustained job loss since the Great Depression (Economic Policy Institute, 2004). In 2003, 8.1 percent of families had an unemployed member (Bureau of Labor Statistics, 2004) and about 22 percent of those currently unemployed have been without a job for 6 months or longer, the highest annual rate of long-term unemployment since 1983 (Allegretto & Stettner, 2004). Among workers displaced from full-time jobs, more than half who re-gained such jobs had lower earnings than on the job that was lost; about one-third had earnings losses of 20 percent or more (Bureau of Labor Statistics, 2004). Importantly, workers at all levels have been affected by these trends. For example, in January 2004, persons in managerial and professional jobs were the largest single group of long-tenured displaced workers, accounting for one-third of the 5.3 million long-tenured workers displaced between 2001 and 2003 (Bureau of Labor Statistics, 2004).

Such economic shifts represent key social forces capable of shaping the life course of American children. Displaced workers suffer substantial periods of unemployment and loss of earnings. Parental well-being and socialization practices may also be affected. However, the nature of children's experiences over time in families with displaced workers is not fully understood.

This paper examines the association between longitudinal patterns of parental job loss and unemployment and change over time in children's academic progress. In addition, we test the relative role of economic resources and parental stress and emotional care as mediating mechanisms. To do so, we draw on data from the 1996 panel of the Survey of Income and

Program Participation (SIPP), a nationally-representative data set collected by the Census Bureau. These data provide extremely detailed, high-quality measures of parental employment and income, collected every four months for a four-year period. In addition the Census Bureau added a set of questions to the SIPP at two times during the 1996 panel measuring child well-being and parenting behaviors. The SIPP thus represents one of very few large-scale, longitudinal, nationally representative data sources that provide excellent longitudinal information on maternal and paternal employment patterns, as well as comprehensive measures of economic conditions, parenting practices, and child well-being.

In this study, we predict children's academic progress, indicated by grade repetition and school suspension/expulsion. These behaviors, which we observe during childhood and adolescence, could reflect how well youth are faring in high school and could influence whether they pursue post-secondary education. This is important because educational attainment has a profound impact on future employment and earnings–for example, in 1998, those with just a high school degree earned, on average, $23,594 while the average annual earnings of college graduates was $43,782 (Newburger & Curry, 2000).

Background

Understanding the mechanisms that link parental job loss to family and child well-being has been a central question in the social science literature for the past two decades. Job loss has wide-ranging negative impacts. For example, job loss negatively affects families' economic security (see, e.g., Farber, 1993; Jacobson, LaLonde, & Sullivan, 1993; Stevens, 1997), and this is reflected in families' reducing their food expenditures, moving, and relying on public assistance (Yeung & Hofferth, 1998). Job loss also negatively affects adults' physical and mental health (e.g., Kessler, House, & Turner, 1987; Kessler, Turner, & House, 1987, 1988,

1989), and marital relationships (Conger & Elder, 1994) and increases the likelihood of divorce (Yeung & Hofferth, 1998). Parental job loss can also negatively affect children's well-being, in part via effects on these family factors and perturbations in parent-child relationships (Conger & Elder, 1994; McLoyd, 1990, 1998; McLoyd, Jayaratne, Ceballo, & Borquez, 1994).

With respect to economic consequences, job loss has both immediate and long-term effects. Farber (1998) estimates that displaced workers have a large (35 percentage point) probability of being unemployed following a displacement, are five percentage points more likely to work part-time than they were prior to the displacement, and earn 13% less upon reemployment. Ruhm (1991), using the Panel Study of Income Dynamics (PSID), finds that job loss is associated with longer-term losses as well; displaced workers display increased unemployment and decreased wages up to four years following displacement. Jacobson et al. (1993) also find longer-term economic losses. Using Pennsylvania administrative data, they find that high tenure workers who suffer a job loss have earnings that are 25% lower five years following the job loss. Finally, Stevens (1997) finds that multiple job losses for a given worker are common and play an important role in persistent earnings and wage losses.

What are the implications of these economic setbacks for family processes and child development? Two theories, drawn from economics and psychology, respectively, are prominent. The "investments" perspective (see Becker & Thomes, 1986) posits that unstable or insufficient work limits families' economic resources; in particular, the income necessary to purchase the resources and goods (e.g., schools, housing, food, safe and cognitively enriched learning environments) that are critical for successful development (Duncan & Brooks-Gunn, 1997). In addition to the level of income, the source of income also appears to matter. A decline in families' work hours and income is associated with increased reliance on public assistance

(Yeung & Hofferth, 1998) and greater receipt of welfare income is associated with children's lower academic achievement, perhaps due to stigma (Morris, Duncan, & Rodriguez, 2004).

The "family stress" perspective, in contrast, emphasizes parents' psychological resources and parenting behaviors as key links between adverse social conditions and child development. According to this model, unstable work and unemployment is psychologically stressful for parents (see McLoyd, Jayaratne, Ceballo, & Borquez, 1994; Conger & Elder, 1994), which in turn inhibits parents' emotional warmth and increases parents' erratic or disengaged behaviors. In turn, ineffective parenting can lead to poorer adjustment in the children (Elder, Nguyen, & Caspi, 1985; McLoyd, 1990).

In considering these two different theories (economic investments versus parental stress and behavior) it is important to note that they are not mutually exclusive. Indeed, it likely takes a sensitive and responsive parent to scaffold children's experiences with purchased "inputs" into development, such as books and toys. Nevertheless, research suggests that economic investments tend to link income (level and stability) to measures of children's cognitive achievement, while parenting behaviors more often account for linkages between economic conditions and children's emotional adjustment (Yeung, Linver, & Brooks-Gunn, 2002).

A third theoretical perspective suggests that children's observations of their parents' work experiences shape their own views of their future economic opportunities and this may be associated with their academic performance and attitudes. Parents can also serve as role models for their children's attitudes and behaviors via their own interpretation of job loss and unemployment experiences. On one hand, children who witness their parent's job loss may be motivated to stay in school in order to eventually secure better or more stable jobs than the ones parent is able to obtain. Conversely, children's pessimistic perceptions of their parents' labor

market experiences could diminish motivation and lead to behaviors such as disengagement from school or work (Barling, Dupre, and Hepburn, 1998; Galambos & Silbereisen, 1987). For example, Barling et al. showed that children's perceptions of their parents' job insecurity were negatively correlated with the children's belief in the Protestant work ethic (i.e., that work is inherently good and fulfilling and that hard work can overcome obstacles to success). As expected, when students had a low Protestant work ethic they were more likely to display low motivation to work.

The major existing studies assessing the associations between job loss, economic decline, family functioning, and child development discuss four family types in two historical periods: (a) white, dual-parent families during the Depression (Elder, 1999); (b) white, dual-parent rural families during the farm crisis of the 1980s (Conger & Elder, 1994); (c) white, dual-parent working class families during the manufacturing crisis of the 1980s (Flanagan & Eccles, 1993); and (d) low-income, black families of the late-1980s urban "underclass" (McLoyd et al., 1994). An important and consistent finding in these studies is that parental job loss and unemployment correlate negatively with a range of important dimensions of family and child well-being. However, there are several gaps in this research that we address in the current investigation. First, many of these studies focus on job loss among working-class or poor families, despite the fact that job loss affects workers at all income levels and is increasingly a middle-class phenomenon (Allegretto & Stettner, 2004; Farber, 1998). In the present study, we examine job loss in a national sample with all income groups represented. Second, most of the studies use cross-sectional data and are drawn from relatively small local samples. We use a nationally representative longitudinal data set to address concerns about generalizeability and to provide greater insight into causal relationships. Third, we extend previous work that has focused on

selected pathways of influence by presenting an integrated theoretical model that allows us to examine the relative contribution of loss of family income, reliance on government assistance programs, parental stress, and parent socialization behaviors as potential mediators of the association between parental job loss and unemployment and children's academic progress. By doing so, we can gain greater insight into the critical linking mechanisms, which might ultimately provide some guidance for intervention.

Fourth, and perhaps most important, our data assess parental employment status by collecting weekly work histories four times per year, allowing us to create detailed patterns of job loss and recovery based on intra-year employment and job transitions. Annual data, even if collected over the long-term, can clearly miss many important shorter-term employment transitions. Fifth, these data also allow us to identify underemployment and "downward mobility," important, but poorly understood phenomena. Although long recognized by labor market scientists, measures of economically inadequate employment (e.g., working part-time, but not by choice, because full-time work is unavailable, or regaining employment following a job loss at a lesser-paying job) have only very recently been linked to indicators of individuals' well-being (Dooley, 2003). To our knowledge, no study has linked downward mobility to child development. Finally, in the case of job losses, we are able to distinguish voluntary job separations (i.e., quits) from involuntary ones. The former have a different character, with perhaps different impacts, than the latter.

Method

Sample

Data for this paper are drawn from the 1996 panel of the Survey of Income and Program Participation (SIPP). The SIPP, which is conducted by the Census Bureau, is a nationally

representative sample of households whose (non-institutionalized) members are interviewed at 4-month intervals over a four-year period (each interview is considered a survey wave). The 1996 SIPP began with a panel of approximately 40,000 households, with a cumulative attrition rate of approximately 25%. Among the approximately 30,000 households observed at Wave 6 (the first wave in which child development is measured), approximately 11,000 households include at least one child under the age of 18 who is biologically related to the head of household.

Although the 1996 panel, which interviewed families from April 1996 to March 2000, was conducted during a relatively strong economy, it over-sampled individuals residing in areas with high poverty concentrations; this is especially relevant for the study of parental job loss. Employment information is collected from each person in the household over the age of 15, thus allowing identification of maternal and paternal patterns of job loss and unemployment in two-parent households. At each interview, data are collected on economic conditions, including income and employment, as well as household composition, for the preceding four months. This allows measurement of within-year patterns of employment as well as economic resources (i.e., income level and source).

Each survey wave collects information on demographic characteristics as well as labor force status for each week of the reference period from each individual in the household over the age of 15 (adult population). Those who had worked during the reference period report number of hours worked in a typical week and number of weeks worked. Those who did not work are asked if they were on layoff or had looked for a job. Information on income sources such as government programs is obtained, as is asset information.

Topical modules collecting information on parental stress and socialization practices, as well as child development measures, are included in Waves 6 and 12 of the panel (see Fields &

Smith, 1998, for an introduction). The interval between Waves 6 and 12 is two years. Questions pertaining to child well-being collected in the topical modules are asked of the "designated parent." In 98% of the cases in the SIPP, the designated parent in married parent families is the mother. Repetition of this information in Waves 6 and 12 allows assessment of change over time in child development as a function of parental employment patterns.

To create our analytic sample, we first selected individuals who were considered a "designated parent" and those with complete data in Waves 6 through 12. Given our interest in assessing maternal as well as paternal employment experiences, we restrict the sample to married couples with minor children at Waves 6 and 12 and, so as not to confound the analysis with the effects of family structure changes, to those adults who are married to the same person at both time points. However, we note that fathers who leave the household have a high likelihood of leaving the study. Thus, our requirement of complete data for the entire study period essentially results in a sample of stably married couples. Second, we imposed some restrictions on the sample based on the child data. To be included in the analytic sample, children had to be under the age of 18 at both points in time, have complete interviews and participate in both Wave 6 and Wave 12. Children were allowed to "age into" the sample, but those who "aged out" were not included. In total, information was collected on 4,476 children between the ages of 5 and 17. The sample sizes for the specific analyses vary somewhat as different measures of child development are collected for children of different ages.

Dependent Variables

Grade repetition. We determined whether the child repeated a grade between Waves 6 and 12. Responses are coded as a dichotomous variable (coded 1 if yes 0 if no). At Wave 6 and also at Wave 12, parents were asked if the child had ever repeated a grade and which grades they

had repeated, if so. Parents also reported the child's grade in school at these survey waves. If the reported grades repeated at the end of the interval correspond to grades held back between the Waves 6 and 12, the child was characterized as having repeated a grade during that time. The measure taken at Wave 6, therefore indicates prior lifetime repetition. Grade repetition is reported for those children who are 5-17 years of age and had ever attended or been enrolled in kindergarten, and therefore represents grade repetition after entering elementary school. If a child was under age 5 at Wave 6, but was age 5 or over at Wave 12, they are included in the sample and their grade repetition is obtained from the response at Wave 12.

Expulsion/Suspension. Parents specified, at Waves 6 and 12, whether and when adolescents ever were expelled or suspended from school. If an expulsion/suspension occurred between Waves 6 and 12, the child was coded as having been expelled, and expulsion reported at Wave 6 is prior lifetime expulsion. Responses are coded as a dichotomous variable (coded 1 if yes 0 if no). Expulsion and suspension is reported for those children who are between the ages of 12 and 17 and had ever attended or been enrolled in kindergarten, first grade or any grade in elementary school; and therefore represents expulsion and suspension for those who are middle school and beyond. If a child was under age 12 at Wave 6, but was age 12 or over at Wave 12, they are included in the sample and their expulsion/suspension information is obtained from the response at Wave 12.

Independent Variables

Employment patterns. Employment patterns are classified based on several labor force characteristics associated with the two-year interval between survey waves. The employment pattern variables are based on monthly labor force participation from the 24-month period between Wave 7 and Wave 12 of the SIPP. Mothers' and fathers' employment patterns are

assigned to seven mutually exclusive groups: (1) continually employed; (2) continually not working; (3) underemployed or downwardly mobile; (4) one gap in employment that is voluntary; (5) one gap in employment that is involuntary; (6) multiple job gaps where all are voluntary; and (7) multiple job gaps where at least one is involuntary.

To elaborate, mothers and fathers are characterized as continually employed if they were employed full-time (full-time is either more than 35 hours per week, or less than 35 hours per week if a full-time work week was less than 35 hours) all 24 months in the study period; if they were continually employed part-time by choice (part-time by choice includes people who indicated that the reason they worked part time (less than 35 hours per week) was (1) they wanted to work part-time, (2) they were taking care of children/other persons, (3) they participated in a job sharing arrangement, (4) they were on vacation, or (5) they were in school all 24 months in the study period); or some combination of the above two patterns. Parents are characterized as continually not working if for all 24 months they were either out of the labor force or on layoff (all or most of the month). Thus, this group combines individuals who are out of the labor force and unemployed, but small sample sizes preclude our distinguishing them.

Those parents who are characterized as underemployed or having experienced downward mobility consist of three types: (1) the parent was employed at the beginning of the period, lost a job, and obtained an involuntary part-time job (among the people in this subgroup, this is the experience of 15% of mothers and 13% of fathers), where those working part-time involuntarily indicated that the reason they worked less than 35 hours per week was because they (a) could not find a full-time job, (b) unable to find full-time work because of an injury, (c) unable to work full-time because of an illness or health condition, or (d) slack work or material shortage; (2) the parent was unemployed at the beginning of the period, and gained employment in an

involuntarily part-time job (among the people in this subgroup, this is the experience of 1% of mothers and 3% of fathers); and (3) the parent worked continuously, but in between the initial and final observation switched from full-time to involuntarily part-time work (among the people in this subgroup, this is the most common experience, representing 83% of mothers and 84% of fathers).

Characterizing parents with exactly one job "gap" is slightly more complicated. This group includes those parents with the following patterns: (1) the parent was employed at Wave 7, lost a job, and regained a full-time or part-time by choice job by Wave 12 (this is the modal category representing 52% of mothers and 68% of fathers in this subgroup); (2) the parent was working at Wave 7, lost a job, and did not regain employment by the last time we observe them in Wave 12 (among the people in this subgroup, this is the experience of 23% of mothers and 17% of fathers); and (3) the parent was unemployed at Wave 6 and obtained and kept a full-time or part-time by choice job by Wave 12 (among the people in this subgroup, this is the experience of 26% of mothers and 14% of fathers). Small sample sizes preclude our distinguishing these three groups, and for parsimony, we refer to this phenomenon henceforth as the "one job gap" group. Finally, those parents who experienced multiple job gaps during the two-year interval constitute their own group, but we cannot distinguish them according to their initial and final employment status due to small sample sizes.

Moreover, we further distinguish those with job gaps (single or multiple) by their voluntary or involuntary nature. The voluntary nature of the job gap is assigned based on the reason given for any employment separation during a reference period. Gaps are classified as voluntary if the reason for job separation or absence is any of the following: retirement, pregnancy and childbearing, taking care of children, going to school, taking a vacation, starting a

new job within the next 30 days, job sharing, and not interested in working. Gaps are classified as involuntary if the reason is the following: injury, illness or disability, unable to find work, on layoff, slack business or work conditions, bad weather, labor dispute, and "other reason" not specified. For those with multiple job gaps, if a parent reports an involuntary reason for at least one of the job absences they are placed in the involuntary group; for such persons to be placed in the voluntary group all gaps must be voluntary in nature.

Control variables: children's characteristics. We control for three child demographic characteristics in the models, age, gender, and race. Age is measured as a continuous variable at the Wave 6 interview. Gender and race are measured as dichotomous variables (coded 1 if girl and 0 if boy; coded 1 if White and 0 if non-White). In addition, we control for children's previous academic experience with variables drawn from Wave 6 indicating whether the children had ever at any time in the past repeated a grade or been suspended/expelled, respectively (coded 0 if no and 1 if yes).

Control variables: parents' characteristics. We control for several maternal and paternal demographic characteristics. First, maternal and paternal ages (measured at the Wave 6 interview) are entered as continuous variables. Second, we control for the highest education obtained by either parent, with five dichotomous variables: no college, some college, two-year degree, Bachelor's degree, and Master's degree or more (no college is omitted).

Household composition is assessed with two different variables measured at the Wave 6 interview. The first measure is the total number of children under the age of 18 residing in the household. The second measure is the total number of adults residing in the household, which can include own children who are older than 18. We also control for home ownership at Wave 6 (coded 1 if own 0 if rent) as a measure of wealth, and we control for the log of family income

averaged over the two-year period between Waves 1-6 as a measure of permanent income preceding our observations of parental employment patterns.

Mediator Variables

Economic resources. Economic resources are measured with two variables, income instability and benefit receipt. Income instability is a dichotomous variable representing whether or not the family income decreased by more than 30 percent from one four-month period to the next at any time between Waves 7 and 12 (total of 6 periods). Second, a dichotomous variable was created indicating whether anyone in the household received non-cash (eg. Food Stamps, WIC, Medicaid, free or reduced price school meals, etc.) or means-tested cash benefits at any time in the survey period (coded 1 if someone received benefits 0 otherwise).

Parenting behaviors. Parenting behaviors are measured with five variables assessing mothers' parental stress and mothers' and fathers' emotional care of children. Parenting stress is a summary scale comprised of four questions. Items included in this measure are: (1) my child is hard to care for; (2) my child does things that bother me; (3) parent gives up life to meet needs of child(ren); and (4) parent feels angry with child. These questions are measured on a 1-4 scale (corresponding to answers of *never, sometimes, often very often*), and the measure is the sum of the four questions (wave 6 $\alpha = .62$; wave 12 $\alpha = .66$). Higher values indicate greater parenting stress. Parenting stress is assessed for the mothers in Waves 6 and 12. The variable used as a mediator in the analysis is the average of these two values.

Emotional care is assessed for both the mother and the father (but all reports are gathered from the mother). The two different constructs include the frequency of (a) playing and (b) praising the child, again measured at Waves 6 and 12, and again, separately for mothers and fathers. The questions asked the mother how often she (and separately the father) and the child

(a) talk or play with each other for five minutes or more just for fun and (b) how often the parent praises or compliments the child. Each of these responses were coded on a five-point Likert scale ranging from 0 to 4 (*never, about once a week or less, a few times a week, one or two times a day, many times each day*). The Wave 6 and 12 measures of each construct were averaged together, separately for mothers and fathers.

Results

Sample Description

Table 1 presents the overall means and standard deviations of all variables in the analysis. Children's characteristics are reported for 4,476 children in the sample. Mothers' and fathers' employment patterns and household characteristics are reported for the 2,569 families to which these children belong. Of the 2,569 families, 1,153 have one child, 1,027 have two children, and the balance has three or more children in the sample (data not shown).

There is wide variation in mothers' employment patterns. The largest single group of mothers is continually working during the two-year window (40 percent), the next-largest group is continually not working (19 percent). Similarly, the majority of fathers are continually employed (72 percent).

Children are on average 9 years old at baseline, with a similar proportion of boys and girls. The majority (94 percent) of the children in the sample are White. This higher proportion of White families is to be expected given that we have limited the sample to stably married couples. Mothers are on average 37, while fathers are on average 40 years old at baseline. The most frequent level of parental education is no college (27 percent), with the next largest group representing those with a Bachelor's degree (23 percent). Each family has 2.1 children in the

household on average, and 2.2 adults. Most families reside in homes that are owned (85 percent). The average monthly income from all sources between Waves 1 and 6 is $5,390.

Children's Academic Progress

Sample sizes for the children's outcome differ from one another primarily because of the age groups and selection criteria for each question in the interview. The majority (4,392) of the children in the sample are included in the grade repetition analysis. There are 2,069 children with valid expulsion/suspension measures (recall that this measure was only asked of mothers whose children were between the ages of 12 and 17).

With respect to the academic progress measures, 3 percent of the 5-17 year olds in this sample repeated a grade in the two-year interval and 5 percent of the 12-17 year olds were expelled or suspended during this time. While no national statistics are collected on grade retention, it is estimated that 5 to 7 percent of public school children are retained annually (Center for Policy Research in Education, 1990). About 4 percent of the children in the sample ever experienced grade repetition, and 8 percent are ever expelled or suspended (data not shown). The extent of grade repetition in this sample is, therefore, less than the national average, but this is to be expected given that we have limited the sample to relatively more advantaged children who reside in married-parent households.

Mediator Variables

Thirty-nine percent of the families experience some income instability over the 24-month study period, with the majority of those experiencing instability only having one drop (74 percent), and the rest having between two and four drops (data not shown). Twenty-eight percent of families report receiving any government assistance in any of the 24 months. Of those

families who received any assistance, 17% received cash assistance in addition to non-cash assistance; the remainder received non-cash assistance only.

Mothers report lower than the mid-point of the parenting stress scale, with an average of 6.3. Mothers are more involved in playing and praising the child than are fathers, doing so on average more than a few times per week.

Regression Analyses

Multivariate regression analyses were conducted predicting both of the measures of children's academic progress. The outcomes are modeled using a logistic regression. The standard errors are corrected (using the cluster option in STATA) in all analyses to account for the presence of siblings in the data (clustering on the family).

Variables are entered into the analysis in blocks in separate models. Model 1 includes the employment patterns over the study period (continually employed is the reference group for both the mother and the father), the child and household characteristics, and the lagged dependent variable. Including the baseline value of the outcome measure as an independent variable provides a proxy for (1) unmeasured genetic influences; (2) any selection characteristics that discriminate families with different employment patterns that are related to adolescent functioning (but only to the extent that these unobserved characteristics are perfectly captured or determined by the baseline value of the outcome); and (3) children's prior functioning, which would at least partially reflect the effects of earlier employment histories (Cain, 1975).

It is important to note that inclusion of the lagged dependent variable in the present analysis might not necessarily control for random unobserved aspects of adolescent well-being—especially unobserved characteristics that vary over time—that could bias the effects of parental employment, and this approach does not control for parental or family level unobserved

characteristics. This could potentially bias upward the estimates for employment patterns on child outcomes. We note this limitation in the discussion.

Model 2 adds the economic resources to the original regression and Model 3 adds the parenting behaviors to the original regression. Separate analyses (available upon request) regressed the hypothesized mediators on the parental employment patterns. For mothers, all employment patterns, except underemployed, are significantly associated with increased odds of income instability. For fathers, all patterns are significantly positively associated with income instability. All employment patterns for mothers are significantly associated with increased odds of benefit receipt, as are all of the fathers' job patterns, with the exception of voluntary job gaps.

The parenting measures are less consistently associated with the parental employment patterns. With respect to the parenting behaviors, mothers' underemployment, as well as fathers' underemployment and multiple involuntary job gaps, are associated with significantly greater maternal parenting stress. None of the fathers' employment patterns are associated with these maternal reports of mothers' or fathers' playing or praising. Mothers' job gaps are associated with higher levels of maternal praise and playing, but lower levels of fathers' praise and play.

Children's academic progress. Table 2 presents the logistic regression results for grade repetition. Model 1 is significant and several of the employment patterns are individually significant. The children whose fathers experience an involuntary job gap during the study period show double the odds of grade repetition compared to those whose fathers are continually working. Additionally, children whose fathers experience multiple involuntary job gaps show slightly greater odds of grade repetition ($p = .07$). Girls and Whites are less likely to repeat a grade in the study period, as are those with older mothers. In contrast, the presence of a greater number of adults (some of whom might be siblings) in the household is associated with increased

odds of grade repetition. Interestingly, parental education is not significantly associated (at conventional levels) with grade repetition, however, higher permanent income levels are associated with lower odds of grade repetition. Finally, having repeated a grade prior to Wave 6 is highly associated with subsequent grade repetition.

Model 2 adds the economic resources to the original Model 1 analysis. Once income instability and benefit receipt are included in the analysis, the effect of having a father who has multiple involuntary job gaps on the log odds of grade repetition drops by more than half. Further, the effect of having one involuntary job gap decreases such that the coefficient becomes only marginally significant ($p = .06$). Income instability and benefit receipt, moreover, are also significantly independently associated with grade repetition. For example, the odds of grade repetition for children who experience income instability during the survey period, even holding employment patterns constant, are 1.6 times higher compared to those whose income is more stable.

Model 3 substitutes the parenting behaviors for the economic resources. Inclusion of these measures does not affect the significance or the magnitude of the effect of the employment patterns from Model 1, although higher levels of maternal parenting stress are associated (at trend levels) with greater odds of children's grade repetition.

Table 3 presents the logistic regression results for expulsion/suspension. Model 1 is highly significant and shows that the odds of suspension/expulsion for children whose fathers experience multiple job gaps during the 24-month period, whether voluntary or involuntary in nature, are 5.3 and 2.8 times higher, respectively, compared to children whose fathers continually work during that time. Girls and Whites have lower odds of suspension/expulsion than boys and non-Whites. Higher levels of parental education and income are associated with lower odds of

being expelled or suspended. Prior expulsion is also associated with expulsion or suspension during the study period.

As in the previous analysis, Model 2 adds the economic resources to the original Model 1 regression. In this model, the magnitude of the effect of fathers' multiple job losses declines only a small amount, and the economic resource variables are not themselves significantly associated with expulsion in Model 2. This shows that economic resources are much less important for suspension/expulsion than for grade repetition. Model 3, which substitutes the parenting behaviors, is also significant, and higher levels of parenting stress are associated with greater odds of expulsion and suspension. However, these variables similarly do not mediate the effect of fathers' multiple job losses.

Extensions

We performed several additional tests to examine whether the full-sample results differed for relevant subgroups. First, we assess whether the results differ for those families with more or fewer economic resources, as indicated by parental income. We hypothesize that families with fewer resources may be especially strained by job and income loss (Yeung & Hofferth, 1998). The sample was split at the median of the average monthly income in Waves 1 through 6. Those below the median level are classified as low-income, and those above the median level are high-income. Fathers' involuntary job gaps (both one and multiple ones) are associated with significantly increased odds of grade repetition in lower-income families, but none of the parental employment patterns are associated with expulsion for this group. In higher-income families, children whose fathers experience multiple voluntary job gaps are at increased risk of grade repetition, and higher-income children whose fathers experience multiple job gaps (both voluntary and involuntary) have increased odds of expulsion/suspension. In addition, higher-

income children whose fathers continually do not work have marginally higher odds of suspension/expulsion. Thus, the full-sample results showing a link between fathers' multiple job gaps and higher odds of suspension/expulsion appear to be true for higher-income children only, whereas the links between fathers' involuntary job loss and grade repetition are only true for lower-income children.

The mediated models are tested for lower-income children's grade repetition, and higher-income grade repetition and expulsion. In lower-income families, both of the effects of the fathers' involuntary job gaps are mediated by economic resources, but not by parenting resources. These findings reflect the pattern of results that was shown in the full-sample analysis. In higher-income families, neither economic resources nor parenting behaviors mediate the effect of fathers' multiple voluntary job gaps on grade repetition. Further, there is no evidence of mediation by either economic resources or parenting for the association between multiple fathers' experiences and children's expulsion for higher-income families, although income instability itself is associated with greater odds of expulsion.

Next, we examined whether the impact of parental employment differs depending on the age of the child. Recall that school suspension/expulsion is only available for the full sample of children who are older than 12 at the time of assessment. We therefore examine grade repetition separately for two age groups; those between 12 and 17 and those under 12. To the extent that parents' socioeconomic resources have been shown to be especially relevant for younger children's development (Duncan & Brooks-Gunn, 1997), we might expect particularly detrimental effects of parental job loss for this group. This is indeed what we find when we run Model 1 separately for the two age groups for grade repetition.

For older children, we find no significant associations between parental employment patterns and grade repetition. In contrast, for younger children, we find that fathers' multiple involuntary job losses are associated with significantly higher odds of repeating a grade. The association between fathers' having one job loss and higher odds of grade repetition is significant at trend levels in this subgroup. This suggests that the negative effects of fathers' involuntary job loss on grade repetition in the full sample are being driven by the younger children. It is important to note that the incidence of grade repetition in the older and the younger children is equivalent (approximately 3% for both groups) so the differences these tests are exposing are not a function of less grade repetition among the older children. Finally, young children whose fathers are underemployed have, somewhat surprisingly, lower odds of grade repetition.

We again examine the role of the mediators for these analyses. As in the full-sample analysis, for the younger children, once economic resources are included in the model, the effects of fathers' multiple involuntary job loss on the odds of grade repetition becomes only marginally significant ($p < .07$), and income instability is itself significantly associated with greater odds of repetition. Parenting behaviors are not associated with grade repetition for younger children.

Discussion

This study examined how maternal and paternal job loss and unemployment predicted children's grade repetition and school suspension/expulsion in a national longitudinal sample. We created detailed patterns of parental job experiences, distinguishing in particular parents who were not employed, underemployed, had one job gap, or had multiple job gaps over a two year period. We further classified those who experienced job gaps by whether those gaps were voluntary or involuntary in nature. We then examined whether and how parental job experiences

were related to children's academic progress, focusing on the relative explanatory role of income instability and source, on the one hand, and parental stress and emotional care, on the other.

We found significant adverse associations between fathers' involuntary job losses on children's probability of grade repetition and school suspension/expulsion. In the case of grade repetition, this was true for the younger and the lower-income children, and adverse effects were apparent when fathers experienced only one or more than one job gap. In contrast, the adverse associations between fathers' multiple job loss and suspension/expulsion was evident for the children ages 12 to 17 (recall that we have no measure of suspension/expulsion for younger children), but only for those in the higher-income families. Moreover, for these higher-income children, fathers' multiple job gaps were associated with higher odds of suspension/expulsion whether the gaps were voluntary or involuntary. Taken together, these results illustrate that the findings related to fathers' job losses are robust across different indicators of children's academic progress, with important variation across different subgroups.

In contrast, we found no associations between mothers' job experiences and children's academic progress. The lack of findings for mothers may reflect the fact that fathers' income represents a greater share of the household economy, and it is therefore a greater shock to the family when it is lost. Although the findings reported in Appendix I suggest that mothers' employment patterns are associated with income instability and receipt of government assistance, an examination of parental earnings between Waves 1 and 6 indicate that, on average, fathers' wages do indeed represent a greater proportion of total household income. The average monthly earnings over this time were $1,700 for mothers with any earnings and $3,500 for fathers with any earnings. In only 22% of families did mothers' average monthly earnings equal or exceed

the father's average earnings. Thus, even though mothers' earnings losses are associated with economic instability, the felt economic impacts of fathers' job losses are likely more substantial.

Another possibility is that fathers more often assume the "breadwinner" role in married-couple households and thus it is more of a perturbation to the family system when this role is not achieved. For example, it was much more common in this sample for mothers not to work at all during the observation period than it was for fathers to do so. Elder's (1999) conceptual framework posits that economic hardship made a difference in children's lives during the Great Depression in part by increasing the relative power of the mother and diminishing the attractiveness of the father as a role model. Perhaps this phenomenon is also relevant to contemporary families.

To our knowledge, ours is the first study to examine the potential impacts of parental underemployment on children's development. Interestingly, we found no significant negative impacts of this experience. It is possible that this experience is less stressful for families because, even though a full-time job has been lost, at least some employment has been regained, even though it is less well remunerated in terms of hours or pay. Perhaps from the standpoint of family well-being, it is better to be in this situation than to be without work at all.

Similarly, we found no adverse impacts of parents' persistent unemployment on children's well-being. This is somewhat difficult to explain, as the literature leads us to expect that prolonged unemployment, especially among fathers, would negatively predict child development. It is possible that these families have stabilized following job loss and have made necessary adaptations. In addition, it is important to bear in mind that this was a rare event for the fathers in this sample, occurring for only 3 percent of fathers, and thus we may have lacked power to detect effects. In the case of mothers, it is important to remember that the group of

continually not employed mothers includes those who are out of the labor force (i.e., homemakers) and thus presumably a voluntary situation for some. It is also possible that our approach, unlike in many previous cross-sectional studies, that controlled for the lagged dependent variable addressed some of the problems of omitted variables bias and thus provides more conservative estimates of the effects of these employment patterns

In terms of the mediators we examined, we highlighted the important role of family income instability and source in linking fathers' involuntary job losses to children's risk of grade repetition, recalling that this linkage was apparent for low-income and younger children in particular. In contrast, the set of parenting behaviors generally did not play a mediating role in our analyses. It is important to recall that the reports of parenting and children's academic progress we have here are collected from the mothers and that her experience of her own or her husband's job experiences may affect her views of both of these measures. Also, it is important to note that we have a relatively limited set of parenting measures; it is regrettable that we lack measures in these data of (especially fathers' reports of) the marital relationship, and of parental depression and anxiety, all of which are important in existing theoretical models.

Interestingly, whereas income instability and source mediated the associations between fathers' multiple job losses and the odds of children's grade repetition (again, for younger and lower-income children in particular), these variables did not mediate the associations between fathers' multiple job losses and older, higher-income children's school suspension/expulsion. To the extent that grade repetition reflects students' achievement, whereas suspension or expulsion reflect behavior problems, this pattern of findings coincides with previous theories laying out linkages between economic conditions and the cognitive development of young children in particular (e.g., Duncan & Brooks-Gunn, 1997). It is possible that income losses associated with

involuntary job loss diminish parental investments in the material goods or resources that are linked to young children's academic performance. This is likely especially true in lower-income families, who have fewer resources to begin with, and thus draw from, in times of need.

We know of few other studies that have examined parents' voluntary job losses (i.e., quits). In our study, we find that higher-income adolescent children of fathers who leave multiple jobs voluntarily have increased odds of school suspension/expulsion, as do their counterparts whose fathers do so involuntarily. Children of higher-income fathers who leave more than one job voluntarily also have higher odds of grade repetition. These associations are neither explained by income instability nor the parenting behaviors we could measure. It is certainly likely that there is family stress and conflict associated with fathers' cycling in and out of work over a short period of time, whether the father quit or was laid off. Indeed, we found that fathers' multiple involuntary job losses were associated with higher levels of mothers' parenting stress. This stress, and the ways in which it manifests itself, could relate to children's behavior and emotional well-being, and this is potentially reflected in their higher odds of school problems. Ideally, we would have measures of the father's emotional well-being and his relationships with his wife and children to examine as mediators. Of course, one must be also concerned about the type of higher-income father who would lose or quit multiple jobs; it is possible that his personal characteristics (e.g., his emotional volatility) make job holding difficult and interfere with his parenting abilities, and that this or a similar characteristic also predicts children's school problems.

In previous work with a national longitudinal data set examining the teenage children of single mothers (author cite), we found that employment instability (in the form of multiple transitions between work and non-work) was associated with an increased risk of school drop-

out and declines in adolescents' self-esteem and mastery. In that work, we also found that income instability predicted an increased risk of grade repetition. The findings presented here thus replicate and extend those found in previous reports. Other recent work with large longitudinal data sets has found negative effects of job instability on children's mental health and behavior problems (Kalil, Dunifon, & Danziger, 2001; Chase-Lansdale et al., 2003). To the extent that suspension/expulsion from school reflects behavior problems, the findings from this study coincide with previous work.

Our findings on the important role of income, but not parenting behavior, in linking involuntary job loss to grade repetition, especially for lower-income children, mirrors results from a recent set of experimental studies of mandated employment pointing to the relatively greater importance of the "economic resources" pathway. In these studies, which experimentally manipulated parents' employment status in low-income families, there were virtually no program impacts on parenting behavior or the quality of the home environment (Gennetian & Miller, 2002; Huston et al, 2001). And, in Chase-Lansdale et al. (2003), the quality of mothers' parenting (e.g., structured family routines or cognitive stimulation) did not change as mothers' employment status changed.

In sum, results presented here suggest that children's well-being may be compromised when fathers experience high job instability. Lower-income and younger children whose fathers lose jobs involuntarily, whether only once or more than once in a 2-year period, are at higher risk of grade repetition, and this due in large part to family income instability associated with job loss. Higher-income children whose fathers lose multiple jobs, whether voluntarily or involuntarily, face higher odds of suspension/expulsion as well as grade repetition. Several issues warrant exploration in future research. Most importantly, researchers need to know what

the short and long-term implications are of the observed effects on the child outcomes measured. Grade repetition, for example, has long-term implications, primarily as one of the strongest predictors of dropping out of school and not returning (Jimerson, Anderson, & Whipple, 2002). It could be possible that leaving school may not portend negative future employability if the student has the opportunity to apprentice in a vocational field or receive job training. Unfortunately, these opportunities are increasingly rare. Between 1985 and 2003, the Department of Labor decreased investments in the Workforce Investment Act funding by 33 percent (Spence & Kiel, 2003). In addition, suspension and expulsion are disciplinary actions taken by the school. It is important to understand the long-term effects of having been the target of such serious disciplinary action.

An obvious problem inherent in non-experimental research is determining causality. This limitation applies to the present study as well. If job termination was a random act perpetrated by the market then it would be reasonable to interpret job holding patterns as a reflection of the environment rather than of the individual's tastes and propensities. Of course the truth is that many of these fathers might have provoked a termination by their behavior. It is easy to imagine that the quality of parental mental health or parenting is also related to the traits that influence job holding and that it is these characteristics that are responsible for the problems in children's functioning that we observe here. It is also possible that genetic commonalities account for these linkages. Longitudinal data with repeated measures of child well-being go a long way to address these problems, but other approaches would be possible with different data. Our ability to distinguish voluntary versus involuntary job separations helps to address this problem as well.

In addition, our paper focuses on stably married couples. As we discussed in the methods section, this limitation is essentially imposed on the sample because we require complete

information on fathers' employment; the data are quite limited on fathers who leave the household. Our analysis suggests that we would only re-capture a handful of fathers who divorce and leave the household if we maintained our requirement of complete employment data – too few to analyze. Thus, we may be underestimating the impact of parental job loss on child well-being to the extent that we include here only the "best" functioning families who stay together. The impact of parental job loss on separation and divorce is an important topic for future research.

In sum, given the climate of economic change in the United States at the present time, we can expect increasing numbers of parents to lose their jobs in the near future. Recent headlines trumpet news of corporate restructuring and mass layoffs in all sectors of the economy, from manufacturing to telecommunications. Results from this study suggest that such changes in the business cycle can have a profound impact on the development of the present generation of children and adolescents.

Our results might be relevant to public policy in several ways. To the extent that the associations between fathers' multiple job losses and children's risk of grade repetition are a function of income instability, especially for lower-income children, our results might inform programs aimed at mitigating the economic shock of job loss. Such programs could involve direct financial assistance to families such as unemployment insurance programs or they could help to promote parents' job search skills, training for a new occupation, or education in effective money management. Not only might such programs help to ease the economic burden on the family and any declines in economic investments in children's activities or goods, but they could also affect the families' emotional well-being by lessening psychological distress and

perceptions of economic strain. To the extent that future work identifies significant mediators such as parental mental health or parenting behaviors, these, too can be targeted for intervention.

References

Allegretto, S., & Stettner, A. (2004). *Educated, experienced, and out of work. Long-term joblessness continues to plague the unemployed.* EPI Issue Brief #198

Barling, J., Dupre, K., & Hepburn, C. (1998). Effects of parents' job insecurity on children's work beliefs and attitudes. *Journal of Applied Psychology, 83,* 112-118.

Becker, G. S., & Thomes, N. (1986). Human capital and the rise and fall in families. *Journal of Labor Economics, 4,* S1-S139.

Bureau of Labor Statistics (2004, July). Worker displacement, 2001-2003. Accessed August 5, 2004 from http://www.bls.gov/cps

Cain, G. (1975). Regression and selection models to improve nonexperimental comparisons. In C. Bennett & A. Lumsdaine (Eds.), *Evaluation and experiment: Some critical issues in assessing social programs (pp. 297-317)*. New York: Academic Press.

Center for Policy Research in Education. (1990). *Repeating grades in school: Current practice and research evidence.* CPRE Policy Briefs, RB-04-1/90: U.S. Department of Education.

Chase-Lansdale, P.L., Moffitt, R., Lohman, B., Cherlin, A., Coley, R., Pittman, L., et al. (2003). Mothers' transitions from welfare to work and the well-being of preschoolers and adolescents. *Science, 299*, 1548-1552.

Conger, R., & Elder, G. H., Jr. (1994). *Families in troubled times.* New York: Walter de Gruyter.

Dooley, D. (2003). Unemployment, underemployment, and mental health: Conceptualizing employment status as a continuum. *American Journal of Community Psychology, 32,* 9-20.

Duncan, G. & Brooks-Gunn, J. (1997). *The consequences of growing up poor*. New York: Russell Sage.

Elder, G. (1999, April). *Historical times and lives: A journey through time and space*. Paper presented at the Henry A. Murray Center for the Study of Lives, Cambridge, MA.

Elder, G.H., Nguyen, T., & Caspi, A. (1985). Linking family hardship to children's lives. *Child Development, 56*, 361-375.

Farber, H. S. (1998). *The changing face of job loss in the United States*. Brookings Papers: Microeconomics 1997, 55-142.

Farber, H. S. (1993). *The incidence and costs of job loss: 1982-91*. Brookings Papers: Microeconomics 1993, 73-119.

Fields, J. & Smith, K. (1998). *Poverty, family structure, and child well-being: Indicators from the SIPP*. Population Division Working Paper No. 23. Washington, D.C.: U.S. Bureau of the Census.

Flanagan, C. & Eccles, J. (1993). Change in parents' work status and adolescents' adjustment at school. *Child Development, 64*, 246-257.

Galambos, N. & Silbereisen, R. (1987). Income change, parental life outlook, and adolescent expectations for job success. *Journal of Marriage and the Family, 49*, 141-149.

Gennetian, L., & Miller, C. (2002). Children and welfare reform: A view from an experimental welfare program in Minnesota. *Child Development, 73,* 601-620.

Huston, A. C., Duncan, G. J., Granger, R., Bos, J., McLoyd, V., Mistry, R., et al. (2001). Work-based anti-poverty programs for parents can enhance the school performance and social behavior of children. *Child Development, 72*, 318-336.

Jacobson, L. S., LaLonde, R. S., & Sullivan, D. G. (1993). Earnings losses of displaced workers. *American Economic Review, 83*, 685-709.

Jimerson, S. R., Anderson, G. E., & Whipple, A. D. (2002). Winning the battle and losing the war: Examining the relation between grade retention and dropping our of high school. *Psychology in the Schools, 39*, 441-457.

Kalil, A., Dunifon, R., & Danziger, S. K. (2001). Are children's behavior problems affected by their mothers' work participation since welfare reform? In G. Duncan & P. L. Chase-Lansdale (Eds.), *For better and for worse: Welfare reform and the well-being of children and families (pp. 154-178).* New York: Russell Sage Foundation.

Kessler, R. C., House, J. S., & Turner, J. B. (1987). Unemployment and health in a community sample. *Journal of Health and Social Behavior, 28(1)*, 51-59.

Kessler, R. C., Turner, J. B., & House, J. S. (1987). Intervening processes in the relationship between unemployment and health. *Psychological Medicine, 17*, 949-961.

Kessler, R. C., Turner, J. B., & House, J. S. (1988). Effects of unemployment on health in a community survey: Main, modifying, and mediating effects. *Journal of Social Issues, 44*, 69-85.

Kessler, R. C., Turner, J. B., & House, J. S. (1989). Unemployment, reemployment, and emotional functioning in a community sample. *American Sociological Review, 54*, 648-657.

McLoyd, V. (1990). The impact of economic hardship on black families and children: Psychological distress, parenting, and socioemotional development. *Child Development, 61*, 311-346.

McLoyd, V. (1998). Socioeconomic disadvantage and child development. *American Psychologist, 53*, 185-204.

McLoyd, V. C., Jayaratne, T. E., Ceballo, R., & Borquez, J. (1994). Unemployment and work interruption among African American single mothers: Effects on parenting and socioemotional functioning. *Child Development, 65*, 562-589.

Morris, P., Duncan, G., & Rodriguez, C. (2004, March). *Does money really matter? Estimating impacts of family income on children's achievement with data from random-assignment experiments*. Paper presented at the Annual Meetings of the Population Association of America.

Newburger, E. C., & Curry, A. (2000). *Educational attainment in the United States: Population characteristics*. Current Population Reports (P20-528).

Ruhm, C. (1991). Are workers permanently scarred by job displacements? *American Economic Review, 81*, 319-24.

Spence, R., & Kiel, B. (2003). *Skilling the American workforce "on the cheap":Ongoing shortfalls in Federal funding for workforce development*. Washington, D.C.: Workforce Alliance Report.

Stevens, A. H. (1997). Persistent effects of job displacement: The importance of multiple job losses. *Journal of Labor Economics, 15,* 165-188.

Yeung, W. J., & Hofferth, S. L. (1998). Family adaptations to income and job loss in the U.S. *Journal of Family and Economic Issues, 19,* 255-283.

Yeung, W.J., Linver, M., & Brooks-Gunn, J. (2002). How money matters for young children's development: Parental investment and family process. *Child Development, 73*, 1861-1879.

Table 1

Descriptive Statistics of Study Variables

	Overall Mean or Percent	SD
Mother Employment Pattern		
Continually works	.40	---
Continually does not work	.19	---
Underemployed	.05	---
One job gap voluntary	.11	---
One job gap involuntary	.08	---
More than one job gap voluntary	.07	---
More than one job gap involuntary	.09	---
Father Employment Pattern		
Continually works	.72	---
Continually does not work	.03	---
Underemployed	.08	---
One job gap voluntary	.05	---
One job gap involuntary	.05	---
More than one job gap voluntary	.01	---
More than one job gap involuntary	.06	---
Child Characteristics		
Age (baseline)	9.12	3.54
Gender (Girl)	.50	---

White	.94	---
Household Characteristics		
Mother age (baseline)	37.31	6.21
Father age (baseline)	39.60	6.89
Highest parental education		---
<= High school	.27	---
Some college	.16	---
Two-year degree	.19	---
Bachelor's degree	.23	---
Master's degree or more	.15	---
Baseline number of children	2.14	.94
Baseline number of adults	2.17	.47
Own home (baseline)	.85	---
Log income (avg w1-w6)	8.40	.64
Economic resources		---
Income instability	.39	---
Ever received benefits	.28	---
Parenting behaviors		---
Parenting stress	6.34	1.52
Mother play	3.22	.72
Father play	2.99	.78
Mother praise	3.21	.71

Father praise	2.99	.79
Baseline scores on outcome variables		
Ever previously repeated a grade	.03	---
Ever previously expelled/suspended	.04	---
Outcomes		
Repeated a grade	.03	---
Expelled/suspended	.05	---

Note: Sample sizes differ for each variable. Variables measured at the family level (employment patterns, household characteristics, economic resource mediators, and parenting stress) are available for 2,569 families. Child characteristics are available for 4,476 children. Grade repetition is reported for 4,392 children. Expulsion/suspension is reported for 2,069 children.

Table 2

Logistic Regression Results: Repeated a Grade (n=4,392)

	Model 1			Model 2			Model 3		
	B	SE B	OR	B	SE B	OR	B	SE B	OR
Mother Employment Pattern									
Continually does not work	.04	.32	1.04	-.07	.32	.93	.04	.33	1.04
Underemployed	-.72	.70	.49	-.79	.67	.46	-.67	.73	.51
One job gap voluntary	-.14	.38	.87	-.25	.37	.78	-.10	.39	.91
One job gap involuntary	-.16	.42	.85	-.26	.43	.77	-.17	.41	.84
More than one job gap voluntary	.36	.41	1.43	.23	.41	1.26	.38	.42	1.46
More than one job gap involuntary	-.06	.41	.94	-.15	.41	.86	-.03	.41	.97
Father Employment Pattern									
Continually does not work	-.40	.56	.67	-.55	.58	.58	-.37	.56	.69
Underemployed	-.24	.39	.78	-.38	.39	.68	-.31	.39	.73
One job gap voluntary	-1.29	.86	.28	-1.36	.85	.26	-1.21	.85	.30

One job gap involuntary	.78	*	.35	2.19	.64	§	.34	1.89	.77	*	.36	2.15
More than one job gap voluntary	.86		.55	2.35	.64		.57	1.89	.85		.55	2.34
More than one job gap involuntary	.66	§	.37	1.94	.46		.38	1.58	.64	§	.37	1.89
Child Characteristics												
Age (baseline)	-.02		.03	.98	-.02		.03	.98	-.02		.04	.98
Sex (Girl)	-.47	*	.22	.63	-.46	*	.22	.63	-.47	*	.23	.63
White	-.99	**	.32	.37	-.88	**	.32	.42	-1.00	**	.33	.37
Household Characteristics												
Mother age (baseline)	-.09	**	.03	.91	-.09	**	.03	.92	-.09	**	.03	.91
Father age (baseline)	.05	§	.02	1.05	.04	§	.02	1.04	.04	§	.02	1.04
Highest parental education												
Some college	-.28		.31	.75	-.19		.32	.83	-.28		.32	.75
Two-year degree	-.60		.37	.55	-.49		.38	.61	-.58		.38	.56
Bachelor's degree	-.31		.40	.73	-.20		.41	.82	-.32		.39	.72
Master's degree or more	-.01		.41	.99	.13		.42	1.14	-.03		.42	.97
Baseline number of children	-.04		.11	.96	-.09		.11	.92	-.05		.11	.95

Baseline number of adults	.42	**	.14	1.52	.38	**	.15	1.47	.43	**	.15	1.54
Own home (baseline)	.20		.32	1.22	.25		.32	1.28	.29		.32	1.33
Log income (avg w1-w6)	-.39	**	.14	.68	-.31		.14	.73	-.40	**	.14	.67
Prior lifetime grade repetition	3.92	***	.27	50.37	3.89	***	.28	48.96	3.89	***	.28	48.77
Economic resources												
Income instability	---				.46	*	.23	1.58	---			
Ever received benefits	---				.51	*	.25	1.66	---			
Parenting behaviors												
Parenting stress	---				---				.13	§	.07	1.14
Mother play	---				---				-.07		.28	.94
Father play	---				---				-.27		.25	.76
Mother praise	---				---				-.15		.33	.86
Father praise	---				---				.47		.30	1.60
Constant	1.07		1.31		-.04		1.34		.32		1.50	
Chi-Square	323.27	***			311.93	***			334.49	***		
Pseudo R-square	.28				.28				.28			

Note: § $p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$.

Table 3

Logistic Regression Results: Expulsion/Suspension (n=2,069)

	Model 1			Model 2			Model 3		
	B	SE B	OR	B	SE B	OR	B	SE B	OR
Mother Employment Pattern									
Continually does not work	-.35	.34	.71	-.42	.35	.66	-.32	.34	.73
Underemployed	-.42	.56	.65	-.50	.59	.61	-.63	.57	.53
One job gap voluntary	.27	.38	1.31	.20	.38	1.23	.18	.37	1.19
One job gap involuntary	-.02	.40	.98	-.04	.39	.96	-.10	.42	.90
More than one job gap voluntary	.11	.43	1.12	.02	.43	1.03	.06	.43	1.06
More than one job gap involuntary	.09	.38	1.10	.03	.38	1.03	.06	.37	1.06
Father Employment Pattern									
Continually does not work	.73	.56	2.07	.64	.57	1.90	.63	.55	1.87
Underemployed	.40	.45	1.50	.35	.45	1.42	.30	.41	1.36
One job gap voluntary	-.34	.68	.71	-.40	.66	.67	-.35	.69	.70

One job gap involuntary	.52		.41	1.67	.41		.41	1.51	.54		.43	1.72
More than one job gap voluntary	1.67	**	.54	5.31	1.58	**	.54	4.86	1.29	*	.59	3.63
More than one job gap involuntary	1.02	**	.37	2.78	.91	*	.40	2.47	.99	**	.37	2.68
Child Characteristics												
Age (baseline)	-.02		.07	.98	-.03		.07	.97	-.01		.07	.99
Sex (Girl)	-.79	**	.23	.46	-.79	**	.23	.45	-.77	**	.24	.47
White	-1.03	**	.37	.36	-.99	**	.38	.37	-1.15	**	.35	.32
Household Characteristics												
Mother age (baseline)	-.05	§	.03	.95	-.05	§	.03	.95	-.05	§	.03	.96
Father age (baseline)	.00		.03	1.00	.01		.03	1.01	.00		.02	1.00
Highest parental education												
Some college	-.12		.31	.89	-.10		.31	.90	-.05		.30	.96
Two-year degree	-.27		.28	.76	-.23		.28	.79	-.22		.28	.81
Bachelor's degree	-1.71	***	.44	.18	-1.72	***	.44	.18	-1.58	***	.43	.21
Master's degree or more	-1.55	**	.48	.21	-1.51	**	.48	.22	-1.43	**	.51	.24
Baseline number of children	-.17		.11	.85	-.20	§	.12	.82	-.22	*	.11	.80

Baseline number of adults	.20		.21	1.23	.15		.23	1.16	.19		.23	1.21
Own home (baseline)	.07		.33	1.08	.09		.33	1.10	.11		.33	1.11
Log income (avg. w1-w6)	.60	**	.21	1.83	.70	**	.21	2.01	.51	*	.22	1.67
Prior lifetime suspension/expulsion	2.33	***	.33	10.28	2.32	***	.34	10.21	2.22	***	.34	9.21
Economic resources												
Income instability	---				.32		.23	1.38	---			
Ever received benefits	---				.31		.27	1.36	---			
Parenting behaviors												
Parenting stress	---				---				.32	***	.07	1.37
Mother play	---				---				-.09		.27	.92
Father play	---				---				.13		.23	1.13
Mother praise	---				---				.15		.28	1.16
Father praise	---				---				-.39		.24	.68
Constant	-4.86	*	2.04		-5.68	**	2.03		-5.52	**	2.08	
Chi-Square	143.37	***			145.75	***			158.19	***		
Pseudo R-square	.17				.17				.20			

Note: §$p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$.