

# Discussion Papers

Do Child Characteristics  
Affect How Children Fare  
in Families Receiving and  
Leaving Welfare?

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Assessing  
the New  
Federalism

*An Urban Institute  
Program to Assess  
Changing Social  
Policies*

*Assessing the New Federalism* is a multiyear Urban Institute project designed to analyze the devolution of responsibility for social programs from the federal government to the states, focusing primarily on health care, income security, employment and training programs, and social services. Researchers monitor program changes and fiscal developments. Alan Weil is the project director. In collaboration with Child Trends, the project studies changes in family well-being. The project aims to provide timely, nonpartisan information to inform public debate and to help state and local decisionmakers carry out their new responsibilities more effectively.

Key components of the project include a household survey and studies of policies in 13 states, available at the Urban Institute's web site, <http://www.urban.org>. This paper is one in a series of discussion papers analyzing information from these and other sources.

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**Contents**

Research Approach .....1

How Does Developmental Risk Compare for Children in Current  
Recipient and Leaver Families by Gender, Age, and Race or Ethnicity?.....4

Why Might Adolescent Boys in Former Recipient Families Fare Worse  
than Those in Current Recipient Families?.....6

Further Evidence on Why Adolescent Boys in Former Recipient Families  
Seem at Elevated Risk .....18

Conclusion and Discussion .....28

References .....36

Appendix tables .....38



## **Do Child Characteristics Affect How Children Fare in Families Receiving and Leaving Welfare?**

Previous research using the 1999 National Survey of America's Families (NSAF) found few differences in developmental risk between children in families who were currently receiving welfare and those in families that had formerly received welfare.<sup>1</sup> This paper reports on new NSAF analyses revealing a pattern in which male adolescents in the families of former recipients may be faring worse than their counterparts in the families of current recipients. We also find that family income, family structure, parental employment, and symptoms of poor parent mental health differed by welfare receipt status and, for income, by gender as well, for adolescents in 1999. Yet, these differences in family characteristics did not account for the elevated levels of developmental risk found among adolescent boys in former recipient families.

### **Research Approach**

In this paper, we use data from NSAF to look at two mutually exclusive groups of children: children in families currently receiving welfare (current recipients) and children in families that had previously received welfare but were no longer recipients (leavers). We define *current recipients* as families that were receiving welfare at the time of their NSAF interview in 1999. *Leavers* are defined as families that received welfare at some point within the two years before their interview in 1999, but who were not receiving welfare at the time of their interview. (Sample characteristics are described in appendix table 1.) This paper does not consider children whose families never received welfare, or whose families had received welfare more than two years before the survey but not more recently.<sup>2</sup>

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<sup>1</sup> See Zaslow et al. (2002).

<sup>2</sup> See Zaslow et al. (2002) for findings regarding these groups.

For both current recipients and leavers, we identified the percentage of children under age 18 who appeared at risk for poor developmental outcomes. To assess developmental risk, we used seven age-appropriate, parent-reported measures available in the NSAF:

- Fair or poor health status (assessed for ages 0 to 17)
- Limiting physical, mental, or health condition (ages 0 to 17)
- High level of behavioral or emotional problems (ages 6 to 17)<sup>3</sup>
- Low level of school engagement (ages 6 to 17)<sup>4</sup>
- Skipped school two or more times in the past year (ages 12 to 17)
- Suspended or expelled in the past year (ages 12 to 17)
- No participation in extracurricular activities in the past year (ages 6 to 17)<sup>5</sup>

Our previous analyses of the 1999 NSAF, which did not consider child gender or race/ethnicity, or look systematically for differences by child age, also used these measures of developmental risk to compare children in welfare recipient and leaver families. These previous analyses indicated that, among all 12- to 17-year-olds, children in current recipient families were *less* likely to have been suspended or expelled from school in the past year than children in former recipient families, while, among all children under 18, children in current recipient families were *more* likely to have a limiting health, physical, or mental condition than children in former recipient families.<sup>6</sup> This earlier investigation did not find differences by welfare status on

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<sup>3</sup> The NSAF measure of behavioral and emotional problems is a scale based on parents' responses to six questions regarding how often in the past month their children didn't get along with other kids, couldn't concentrate or pay attention for long, and were unhappy, sad, or depressed. Parents of 6- to 11-year-olds were also asked how often during the past month their children felt worthless or inferior; were nervous, high-strung, or tense; or acted too young for their age. Parents of 12- to 17-year-olds were also asked how often during the past month their children had trouble sleeping, lied or cheated, and did poorly at schoolwork (Ehrle and Moore 1999).

<sup>4</sup> The NSAF measure of school engagement is based on a scale created from parents' responses to four questions about how often their children did schoolwork only when forced to, did just enough schoolwork to get by, always did homework, and cared about doing well in school (Ehrle and Moore 1999).

<sup>5</sup> The NSAF asked parents whether, in the last year, their child had been on a sports team either in or out of school, taken lessons after school or on weekends, had participated in any clubs or organizations after school or on weekends, or had participated in any other organized activities during the past year.

<sup>6</sup> See Zaslow et al. (2002).

other measures of risk, including children's behavioral and emotional problems, health status, level of engagement in school, likelihood of skipping school, or participation in extracurricular activities.

The present paper extends previous research by exploring how patterns of developmental risk in children may differ between former and current recipient families within gender groups (contrasting boys in current versus former recipient families and girls in current versus former recipient families), age (contrasting children in current versus former recipient families among those under age 6, age 6 through 11, and age 12 through 17), or racial or ethnic group (contrasting children in current and former recipient families separately among those who are non-Hispanic white, non-Hispanic black, and Hispanic). Examining patterns of risk within specific demographic subgroups is important, because there may be differences in how boys and girls, younger and older children, and children in families of different racial or ethnic groups are faring when families leave welfare or participate in welfare-to-work programs. Further, different patterns for specific subgroups may be obscured when looking at the overall population.

Experimental evaluations of welfare-to-work programs provide some indications of differences by subgroups. For example, regarding child age, multiple experimental evaluations of welfare-to-work programs suggest that programs that increased family income tended to positively affect young school-age children. These same programs, nevertheless, often had negative impacts on adolescents (Brooks, Hair, and Zaslow 2001; Zaslow et al. 2002). An example of findings regarding child gender comes from the Child Outcomes Study of the National Evaluation of Welfare-to-Work Strategies. This study evaluated impacts on young children of six mandatory work-first or education-first programs implemented under the Family Support Act. These programs generally increased employment but did not raise income, and had

few effects on young children. Where child health was affected, however, impacts were generally negative, and these negative impacts were found to occur particularly among boys.

### **How Does Developmental Risk Compare for Children in Current Recipient and Leaver Families by Gender, Age, and Race or Ethnicity?**

A preliminary look at the level of risk for boys versus girls, by welfare receipt status. While direct comparisons between boys and girls are not our primary focus, it is worthwhile noting that, on the measures examined here, leaver boys fared worse than leaver girls regardless of age, with only a few exceptions (see appendix table 2). The percentages of leaver boys and leaver girls in fair or poor health did not differ significantly, nor did the percentages of 6- to 11- and 12- to 17-year-olds who did not participate in extracurricular activities, nor the percentages of 6- to 11-year-old leaver boys and girls with a high level of behavior problems. In contrast, among current recipients, boys and girls fared similarly, with only a few exceptions. Among children under age 6, current recipient boys were more likely to be rated as having fair or poor health than current recipient girls, while among 12- to 17-year-olds, current recipient boys were less likely to skip school than current recipient girls. Additionally, among 12- to 17-year-old current recipients, boys were less likely than girls to have participated in extracurricular activities.

Differences in risk level of children in current recipient versus leaver families by child gender subgroups. Turning now to differences in risk level according to family welfare receipt status for boys and for girls, we focus first on younger children. The NSAF data show no consistent differences in the levels of risk between younger children in leaver and current recipient families when boys and girls are considered separately (see appendix table 2). Among 6- to 11-year-olds, leavers and current recipients were equally likely to have problems on four of the five measures of risk appropriate for that age group, regardless of a child's gender. Among girls age 6 to 11, children in current recipient families were more likely than those in former recipient families to

have participated in extracurricular activities in the previous year. For the two measures of risk appropriate for children under age 6 (health status and limiting physical, mental, or health condition), there were no differences in the levels of risk between children in current recipient and leaver families for boys, and one difference for girls. Among girls under age 6, those in leaver families were less likely than those in current recipient families to have a limiting physical, mental, or health condition. Overall, for younger children of both genders, risk level was similar for those in current and former recipient families.

Turning to older children, however, the evidence suggests a differing pattern for boys and girls. Among adolescent boys age 12 to 17, children in leaver families tended to fare worse than children in current recipient families in 1999. This pattern was consistent across four of seven child risk measures examined for adolescent boys, but the pattern was *not* apparent among adolescent girls (see appendix table 2). Adolescent boys whose families had left welfare were more than twice as likely as adolescent boys whose families were currently receiving welfare to have a high level of behavior problems, to have skipped school two or more times in the previous year, to have been suspended or expelled in the previous year, and to exhibit a low level of school engagement. Adolescent boys in current and former recipient families were equally likely to have a limiting physical, mental, or health condition, to be in fair or poor health, and to have no participation in extracurricular activities in the previous year. Among adolescent girls, those in former and current recipient families were equally likely to have problems on all the measures examined, with one exception: girls in leaver families were *less* likely to have skipped school than were girls in current recipient families.

For adolescent boys, differences in risk by welfare receipt status seem to be concentrated in school-related areas. As noted above, levels of risk on the two health-related risk measures did not vary with welfare receipt status either for adolescent boys or for adolescent girls.

Differences by race/ethnicity. Analyses of the 1999 NSAF revealed few differences between children in current and former welfare recipient families by racial or ethnic group membership. Among non-Hispanic blacks, but not among non-Hispanic whites or Hispanics, children in current recipient families were less likely than children in leaver families to have been suspended or expelled (for ages 12 to 17)<sup>7</sup> but were also less likely to have participated in any extracurricular activities (for ages 6 to 11).<sup>8</sup>

When separating out age, gender, and racial/ethnic subgroups, then, a new pattern emerges in which adolescent boys in leaver families appear to be at higher risk than their peers in families receiving welfare particularly on school-related variables. However, no consistent patterns emerge by racial or ethnic groups for girls, or for younger boys.

### **Why Might Adolescent Boys in Former Recipient Families Fare Worse than Those in Current Recipient Families?**

We considered several possible explanations for our finding that, among adolescent boys (but not adolescent girls), children in leaver families appear to be at greater developmental risk than children in current recipient families. Our hypotheses fall into two major categories (figure 1). One set of hypotheses assumes that mothers deal with high risk among adolescents in ways that differ according to an adolescent's gender, and that these in turn are related to the likelihood and ways of leaving welfare. In this set of hypotheses, the risk status of the adolescents antedates and

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<sup>7</sup> 54.6 percent compared with 70.2 percent ( $p < .10$ ).

<sup>8</sup> 54.0 percent compared with 75.8 percent ( $p < .05$ ).

helps explain the family's departure (or lack of departure) from welfare. Figure 1 depicts this hypothesized relationship with the combination of child risk level and gender on the left side of the figure and families' welfare receipt status shown on the right side of the figure. Since adolescents' risk status is hypothesized to affect indirectly families' welfare receipt status, we label this set "selection" hypotheses.

A second set of hypotheses focuses instead on what happens after leaving welfare. These hypotheses posit that leaving welfare (or the changing family circumstances that accompany leaving welfare) affects boys differently from girls. Figure 1 depicts this pathway, with welfare status on the left side of the figure and child risk level on the right side. This set of hypotheses proposes that the gender differences in the risk levels of adolescents in current versus former recipients are evidence of negative consequences for boys whose families leave welfare. We call this set of possibilities "mediating" hypotheses, because leaving welfare is the pathway that helps to explain, or "mediate," the outcomes for the adolescents.

Mediation might work in two ways, as shown in figure 1. In version A, when families leave welfare, the families' circumstances or characteristics may change in different ways depending on whether the adolescent is a boy or a girl. That is, a problematic family characteristic may be more likely to develop in leaver families with adolescent boys than in leaver families with girls, and the differing presence of such a family characteristic may help explain the difference in adolescent outcomes for boys in recipient and leaver families. In version B, when families leave welfare, how family characteristics change does not differ by adolescents' gender. Rather, boys are hypothesized to be particularly sensitive to the changing family characteristics.<sup>9</sup> In this scenario, we would not expect to see patterns of family

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<sup>9</sup> In general, mediating hypothesis A indicates that rates of the mediator differ by gender in leaver families.

characteristics of current versus former recipients to differ by adolescent gender, but the family characteristic nevertheless would help explain the difference in risk levels found between adolescent boys in leaver and recipient families but not found for girls. (We use “A” and “B” to distinguish between the two mediating hypotheses throughout the remainder of the paper.)

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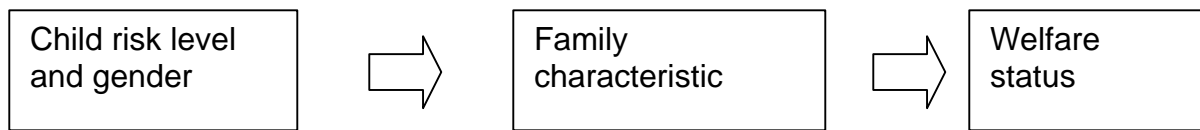
Mediation occurs for both genders. Difference in outcomes occurs not because of differential sensitivity but because the levels of the mediator differ by gender. Mediating hypothesis B indicates that levels of the mediators do not differ by gender in families of leavers. Rather, mediation occurs only or more strongly for adolescent of one gender.

**Figure 1. Hypothesized Pathways That Explain Why Adolescent Boys in Former Recipient Families Might Fare Worse than Those in Current Recipient Families**

*Boxes represent family and child characteristics, as well as welfare status. Arrows represent causal links.*

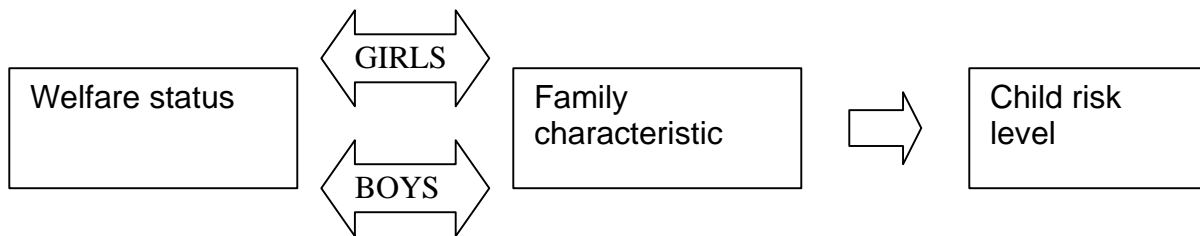
**SELECTION HYPOTHESES**

Families receiving welfare respond to having an at-risk adolescent boy or girl differently. The responses of the families with at-risk adolescent boys result more often in leaving welfare (through marriage, cohabitation, or sanctioning) than the responses in families with at-risk adolescent girls.



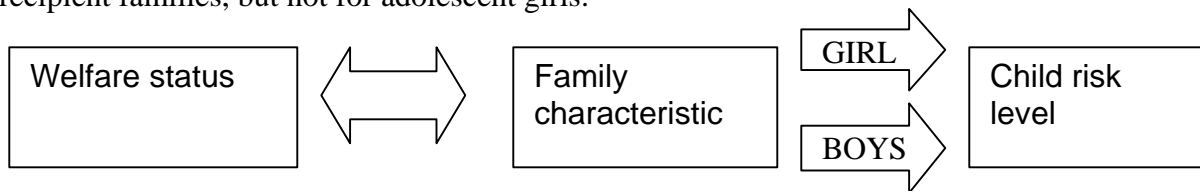
**MEDIATION HYPOTHESES VERSION A**

Leaving welfare is accompanied by changes in family-level characteristics that differ by child gender. The family characteristics help explain why a difference occurs in risk level for adolescent boys in leaver and recipient families, but not for adolescent girls.



**MEDIATION HYPOTHESIS VERSION B**

Leaving welfare is accompanied by changes in family-level characteristics that are similar for boys and girls. However, boys are particularly sensitive to the changing family characteristics, which helps explain why a difference occurs in risk level for adolescent boys in leaver and recipient families, but not for adolescent girls.



Specific selection hypotheses. We propose two selection hypotheses, in which the families of boys and girls at initially higher risk might tend to have different reasons for and tendencies to

leave welfare (table 1). First, mothers might feel that having a male role model in the household is more important for adolescent sons they perceive as at-risk than for adolescent daughters perceived as at-risk. Further, mothers might feel more protective of their at-risk daughters than at-risk sons in terms of including a new adult male in the family, and so mothers of at-risk daughters may be more cautious about marrying or cohabiting. If so, mothers of at-risk boys may be more likely to marry or cohabit than mothers of at-risk girls, a circumstance which might in turn enable them to exit welfare. The higher risk among adolescent boys in leaver families could thus result in a gender-specific maternal strategy for dealing with risk that antedated leaving welfare.

Second, mothers of at-risk adolescent boys and girls might be differentially sanctioned. For example, if behavior problems among at-risk adolescent boys more often involve serious acting out that results in involvement with the law or suspension or expulsion from school, then the need to intervene for the son at school or with law enforcement, or the need to monitor him more closely to prevent recurrences might constitute more of a barrier to mothers' abilities to meet welfare requirements for work or job training efforts than behavior problems among at-risk girls. If so, mothers of high-risk boys might be particularly likely to have their welfare benefits terminated because of noncompliance with program requirements, and therefore fall into the group of families who are no longer recipients.

NSAF data cannot be used to trace these hypothesized patterns in detail, as we do not have data on the same families and children before and after leaving welfare (as we would need, for example, to document that the adolescent risk level preceded and helped explain differing patterns of marriage, employment levels, or income in families with adolescent boys and girls). However, patterns that would accord with this set of hypotheses are higher rates of marriage or

cohabitation among leaver families than among recipient families for adolescent boys, but not necessarily for girls (as in the first specific selection hypotheses described above), or lower rates of employment and lower income among leaver families than among recipient families for adolescent boys, but not necessarily for girls (as in the second specific selection hypothesis two above). Because these patterns would reflect how leaving welfare came about, with the risk status of the boys preceding these family circumstances, we would not expect that the marital or cohabiting status, or employment rates or income levels, would be the pathway by which the higher risk status in adolescent boys came about. That is, the family structure and employment variables would not help explain (or mediate) the higher risk status of adolescent boys in leaver families.

Specific mediating hypotheses. The second set of hypotheses shifts the focus to what happens after a transition off welfare and predicts that experiences accompanying or following the transition cause the differences in risk levels for adolescent boys and girls. The first specific mediating hypothesis focuses on mothers' mental health. We propose only one version of a mediating hypothesis involving parental mental health (version A, not version B). This first hypothesis anticipates that, for adolescent boys but not girls, mothers' mental health deteriorates when they leave welfare and become employed. Mothers of sons may become more worried or anxious than those with daughters about how their children are faring after transitioning off welfare, because of their perception that street influences may be riskier for boys or because girls may be more willing to stay inside or away from negative influences (Jarrett 1995). Mothers' mental health in turn may affect children of both genders, but if it has deteriorated especially for mothers of adolescent boys, boys' school outcomes indicate greater risk.

Another hypothesis focuses on changes in family structure. In contrast to our selection hypothesis featuring family structure, in which concern for pre-existing risk among adolescents helped shape mothers' decisions to marry or cohabit, here, the higher risk among adolescent boys follows from the marriage or cohabitation. Version A of this hypothesis posits that mothers of boys may be more likely than mothers of girls to marry or begin cohabiting upon exiting welfare. In this instance, the marriage is not a response to an already high risk level in the son. Rather, it is a strategy for leaving welfare, which may be carried out with greater caution in families with adolescent daughters (because of concerns about the presence of a new unrelated adult male in the family for teenage girls) and greater eagerness in families with adolescent sons (because of positive expectations about a male role model for sons). Counter to mothers' expectations, however, sons, like daughters, may react negatively to the marriage or cohabitation. In this hypothesis, the higher rate of marriage or cohabitation among mothers of adolescent sons helps explain the higher rates of risk behavior among the adolescent boys in leaver than recipient families.

Version B of the mediating hypothesis focusing on family structure does not foresee differing rates of marriage or cohabitation in families with adolescent sons and daughters in leaver families, but anticipates greater sensitivity in male than female adolescent children to mothers' marriage or cohabitation. Sons' responses to the mother's marriage or cohabitation may place them at higher risk in leaver than recipient families. Indeed, one recent study suggests that, among low-income families, externalizing problems (that is, "acting out" behaviors) are higher among young school-age boys whose mothers' boyfriends live in the household than among boys living in other family types (Ackerman et al. 2001). The same study found no differences in externalizing problems among young school-age girls by family structure. While this study

differs from the current focus in terms of the age range of the children, it does suggest a pattern of reactions to cohabitation that differs by child gender.<sup>10</sup>

Another possibility is that, as mothers transition from welfare to employment, they have less time available to monitor their children. Here, we hypothesize either that (version A) mothers of sons may be working particularly long hours and have more limited time to monitor their children than do mothers of daughters, perhaps because of a particularly strong concern about protection of adolescent daughters; or (version B) boys may be more susceptible than girls to negative effects of decreased monitoring provided by their parents, though the monitoring does not in fact differ by child gender (Crouter et al. 1990). As with the mediating hypotheses concerning family structure, the higher risk in the adolescent boys would here be seen to follow from, rather than antedate, the transition off welfare, with boys in leaver families differentially exposed to extensive hours of employment and less monitoring, or differentially sensitive to diminished monitoring although it does not differ by child gender. We would expect here, but not in the selection hypotheses, that level of parental monitoring would help explain, or mediate, the risk level in adolescent boys in leaver as opposed to recipient families.

A last possibility is that moving from welfare to work may involve work that is unstable or at low wage levels, which could negatively affect adolescents' well-being. In this set of mediating hypotheses, either (version A) family income may increase more or be more stable for families of girls leaving welfare than for families of boys leaving welfare; or (version B) boys might be more susceptible than girls to stress resulting from low-wage or unstable maternal

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<sup>10</sup> However, prior research has not provided consistent evidence about the effect of mothers' new cohabiting partners or spouses on children. For example, another study using a sample of children whose parents had divorced did not find boys' behavioral problems related to the presence of their mother's marital or cohabiting partner in their household (Morrison 2000). Also, these studies focused on one specific type of risk—externalizing behavior problems.

employment. In version A, mothers of sons as well as mothers of daughters may initially engage in full-time employment when they leave welfare, but, if the sons react negatively to diminished maternal availability and monitoring, their mothers' employment may be interrupted, which could be reflected in lower earnings. Alternatively, prior research provides some support for version B. For example, research on families during the Great Depression suggests that adolescent boys may be more likely than adolescent girls to feel a sense of responsibility for, and perhaps also anxiety about, economic insecurity within the family (Elder 1974). In a more recent study focusing on children of low-wage single mothers in 1991 that had received welfare at some time during the previous five years, boys and girls responded differently to maternal employment (Moore and Driscoll 1997).<sup>11</sup> For example, maternal employment was associated with lower math test scores for boys, but with fewer behavior problems for girls. For the mediating hypothesis regarding unstable or low-wage employment, levels of income or employment would be expected to help explain the risk levels of adolescent boys in leaver as opposed to recipient families.

Overall, we thought of a number of possible explanations for the finding that, among adolescent boys but not adolescent girls, children in leaver families show higher levels of developmental risk than do children in current recipient families. We considered two general types of explanations. First, a set of selection hypotheses proposes that higher initial risk levels in boys and girls, and the ways mothers try to address these risk levels, affect such family characteristics as family structure, family income, and parental employment. These changes in turn affect the likelihood that a family currently receives or has left welfare. Second, a set of

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<sup>11</sup> We also note that the effects varied not only according to the outcome examined, but also sometimes with mothers' wage levels. For instance, very low wage maternal employment was associated with lower math scores for boys, but not for girls.

mediation hypotheses proposes that leaving welfare is accompanied by changes in family characteristics, which then affect adolescents' risk levels. This mediation could act in two ways: either (version A) the relative presence of certain family characteristics (including family structure, parent mental health, family income, and parental employment) in leaver families versus current recipient families might differ by adolescent gender, or (version B) the pattern of family characteristics for adolescents in leaver families versus adolescents in recipient families would not differ by adolescent gender, but boys may be particularly sensitive to changes in family characteristics. For either version A or B of the mediating hypothesis, we would seek evidence that family structure, parent mental health, family income and/or parental employment would help explain (or mediate) the elevated risk level in the adolescent boys in leaver families.

**Table 1. Possible Explanations for the Finding That, among Adolescent Boys but Not Adolescent Girls, Children in Leaver Families Show Higher Levels of Developmental Risk than Children in Current Recipient Families**

| Hypotheses   | Evidence that would be consistent with hypothesis  | Supporting evidence? |
|--|--|----------------------|
| <b>Selection Hypotheses:</b> High-risk status of the adolescent helps explain whether the family leaves welfare or the circumstances of the family upon leaving, with patterns differing by gender.  |  |                      |
| <ul style="list-style-type: none"> <li>• Mothers with high-risk boys may be more likely than mothers of high-risk girls to marry or cohabit and leave welfare as a result.</li> <li>• Mothers with high-risk boys may be more likely than mothers of high-risk girls to have problems meeting welfare requirements and may be sanctioned off welfare.</li> </ul>   | <p><i>Would expect to see:</i> Among adolescent boys but not girls, higher rates of marriage and/or cohabitation for parents in leaver families than in recipient families (table 3). But marriage and cohabitation do not mediate risk level for boys in leaver families (tables 4 and 5).</p> <p><i>Would expect to see:</i> Among adolescent boys but not girls, lower overall income levels or parental employment in leaver families than in recipient families (table 3). But neither employment nor income mediates risk level for boys in leaver families (tables 4 and 5).</p>  | For income           |
| <b>Mediating Hypotheses:</b> High risk of adolescent boys follows and is caused by the circumstances surrounding the transition off welfare.   |  |                      |
| <u>Mental health hypothesis</u>  |  |                      |
| A. Poor maternal mental health may be associated with higher levels of risk for adolescents regardless of their gender, but mothers of adolescent boys may be more likely than mothers of adolescent girls to experience declines in mental health when they leave welfare.  | A. <i>Would expect to see:</i> Among adolescent boys but not girls, higher incidence of symptoms of poor mental health among parents in leaver families than in recipient families (table 3). Parent mental health mediates risk levels in adolescent boys and girls. In regression models in table 4, coefficient on interaction between gender and welfare status [male * leaver] is lower or nonsignificant in model that controls for parent mental health. Coefficient on indicator of poor parent mental health is positive.   |                      |
| <u>Marriage/cohabitation</u>   |  |                      |
| <p>A. Marrying or cohabiting may enable mothers to transition off welfare. The change in family structure may negatively affect children of either gender, but mothers of boys may be more likely than mothers of girls to marry or cohabit when they leave welfare.</p> <p>B. Marriage or cohabitation may increase for all mothers, irrespective of adolescent gender, but the change in family structure has a stronger negative effect on adolescent boys.</p> | <p>A. <i>Would expect to see:</i> Among adolescent boys but not girls, higher rates of marriage and/or cohabitation for parents in leaver families than in recipient families (table 3). Marriage and/or cohabitation status mediates risk levels in adolescent boys and girls. In regression models in table 4, coefficient on interaction between gender and welfare status [male * leaver] is lower or nonsignificant in model that controls for family structure; coefficient on indicator of cohabitation and/or marital status is positive.</p> <p>B. <i>Would expect to see:</i> Parental marriage and/or cohabitation status mediate risk levels differently for boys than for girls, after controlling for any differences in marriage and/or cohabitation rates. In regression models in table 5, coefficient on interaction between gender and welfare status [male * leaver] is lower or nonsignificant in model that controls for interaction between family structure and gender; coefficient on interaction term(s)</p> |                      |

[male \* parent is married, male \* parent cohabits] is (are) negative.)

Time available to monitor

- |   |  |
|---|--|
| <p>A. When families leave welfare, mothers may have less time to monitor their adolescents because of their work obligations. The change in monitoring may negatively affect children of either gender, but mothers of boys may be working longer hours than mothers of girls and have particularly limited time to monitor.</p> <p>B. The time mothers have available to monitor their adolescents may decrease in all families when the mother leaves welfare, irrespective of adolescent gender, but adolescent boys are especially responsive to the reduction in monitoring.</p> | <p>A. <i>Would expect to see:</i> Among adolescent boys but not girls, higher rates of full-time employment for parents in leaver families than in recipient families (table 3). Parental work status mediates risk levels in adolescent boys and girls. In regression models in table 4, coefficient on interaction between gender and welfare status [male * leaver] is lower or nonsignificant in model that controls for parental employment; coefficient on indicator of full-time employment status is positive.</p> <p>B. <i>Would expect to see:</i> Parental employment status mediates risk levels differently for boys than for girls, after controlling for any differences in rates of full-time parental employment. In regression models in table 5, coefficient on interaction between gender and welfare status [male * leaver] is lower or nonsignificant in model that controls for interaction between parental employment and gender; coefficient on interaction term [male * fully employed parent] is negative.</p> |
|---|--|

Job characteristics

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|--|---|
| <p>A. Mothers of adolescent boys and girls in leaver families seek employment equally, but the need to monitor adolescent sons more closely results in more interruptions to work and as a result less accrued income over time and less chance to increase earnings over time. The unstable or low-wage work helps account for the elevated risk in adolescent sons in leaver as opposed to recipient families.</p> <p>B. When mothers leave welfare, their work may be unstable or low-wage, irrespective of child gender, but unstable or low-wage work may have a stronger negative effect on adolescent boys.</p> | <p>A. <i>Would expect to see:</i> Among adolescent boys but not girls, lower overall income levels in leaver families than in recipient families (table 3). Income mediates risk levels in adolescent boys and girls. In regression models in table 4, coefficient on interaction between gender and welfare status [male * leaver] is lower or nonsignificant in model that controls for family income; coefficients on indicators of higher income are negative.</p> <p>B. <i>Would expect to see:</i> Earnings and income mediate risk levels differently for boys than for girls, after controlling for any differences in levels of parental earnings and income. In regression models in table 5, coefficient on interaction between gender and welfare status [male * leaver] is lower or nonsignificant in model that controls for interaction between family income and gender; coefficients on interaction terms are positive when the family characteristic variable indicates higher income [male * higher income groups] and negative when the family characteristics indicates lower income [male * poverty]. (Note: stability of employment is not assessed in the NSAF)</p> |
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## **Further Evidence on Why Adolescent Boys in Former Recipient Families Seem at Elevated Risk**

Table 1 provides a summary of the specific selection and mediation hypotheses, the evidence regarding patterns of family characteristics and mediation that would be consistent with each hypothesis, and whether the findings from further analyses carried out using NSAF data are consistent with each hypothesis. We are careful here to use the term “consistent with” rather than the stronger term “supporting” regarding the evidence that we can bring to bear on each hypothesis because of our lack of longitudinal data. The hypotheses we have articulated would be best supported or refuted by data looking not only at mediation, but also at child risk levels and family characteristics at multiple time points, especially before and after the transition off welfare in leaver families. The available cross-sectional data from the NSAF permit a preliminary analysis of which hypotheses appear most promising, but they do not provide conclusive support. In addition, sometimes the NSAF does not include measures of the specific family characteristics (such as parental monitoring or stable employment) that are of interest, and we must use approximations (such as full-time employment by all available parents in the family or family income).

We begin first by looking at evidence from the NSAF regarding the patterns of family characteristics of adolescents in leaver and recipient families. In particular, we examine whether measures of family structure, parental employment status, parent mental health, and family income differ by adolescent gender. Both the specific selection hypotheses, as well as the A versions of the mediation hypotheses, expect differences for boys, but not for girls, in these family characteristics according to families’ welfare receipt status (though for different reasons), while the B versions of the mediation hypotheses do not predict such differences in family characteristics. A consideration of the family characteristics among adolescent boys and girls in

leaver and recipient families can begin to differentiate which general approach, and which specific version of mediation hypothesis (A or B), the findings are in accord with. These analyses are shown in appendix table 3.

We then consider whether evidence from the NSAF is consistent with mediation; that is, whether the family characteristics help explain the elevated risk level in the adolescent boys in leaver versus recipient families. To test for mediation, we examine the results of multivariate regression models to see whether the effect of each family characteristic on the various developmental risk measures explains, or “mediates,” the link between welfare status and adolescent risk.<sup>12</sup> We note that welfare status is not significantly related to risk level for adolescent girls; therefore, there is no relationship for family characteristics to mediate. To model this situation (that is, the association of leaving welfare with elevated risk levels for boys but not for girls), our regression models include an interaction term between adolescent gender and welfare status.<sup>13</sup> In the selection hypotheses, adolescent risk level is seen as antedating the change in welfare status. Thus, the *absence* of signs that the family characteristics mediate the association between welfare status and adolescents’ risk levels would be consistent with the selection hypotheses. In contrast, findings indicating that family characteristics help explain the elevated risk in adolescent boys would be in accord with the mediation hypotheses.

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<sup>12</sup> We estimated logistic regression models that enabled us to identify the independent association of welfare receipt status for boys and girls with adolescent developmental risk, while controlling for the effect of family income, parental employment, symptoms of poor parent mental health, and family structure. We estimated separate models for each of the four indicators of developmental risk on which adolescent leaver boys differed significantly from recipients: low school engagement, suspension or expulsion from school, skipping school, and high behavioral and emotional problems. To maximize degrees of freedom, we did not include all the family characteristics in a single regression model; rather, we ran separate models for each family characteristic.

<sup>13</sup> Specifically, we included the interaction term male \* leaver, which has a value of 1 for adolescents who are boys and members of leaver families. Since adolescent male leavers seem to be at elevated risk, the coefficient on the interaction term in regression models that do not include controls for other relevant factors is consistently statistically significant and positive.

According to version A of the mediating hypotheses, differences in the *patterns* of family characteristics among families of boys and girls following a transition off welfare are responsible for the elevated risk levels of adolescent leaver boys. Under this scenario, the *relationship* between family characteristics and adolescent risk status is similar for boys and girls. Instead, it is the difference in the level of the family characteristic that helps explain the differing findings by gender. To test for mediation in version A, we add indicators for the family characteristics to our regression models. We are interested to see whether, after controlling for relevant family characteristics, the coefficient on the interaction term became closer to zero or nonsignificant. If this occurred, it would be consistent with mediation.<sup>14</sup> The results of these regression models are shown in appendix table 4.

In contrast, version B of the mediation hypotheses proposes that the *patterns* of characteristics among families of boys and girls following a transition off welfare are similar, but that the *relationship* between family characteristics and adolescent risk status is different for boys and girls. In contrast to our regression models for version A, in which the mediation is assumed to function the same way for boys and girls, in version B, we statistically allow for the possibility that the family characteristic functions differently for boys and girls. That is, to test for the version B type of mediation, we control for the interaction of the family characteristic with child gender. Here, we are interested to see whether, after controlling for relevant family characteristics in a way that allows the relationship between the family characteristics and the measures of risk to differ for boys and girls, the coefficient on the interaction term between

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<sup>14</sup> If, after controlling for relevant family characteristics, the coefficient on the interaction term male \* leaver became closer to 0 or became non-significant, this would be consistent with mediation. In order to establish mediation, a t-test should show that the change in the coefficient on the interaction term is statistically significant.

adolescent gender and welfare receipt status became closer to zero or nonsignificant.<sup>15</sup> The results of the regression models relevant to version B of the mediation hypotheses are shown in appendix table 5.

Juxtaposing the evidence on family characteristics and mediation will also help us distinguish between evidence consistent with the A and B mediating hypotheses. Findings that family characteristics differ by gender among leaver families *and* that there is mediation for adolescent boys in leaver families would be in accord with the A subset of mediation hypotheses, which posit that differing changes occur when families of boys and girls leave welfare, and that the key family characteristics help to explain the differing patterns of risk among adolescent boys in leaver and recipient families. Findings indicating no difference by gender in the family characteristics among leaver families but mediation for boys (according to models that include an interaction term for gender and family characteristics) would be in accord with the B subset of mediation hypotheses. These hypotheses predict differential sensitivity to family characteristics in adolescent boys and girls, but not that these family characteristics change differentially by gender when families leave welfare.

Family characteristics among adolescents in leaver and recipient families: Do they differ by gender? To examine patterns of family characteristics among adolescents in leaver versus current recipient families, we looked at whether adolescents' parents were single, married, or cohabiting with a partner, and whether this differed by adolescent gender. Compared to adolescents in

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<sup>15</sup> Specifically, we included the interaction term(s) male \* family characteristic, which has a value of 1 for adolescents who are boys and live in families with the particular characteristic (such as having fully employed parents, or a parent who cohabits or who is married, or who reports symptoms of poor mental health). If, after controlling for interactions of family characteristics and gender, the coefficient on the interaction term male \* leaver became closer to 0 or nonsignificant, this would be consistent with the version B type of mediation. To establish mediation, a *t*-test should show that the change in the coefficient on the interaction term [male \* leaver] is statistically significant.

families currently receiving welfare, adolescent leavers were less likely to be living with single parents (57 percent versus 72 percent) and more likely to be living with married parents (31 percent versus 15 percent), but equally likely to be living with cohabiting parents (see appendix table 3). However, this pattern did not differ by adolescent gender.<sup>16</sup>

Furthermore, we do not see differences between leaver girls and leaver boys in rates of parental marriage or cohabitation. Among leavers, children were equally likely to be living with a single parent (57 percent), regardless of child gender. Similarly, among leavers, the percentages living with married parents did not differ by child gender (31 percent), nor did the percentages living with cohabiting parents (12 percent). This family structure pattern does not provide support for the selection hypothesis that mothers with high-risk boys may be more likely than mothers of high-risk girls to marry or cohabit and leave welfare in part to address the high risk level in their sons. Nor is the pattern consistent with the mediation hypothesis predicting differing rates of marriage among leaver families with boys and girls irrespective of initial risk of the adolescent.<sup>17</sup>

Because the NSAF does not include a measure of parent monitoring, we looked at parents' employment as a way to approximate the amount of time that parents might have available to supervise or monitor their children. We compared the percentages of adolescents with "fully employed" parents (a single parent who works at least 35 hours a week, or two

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<sup>16</sup> In comparisons of leavers to recipients separately by gender, the only apparent statistically significant difference was that leaver girls were more likely to live with a married parent than were current recipient girls (37 percent versus 13 percent,  $p < .05$ ). However, we cannot conclude that the pattern of differences between leavers and current recipients differed by child gender, since the results of a difference-of-differences  $t$ -test yielded an insignificant  $p$ -value ( $p > .10$ ).

<sup>17</sup> The majority of adolescents in current and former recipient families are living with a single parent. While we have not identified whether adolescents were living with a single mother, single father, or in some other family situation before leaving welfare, the vast majority of these single parents are mothers. Therefore, although some adolescents may live with a single father, our discussion focuses on "mothers."

parents who both work at least 35 hours a week), as well as the percentages of adolescents with no parents working. Not surprisingly, like patterns of family structure, parental employment patterns also differ for adolescents in leaver and current recipient families. Relative to current recipients, adolescent leavers were more likely to have fully employed parents (38 percent versus 16 percent) and less likely to have parents with no employment (20 percent versus 56 percent). (The remainder had parents with part-time employment or had one employed and one nonemployed parent.) This employment pattern suggests that parents who have left welfare might have less time available to monitor their children than parents who currently receive welfare. However, the employment pattern did not differ by adolescent gender.<sup>18</sup>

Overall, 38 percent of adolescents in leaver families had parents who were fully employed, and 20 percent had parents with no employment. However, we found that these percentages did not differ by adolescent gender among leavers. Hence, the evidence on parental employment is not consistent with a selection hypothesis predicting differing rates of employment as a result of behavior problems among at-risk boys. Neither is the parental employment pattern evidence consistent with the version A mediation hypothesis predicting differing levels of parental availability for monitoring in leaver families according to child gender. We do not report on differences in job instability across family types, since the NSAF does not include such a measure.

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<sup>18</sup> Among boys, adolescents of leavers were more likely to have fully employed parents than were adolescents of current recipients (47 percent versus 17 percent,  $p < .01$ ). The corresponding difference for adolescent girls was not statistically significant. However, we conducted a difference-of-difference  $t$ -test, and the resulting  $p$  value (.31) indicates that the employment patterns for leavers versus current recipients were not different for girls and boys. If the patterns differed significantly by child gender, such a finding would be consistent with one of our hypotheses, suggesting that higher levels of developmental risk among leaver boys could be at least partly due to decreased parental monitoring.

While employment is measured in the NSAF at a single point in time, stability of employment and overall economic well-being would be better assessed over a broader time period. The NSAF asked parents directly about income and calculated each family's poverty level, taking into account all sources of income during the previous year.<sup>19</sup> Although a majority of adolescents whose families left welfare had family incomes below the federal poverty level (64 percent), they were less likely to be poor than were current recipients (81 percent). Additionally, we did find evidence of family income differences by gender among adolescent leavers, with adolescent leaver girls more likely to be in families with incomes over 200 percent of the poverty level than adolescent leaver boys (22 percent versus 5 percent). Further, among girls, leavers were more likely than recipients to live in families with incomes over 200 percent of the poverty level (22 percent versus 4 percent), but no such difference was apparent between leavers and current recipients among boys.<sup>20</sup>

These patterns of income levels are consistent with the selection hypothesis that considers not so much point-in-time employment, but ability to sustain employment and accumulate earnings, predicting that close monitoring of high-risk adolescent sons may impede sustained employment and result in leaving welfare because of sanctioning. Similarly, these differences are consistent with the mediation hypothesis that predicts differences in income among leaver families resulting from behavioral issues that emerge in adolescent sons over time in response to the mother's employment when leaving welfare—problems that subsequently make it difficult to sustain employment.

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<sup>19</sup> The measure of income we used compared adolescents' family incomes in 1998—the year before the survey—to the federal poverty threshold. For a single parent with two children, the poverty threshold in 1998 was \$13,133.

<sup>20</sup> In this case, the difference of difference test yielded a statistically significant *p*-value (< .05).

To conclude our consideration of patterns of family characteristics, we turn to the evidence regarding parental mental health. Having a parent who reported symptoms of poor mental health<sup>21</sup> was less likely among leavers than among current recipients (36 percent compared with 49 percent).<sup>22</sup> However, among leavers, adolescent boys and girls were equally likely to have a parent who reported symptoms of poor mental health. Thus, the evidence is not consistent with version A of the mediating hypothesis, which posits that, when transitioning off welfare, mothers of adolescent sons might be more anxious than mothers of adolescent daughters, and that differences in parental mental health might help explain the gap in risk level for adolescent boys in recipient and leaver families.

In sum, among the family characteristics, only family income showed differing levels in the predicted direction. Among girls, but not among boys, adolescent leavers were in families that were faring better financially than those in current recipient families. Further, among adolescents in leaver families, girls were in families with higher incomes than boys. This pattern suggests a difference by adolescent gender not so much in parental employment at any one point in time, but more in families' abilities to accumulate income through sustained employment, increasing job status, or perhaps sustaining a relationship in which income is shared.

Do family characteristics mediate the relationship between welfare status/gender and adolescent risk level? The selection hypotheses predict levels of family characteristics in adolescents' families that differ according to welfare receipt status and adolescent gender but not mediation,

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<sup>21</sup> The NSAF measure of symptoms of poor mental health is a scale based on parents' responses to questions about how much of the time in the past month they have been a very nervous person; felt calm and peaceful; felt downhearted and blue; been a happy person; and felt so down in the dumps that nothing could cheer them up (Ehrle and Moore 1999).

<sup>22</sup> In comparisons of leavers to recipients separately by gender, only the difference for boys was statistically significant ( $p < .01$ ). However, we cannot conclude that the pattern of differences between leavers and current recipients differed by child gender, since the results of a difference-of-differences  $t$ -test yielded an insignificant  $p$ -

as adolescents' high risk level is seen as preceding and helping shape the family characteristic. Version A of the mediating hypotheses also predicts differing patterns of family characteristics, with family characteristics helping explain, or mediate, the elevated level of risk among adolescent boys in leaver families. As noted above, it is only for family income that a key family characteristic differs among adolescents by welfare status and by adolescent gender. However, none of the regression models in appendix table 4 show evidence that family income mediates the relationship between welfare status/adolescent gender and behavioral and emotional problems, school engagement, suspension/expulsion, or skipping school.

The regression models in appendix table 4 indicate that, as expected, higher family income is associated with a lower likelihood that an adolescent was suspended or expelled in the prior year. Additionally, adolescents whose parent reported symptoms of poor mental health were more likely to have a high level of behavior problems and to be poorly engaged in school. However, the regression models in appendix table 4 do not show evidence that family income or symptoms of poor parental mental health mediate, or explain, the higher level of risk found among adolescent boys in leaver families.<sup>23</sup> Parental employment and family structure were not significantly associated with any risk indicators, net of the effect of adolescent gender and welfare status.

Version B of the mediating hypotheses suggests that adolescent boys are more responsive to changes in family characteristics, and that this differential sensitivity of boys and girls to key family characteristics helps explain the gap found for boys, but not for girls, in the risk level for

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value. Nevertheless, it seems worth noting that the  $p$ -value (.10) nearly reached statistical significance.

<sup>23</sup> The coefficient on the interaction term, male \* leaver, did not change significantly in any of the models predicting developmental risk status on the four indicators, after controlling for income, parental employment, family structure, or parent mental health.

leaver versus recipient families. Since version B does not require a pattern of family characteristics that differs by welfare receipt status and adolescent gender, none of the evidence we have examined thus far regarding family structure, family income, parental mental health, and parental employment is explicitly inconsistent with the possibility that this type of mediation may be occurring. However, as shown in appendix table 5, we do not see evidence that a differential sensitivity by adolescent gender to any of the family characteristics mediates the link between welfare status and risk level for boys, after controlling for differing levels of family characteristics.<sup>24</sup> Therefore, findings from the regression models are not consistent with any of the version B hypotheses.

In appendix table 5, we see evidence that the relationship between some family characteristics and risk levels differs by adolescent gender for family income and for family structure. For example, counter to our expectations that boys might react particularly negatively to their mothers' cohabiting partner, having a cohabiting parent is associated with a lower likelihood of behavioral and emotional problems for adolescent boys, but not so much for adolescent girls. However, findings were more consistent with our expectations that boys might react particularly negatively to their mother's husband. Specifically, the regression models in appendix table 5 showed that having a married parent was associated with a higher likelihood of low school engagement and skipping school for boys, but not for girls.

The regression models in appendix table 5 show some unexpected evidence regarding family income. For adolescent girls, higher levels of family income were associated with a lower probability of behavioral and emotional problems or of suspension and expulsion from school,

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<sup>24</sup> The coefficient on the interaction term male \* gender appears to decline in the model predicting behavioral and emotional problems and in the model predicting suspension/expulsion, after controlling for an interaction between adolescent gender and family income. However, *t*-tests indicate that the changes in the coefficient on male \* gender

net the effect of welfare status. For boys, however, the reverse appears to be the case in the NSAF data: boys in families with incomes over 150 percent of the poverty level were more likely than boys in families with incomes below 50 percent of the poverty level to have a high level of behavioral and emotional problems. Further, boys in families with incomes between 50 and 99 percent of the poverty level were more likely than boys with lower family incomes to have been suspended or expelled from school. However, it is important to recall that, while the regression models provide evidence that family income and family structure are differentially associated with adolescent risk for boys and girls, these family characteristics do not explain, or mediate, the link between welfare status/gender and adolescent risk level.

## **Conclusion and Discussion**

Summary. In this paper, we used data from a nationally representative survey, the 1999 NSAF, to compare children in families that were receiving welfare at the time of the survey (current recipients) with children in families that were not receiving welfare at the time of the survey, but that had received welfare at some time during the two years before the survey (leavers). We compared children in leaver and recipient families separately by child age, gender, and race or ethnicity. Analyses of data from the NSAF indicated that adolescent boys age 12 to 17 in leaver families were at elevated risk on four of the seven indicators we examined. Among adolescent boys, those in leaver families were more likely than those in current recipient families to have a high level of behavioral and emotional problems, to have skipped school twice or more in the previous year, to have been suspended or expelled from school in the previous year, and to be poorly engaged in school. Not only did adolescent leaver boys fare worse on these four

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are not statistically significant ( $p > .10$ ).

indicators than did adolescent current recipient boys, but the adolescent leaver boys were also more likely to be at risk on these indicators than were adolescent girls in leaver families.

We developed several hypotheses regarding adolescents' family characteristics that might explain why adolescent boys in leaver families appear to be at particular risk, and explored whether data from the NSAF were consistent with any of the hypotheses. As expected, we found evidence that family income, parental employment, parental mental health symptoms, and family structure differed by welfare receipt status. Compared with adolescents in current recipient families, those in leaver families were more likely to live with married parents and less likely to live with single parents, less likely to be poor and more likely to have incomes over 200 percent of the federal poverty level, more likely to have fully employed parents and less likely to have nonemployed parents, and less likely to have a parent reporting symptoms of poor mental health. Since (with one exception) these patterns did not differ significantly by adolescent gender, the findings are generally not consistent with selection hypotheses that posit that adolescents' risk status and gender help explain whether the family leaves welfare or the circumstances of the family upon leaving. Neither was the evidence consistent with mediating hypotheses that posit that changes in welfare status are accompanied by changes in family characteristics that explain, or mediate, the elevated risk level found for adolescent leaver boys.

The major exception to the lack of gender and welfare receipt status differences is found with the patterns of family income. Specifically, among girls but not among boys, leavers were more likely to have incomes over 200 percent of the federal poverty level than were current recipients; additionally, adolescent leaver girls were more likely than adolescent leaver boys to live in such higher-income families. Since we did not find evidence that family income mediated the association between welfare status/adolescent gender and the four risk measures we

examined in multivariate models, the income finding seems to accord with the second selection hypothesis. High risk among adolescent boys may not preclude parental employment at any one point in time so much as hinder sustained employment in circumstances in which the mother can increase earnings over time or accumulate higher earnings. The behavior of the son may result in sanctioning if employment is inconsistent, or concerns about her son may distract the mother in her efforts to advance in her employment.

In general, differing patterns of family structure, parental employment, parent mental health, and family income did *not* account for the differences in levels of risk that we observed between current and former recipients among adolescent boys, whether we considered how the characteristics of adolescents' families differed by gender and welfare status, or the possibility that adolescents boys might react to these key family characteristics irrespective of whether they differed by gender and welfare status. We found that, among adolescent boys, former recipients were more likely to exhibit higher levels of the risk indicators than were current recipients, even after controlling for each of the four key family characteristics available in the NSAF data.

Interestingly, higher income was unexpectedly linked with a greater likelihood of behavioral and emotional problems and of suspension and expulsion from school among boys. We found that adolescent boys living in deep poverty during 1998 were actually slightly *less* likely to exhibit a high level of behavioral and emotional problems than were adolescent boys who were poor but not in deep poverty, regardless of welfare receipt status.<sup>25</sup> Similarly, adolescent boys in deep poverty were *less* likely than those in families with higher incomes to have been suspended or expelled from school during the previous year.<sup>26</sup> However, given small

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<sup>25</sup> We consider a child living in a family with an income below half of the poverty threshold in 1998—\$6,566.50 for an adult with two children—living in deep poverty.

<sup>26</sup> The higher-income category included families with incomes at or above 150 percent of the poverty level in 1998.

samples sizes in the income subgroups among leavers, the findings, while statistically significant, must be viewed with caution and replication with other data sought.

Limitations. The evidence we present in this paper does not allow us to identify the *impact* on children of leaving welfare. First, the NSAF does not follow the same children and families over time. Rather, we compare different groups of children at one point in time—a group of children whose families were receiving welfare when they were interviewed in 1999, and a separate group of children whose families had left welfare within the two years before their 1999 interview. Characteristics of children or their families linked to their welfare status may be responsible for the higher levels of risk we observed among adolescent boys in former recipient families, relative to adolescent boys in current recipient families (though we did find some evidence that family income, family structure, and parent mental health are *not* responsible for this discrepancy).<sup>27</sup> Experimental evaluations, rather than cross-sectional survey data, provide the appropriate basis for making causal statements.

Readers should also keep in mind that the NSAF includes only two measures of risk for the youngest children—those under age 6. It may be harder to detect whether patterns of risk differ by welfare receipt status for younger children than for adolescents because the NSAF includes more measures of risk for older children. Also, the NSAF measure of behavioral and emotional problems does not allow us to distinguish internalizing from externalizing problems. Such a distinction could be informative, since girls may tend to react to economic stress with internalizing problems, while boys may be more likely to display externalizing problems

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For a single parent with two children, this income threshold was \$19,700.

<sup>27</sup> Because the NSAF is a nationally representative survey rather than a comparison of individuals randomly assigned to treatment and control conditions, current and former recipients may differ in ways that we were unable to control, although we have attempted to control for differences in family income, parental employment status, and parental mental health.

(Conger et al. 1994). Further, for both age groups, all the measures rely on parental reporting. More might again be detected if information had been collected from different sources, such as direct assessment and teacher report.

It will be important to see whether researchers will observe the same pattern in other cohorts of data, especially the 2002 round of the NSAF.<sup>28</sup> With those data, it will be critical to explore not only whether the gender difference for adolescent outcomes is replicated, but also whether the differences in family characteristics by welfare status recur. The (unexpected) pattern of income differences by child gender might be particular to the 1999 round of the NSAF. If it is found in the 2002 round of data, it will be important to ask why the patterning is occurring, and especially whether there are possible child effects on such adult outcomes as employment, mental health, cohabitation and income (and not only possible gender differences in responses).

We also note that, although we used the child as the unit of analysis here, many adolescent girls may have adolescent brothers, and vice versa, which could muddy the analyses slightly when comparing family characteristics by adolescent gender. However, looking only at children who do not have siblings would make our sample less representative of the general population of welfare leavers and recipients, as well as reducing our sample size.

Finally, one reason for the lack of apparent differences between current and former recipients by racial/ethnic group membership may be the relatively small sample sizes of these subgroups, particularly Hispanic children and adolescents. Given the small sample sizes, it is

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<sup>28</sup> Although all differences noted in this brief are statistically significant at  $p < .10$  and better, standard errors tend to be quite large. Additionally, in an analysis of 1997 NSAF data, we did *not* identify a parallel pattern among adolescent boys in which former recipients fared worse than current recipients. Among adolescent boys in the 1997 NSAF data, levels of risk for former and current recipients were not statistically significantly different at the 90 percent confidence level.

impossible to pursue further the possibility that there is a pattern specific to adolescent boys (and girls) in particular racial/ethnic groups. Small sample sizes could also be responsible for our unexpected finding of an association between deep poverty and a lower level of behavioral and emotional problems among adolescent boys in families of leavers.

Discussion. Many have voiced concern about how the very youngest children are faring in the years following welfare reform, since requirements to work have been extended to mothers of infants (Kirby, Ross, and Puffer 2001). Yet, findings from the NSAF suggest that we should also be concerned about how welfare might affect older children, and boys in particular.

On three school-related measures of developmental risk, as well as one behavioral and emotional measure of risk, adolescent boys of leavers consistently fared worse than adolescent boys of current recipients. In contrast, we found no differences between current and former adolescents in recipient families on two measures of health, either for boys or girls. In fact, we found only one difference in levels of risk by welfare receipt status for adolescent girls—on a measure of skipping school, former recipients fared better than current recipients.

Experimental studies of welfare reform and children have raised concern about impacts on adolescents across a range of differing welfare-to-work approaches. However, no consistent pattern of differences by gender has been noted (Gennetian et al. 2002). It is unclear how representative the varying welfare-to-work approaches examined in experimental studies, carried out in specific locations often before 1996 welfare reform, are compared with the prevalent approaches now in place throughout the nation. That is, the more local studies may not capture a gender difference found in a representative nonexperimental sample, such as the NSAF, that more closely reflects widely implemented approaches to welfare reform. Both bodies of

evidence, however, suggest a need for continued focus on adolescents when considering the implications of making a transition off welfare for children.

It is important to note that, while there were few differences in levels of developmental risk examined here for adolescent girls or for younger children of either gender, leaver and current recipient children typically showed higher levels of developmental risk in 1999 than did children in higher-income families that have never received welfare or that last received welfare more than two years before the 1999 NSAF interview.<sup>29</sup>

Evidence from our analyses of the NSAF cannot illuminate what characteristic or experience of welfare status causes the differences in adolescent boys' levels of risk by welfare receipt status. We did, however, find some interesting differences among families. For example, among adolescent girls, those in families of leavers are more likely than those in families of recipients to have family incomes above 200 percent of the federal poverty level. Yet, the family income of adolescent boys of leavers is not higher than the income of those in recipient families. This finding is striking, particularly since—as noted above—full-time employment was more common among adolescents in families of leavers than those in families of current recipients, regardless of adolescent gender.

Perhaps the parents of these adolescent boys are particularly likely to have unstable jobs. Leaver parents of adolescent boys may also experience worry or parenting stress in ways that the NSAF does not assess. While poverty has typically been associated with worse outcomes among children,<sup>30</sup> nearly all the adolescents we are focusing on here were living in low-income families in 1998 (93.5 percent of adolescent boys in current recipient families and 95.1 percent of

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<sup>29</sup> These analyses are not shown in this brief; results are available from the authors.

<sup>30</sup> For example, see McLoyd (1998).

adolescent boys in former recipient families). Additionally, families' incomes may have changed between 1998 and 1999, when families were interviewed. The findings suggest that, for adolescent boys, being just beyond deep poverty but within the low-income range may be associated with the highest levels of behavior problems, and that the income pattern overall helps explain the behavior problem difference for adolescent boys between leavers and current recipients.

Adolescent boys may absorb more of a sense of responsibility for family economic well-being once work (perhaps of limited stability in some families) has replaced welfare. This interpretation, while only a hypothesis, does correspond well with earlier findings that adolescents in families that have left welfare are much more likely to be employed than those in families receiving welfare (Brown 2001).

One possibility that would be consistent with the data is that a perceived need for greater vigilance with sons as opposed to daughters impedes sustained employment in some proportion of leaver families with adolescent sons, and thus overall income does not increase when leaving welfare. Those leaver families with sons that nevertheless increase their income through sustained employment or increasingly favorable job characteristics are perhaps ignoring a real need for heightened vigilance with sons, and the result is both higher income and greater behavior problems (or suspension/expulsion in a specific income/poverty range) among adolescent boys. This new hypothesis would best be examined through longitudinal data examining behavior problems and problems in school over time in conjunction with employment levels in mothers.

Our analyses of the 1999 NSAF data could be another “early warning sign” that adolescents may be particularly vulnerable when their families exit welfare.<sup>31</sup> The findings summarized in this paper indicate that that the relationship between receiving or leaving welfare and child well-being merits further research attention. Researchers should examine the links between welfare status, child age and gender, and developmental risk, and the family characteristics that might help explain these links, in subsequent waves of NSAF data. Such future analyses will validate whether our current findings should be taken as a warning sign regarding the well-being of adolescent boys whose families leave welfare.

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<sup>31</sup> Brooks, Hair, and Zaslow (2001) identified such an “early warning sign.”

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**Appendix Table 1. Sample Characteristics (weighted percentages)**  
**Distribution of Children of Former Recipients and of Current Recipients by Age, Race/Ethnicity, and Gender**  
**1999 National Survey of America's Families**

|                          | Former Recipients |           |       | Current Recipients |           |       |
|--------------------------|-------------------|-----------|-------|--------------------|-----------|-------|
|                          | Percent           | St. Error | N     | Percent            | St. Error | N     |
| <b>Total</b>             | 100.0             |           | 1,271 | 100.0              |           | 1,121 |
| Age 0-5                  | 43.4              | (2.38)    | 597   | 39.4               | (2.00)    | 496   |
| Age 6-11                 | 36.5              | (2.49)    | 442   | 34.2               | (2.37)    | 386   |
| Age 12-17                | 20.1              | (2.15)    | 232   | 26.5               | (2.57)    | 239   |
| <b>By race/ethnicity</b> |                   |           |       |                    |           |       |
| <u>Age 0-5</u>           |                   |           |       |                    |           |       |
| Non-Hispanic black       | 33.8              | (4.03)    | 213   | 46.4               | (4.16)    | 202   |
| Hispanic                 | 16.1              | (2.44)    | 106   | 27.6               | (2.90)    | 130   |
| Other                    | 3.8               | (1.43)    | 17    | 3.5                | (1.44)    | 22    |
| Non-Hispanic white       | 46.3              | (3.83)    | 261   | 22.5               | (2.56)    | 142   |
| <u>Age 6-11</u>          |                   |           |       |                    |           |       |
| Non-Hispanic black       | 32.4              | (4.85)    | 150   | 47.6               | (5.31)    | 167   |
| Hispanic                 | 14.3              | (3.06)    | 74    | 25.7               | (3.99)    | 89    |
| Other                    | 2.4               | (0.82)    | 18    | 4.0                | (1.95)    | 13    |
| Non-Hispanic white       | 50.9              | (4.97)    | 200   | 22.7               | (4.23)    | 117   |
| <u>Age 12-17</u>         |                   |           |       |                    |           |       |
| Non-Hispanic black       | 43.5              | (5.95)    | 86    | 40.1               | (6.25)    | 86    |
| Hispanic                 | 17.1              | (4.34)    | 28    | 20.9               | (5.23)    | 48    |
| Other                    | 1.7               | (0.67)    | 8     | 4.4                | (2.19)    | 13    |
| Non-Hispanic white       | 37.7              | (4.74)    | 110   | 34.7               | (5.48)    | 92    |
| <u>All ages</u>          |                   |           |       |                    |           |       |
| Non-Hispanic black       | 35.3              | (2.91)    | 449   | 45.1               | (3.10)    | 455   |
| Hispanic                 | 15.6              | (1.73)    | 208   | 25.2               | (2.42)    | 267   |
| Other                    | 2.8               | (0.60)    | 43    | 3.9                | (1.26)    | 48    |
| Non-Hispanic white       | 46.3              | (3.09)    | 571   | 25.8               | (2.17)    | 351   |
| <b>By gender</b>         |                   |           |       |                    |           |       |
| <u>Age 0-5</u>           |                   |           |       |                    |           |       |
| Male                     | 52.9              | (3.39)    | 315   | 48.4               | (3.03)    | 260   |
| Female                   | 47.1              | (3.39)    | 282   | 51.6               | (3.03)    | 236   |
| <u>Age 6-11</u>          |                   |           |       |                    |           |       |
| Male                     | 46.8              | (3.89)    | 226   | 58.4               | (5.30)    | 203   |
| Female                   | 53.2              | (3.89)    | 216   | 41.6               | (5.30)    | 183   |
| <u>Age 12-17</u>         |                   |           |       |                    |           |       |
| Male                     | 43.7              | (5.82)    | 107   | 51.1               | (5.16)    | 125   |
| Female                   | 56.4              | (5.82)    | 125   | 48.9               | (5.16)    | 114   |
| <u>All Ages</u>          |                   |           |       |                    |           |       |
| Male                     | 48.8              | (2.30)    | 648   | 52.6               | (2.25)    | 588   |
| Female                   | 51.2              | (2.30)    | 623   | 47.5               | (2.25)    | 533   |

**Appendix Table 2. Percentage of Children under Age 18 with Various Indicators of Developmental Risk, by Family's Welfare Receipt Status and Child Age, 1999 (weighted estimates)  
1999 National Survey of America's Families**

|   | Former Recipients  |             |            |                |             |             | Current Recipients |             |            |             |             |             |
|---|--------------------|-------------|------------|----------------|-------------|-------------|--------------------|-------------|------------|-------------|-------------|-------------|
|   | All Children 12-17 |             | Boys 12-17 |                | Girls 12-17 |             | All Children 12-17 |             | Boys 12-17 |             | Girls 12-17 |             |
|   | Percent            | (St. Error) | Percent    | (St. Error)    | Percent     | (St. Error) | Percent            | (St. Error) | Percent    | (St. Error) | Percent     | (St. Error) |
| High level of behavioral and emotional problems | 20.9               | (5.07)      | 32.0       | (8.79) ** ††   | 12.0        | (3.63)      | 20.1               | (5.32)      | 12.5       | (3.95)      | 27.2        | (8.78)      |
| Skipped school 2+ times                         | 21.8               | (4.97)      | 36.3       | (8.70) *** ††† | 10.6        | (3.53) *    | 18.1               | (5.11)      | 6.5        | (1.57) ††   | 30.3        | (9.55)      |
| Suspended or expelled                           | 42.7               | (5.95) **   | 65.4       | (7.32) *** ††† | 25.6        | (8.14)      | 26.9               | (4.89)      | 21.7       | (4.11)      | 32.5        | (9.74)      |
| Low school engagement                           | 35.9               | (5.69)      | 54.4       | (8.40) *** ††† | 21.1        | (5.26)      | 28.4               | (6.08)      | 23.8       | (5.78)      | 33.3        | (9.21)      |
| No extracurricular activities                   | 74.7               | (4.68)      | 66.8       | (9.13)         | 80.9        | (5.75)      | 70.9               | (7.06)      | 81.8       | (4.65) †    | 60.9        | (10.92)     |
| Limiting condition                              | 21.2               | (3.80)      | 30.4       | (7.75) †       | 14.2        | (4.27)      | 24.5               | (4.87)      | 26.5       | (7.72)      | 22.5        | (5.65)      |
| Fair or poor health status                      | 14.8               | (4.55)      | 16.2       | (7.75)         | 13.7        | (6.13)      | 11.8               | (4.42)      | 11.2       | (5.28)      | 12.4        | (7.13)      |
|   | All Children 6-11  |             | Boys 6-11  |                | Girls 6-11  |             | All Children 6-11  |             | Boys 6-11  |             | Girls 6-11  |             |
|   | Percent            | (St. Error) | Percent    | (St. Error)    | Percent     | (St. Error) | Percent            | (St. Error) | Percent    | (St. Error) | Percent     | (St. Error) |
| High level of behavioral and emotional problems | 14.1               | (3.11)      | 15.7       | (4.54)         | 12.7        | (4.08)      | 22.6               | (6.25)      | 21.9       | (7.92)      | 23.5        | (10.76)     |
| Low school engagement                           | 27.4               | (4.29)      | 35.5       | (6.09) †       | 20.7        | (5.70)      | 28.7               | (5.17)      | 33.4       | (7.69)      | 22.1        | (5.18)      |
| No extracurricular activities                   | 65.7               | (5.08) **   | 59.5       | (6.90)         | 71.0        | (6.21) *    | 49.4               | (5.84)      | 47.5       | (7.62)      | 51.9        | (8.69)      |
| Limiting condition                              | 20.7               | (2.63)      | 27.0       | (5.26) †       | 15.3        | (3.30)      | 29.3               | (6.48)      | 33.6       | (7.65)      | 23.3        | (11.34)     |
| Fair or poor health status                      | 5.6                | (1.67)      | 7.4        | (3.12)         | 4.0         | (1.84)      | 12.8               | (4.74)      | 14.2       | (7.79)      | 10.8        | (4.75)      |
|   | All Children 0-5   |             | Boys 0-5   |                | Girls 0-5   |             | All Children 0-5   |             | Boys 0-5   |             | Girls 0-5   |             |
|   | Percent            | (St. Error) | Percent    | (St. Error)    | Percent     | (St. Error) | Percent            | (St. Error) | Percent    | (St. Error) | Percent     | (St. Error) |
| Limiting condition                              | 6.4                | (1.81)      | 9.8        | (3.60) †       | 2.5         | (0.86) *    | 10.5               | (2.79)      | 9.7        | (3.39)      | 11.2        | (4.40)      |
| Fair or poor health status                      | 7.1                | (1.90)      | 9.6        | (3.63)         | 4.2         | (1.57)      | 9.2                | (1.83)      | 13.1       | (3.12) ††   | 5.5         | (1.81)      |

\* Differs significantly from the percentage for current recipients (\*  $p < .10$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ )

† Differs significantly from the percentage for girls (†  $p < .10$ , ††  $p < .05$ , †††  $p < .01$ )

Note: For ages 12-17, the difference between former and current recipients is statistically significantly different ( $p < .05$  for boys versus girls for the following measures: behavioral and emotional problems, skipping school, suspension/expulsion, and low school engagement)

**Appendix Table 3. Percentage of Children (Ages 12-17) with Various Family Characteristics, by Family's Welfare Receipt Status, 1999 (weighted estimates)  
1999 National Survey of America's Families**

|  | Former Recipients |             |            |             |             |             | Current Recipients |             |            |             |             |             |
|--|-------------------|-------------|------------|-------------|-------------|-------------|--------------------|-------------|------------|-------------|-------------|-------------|
|  | Children 12-17    |             | Boys 12-17 |             | Girls 12-17 |             | Children 12-17     |             | Boys 12-17 |             | Girls 12-17 |             |
|  | Percent           | (St. Error) | Percent    | (St. Error) | Percent     | (St. Error) | Percent            | (St. Error) | Percent    | (St. Error) | Percent     | (St. Error) |
| <b>Family Structure</b>                |                   |             |            |             |             |             |                    |             |            |             |             |             |
| Single parent                          | 56.6              | (6.74) *    | 60.8       | (10.51)     | 53.4        | (7.93)      | 71.7               | (4.98)      | 75.7       | (6.38)      | 67.5        | (7.94)      |
| Cohabiting parents                     | 12.4              | (3.84)      | 16.2       | (7.51)      | 9.5         | (3.95)      | 13.7               | (5.10)      | 8.1        | (5.34)      | 19.5        | (8.10)      |
| Married parents                        | 30.9              | (6.82) **   | 23.0       | (9.14)      | 37.1        | (8.67) **   | 14.7               | (3.00)      | 16.3       | (4.21)      | 13.0        | (4.00)      |
| <b>Family Income<sup>a</sup></b>       |                   |             |            |             |             |             |                    |             |            |             |             |             |
| Below 100% poverty level               | 64.4              | (5.32) ***  | 68.4       | (7.38)      | 61.4        | (8.30) *    | 80.7               | (4.03)      | 81.8       | (5.51)      | 79.6        | (4.82)      |
| 100-199% poverty level                 | 21.3              | (3.71)      | 26.7       | (6.89) *    | 17.0        | (5.07)      | 14.1               | (2.93)      | 11.8       | (3.98)      | 16.6        | (3.83)      |
| 200%+ poverty level                    | 14.3              | (4.92) *    | 4.9        | (1.82) ††   | 21.6        | (7.78) **   | 5.2                | (1.99)      | 6.5        | (3.03)      | 3.8         | (2.07)      |
| <b>Parental Employment<sup>b</sup></b> |                   |             |            |             |             |             |                    |             |            |             |             |             |
| No work                                | 20.3              | (5.47) ***  | 13.1       | (4.65) ***  | 25.8        | (8.62) **   | 56.2               | (4.97)      | 61.9       | (6.70)      | 50.3        | (7.32)      |
| Partial employment                     | 42.1              | (7.66)      | 39.7       | (10.02)     | 44.0        | (9.61)      | 28.0               | (4.97)      | 21.0       | (6.22)      | 35.3        | (7.38)      |
| Full employment                        | 37.6              | (5.87) ***  | 47.2       | (8.72) ***  | 30.2        | (7.46)      | 15.8               | (4.04)      | 17.1       | (5.37)      | 14.4        | (5.91)      |
| <b>Symptoms of poor mental health</b>  |                   |             |            |             |             |             |                    |             |            |             |             |             |
|  | 35.7              | (6.09) *    | 30.9       | (7.66) ***  | 39.5        | (8.69)      | 49.2               | (5.43)      | 57.7       | (7.43)      | 41.3        | (7.27)      |

a Family income is assessed as the ratio of the family's 1998 income to the 1998 federal poverty threshold.

b No employment: A single parent who is not employed or two parents, neither of whom is employed

Full employment: A single parent who works 35 hours or more a week or two parents, both of whom work 35 or more hours a week

Partial employment: All other categories (e.g., a single parent who works less than 35 hours a week or two parents with one employed and the other not employed)

\* Differs significantly from the percentage for current recipients (\*  $p < .10$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ )

† Differs significantly from the percentage for girls (†  $p < .10$ , ††  $p < .05$ , †††  $p < .01$ )

**Appendix Table 4. Logistic Regression Models Predicting Developmental Risk among Children Ages 12-17  
National Survey of America's Families, 1999 (weighted estimates)**

| Dependent variable:       | High behavioral and emotional problems |             | Low school engagement |             | Suspended or expelled in past year |             | Skipped school 2+ times in past year |             |
|---------------------------|--|-------------|-----------------------|-------------|------------------------------------|-------------|--------------------------------------|-------------|
|                           | Parameter Estimate                     | (St. Error) | Parameter Estimate    | (St. Error) | Parameter Estimate                 | (St. Error) | Parameter Estimate                   | (St. Error) |
| Intercept                 | -0.99                                  | (0.47) **   | -0.70                 | (0.43)      | -0.73                              | (0.45)      | -0.83                                | (0.46) *    |
| Male                      | -0.96                                  | (0.54) *    | -0.47                 | (0.47)      | -0.55                              | (0.56)      | -1.83                                | (0.54) ***  |
| Welfare leaver            | -1.01                                  | (0.59) *    | -0.62                 | (0.54)      | -0.33                              | (0.63)      | -1.30                                | (0.63) **   |
| Male * leaver             | 2.21                                   | (0.71) ***  | 1.97                  | (0.66) ***  | 2.26                               | (0.83) ***  | 3.40                                 | (0.76) ***  |
| R <sup>2</sup>            |  | 0.07        |                       | 0.08        |                                    | 0.13        |                                      | 0.15        |
| Intercept                 | -1.11                                  | (0.61) *    | -0.77                 | (0.48)      | -0.71                              | (0.53)      | -0.80                                | (0.55)      |
| Male                      | -0.94                                  | (0.58)      | -0.44                 | (0.49)      | -0.54                              | (0.57)      | -1.84                                | (0.56) ***  |
| Welfare leaver            | -1.11                                  | (0.62) *    | -0.63                 | (0.59)      | -0.29                              | (0.68)      | -1.29                                | (0.69) *    |
| Male * leaver             | 2.07                                   | (0.74) ***  | 1.95                  | (0.65) ***  | 2.31                               | (0.80) ***  | 3.42                                 | (0.76) ***  |
| Fully employed parents    | 0.09                                   | (0.59)      | 0.21                  | (0.48)      | 0.06                               | (0.48)      | -0.08                                | (0.59)      |
| Other work schedule       | 0.59                                   | (0.70)      | -0.03                 | (0.52)      | -0.32                              | (0.59)      | -0.07                                | (0.77)      |
| R <sup>2</sup>            |  | 0.08        |                       | 0.08        |                                    | 0.13        |                                      | 0.15        |
| Intercept                 | -1.30                                  | (0.84)      | -0.73                 | (0.63)      | -0.20                              | (0.57)      | -0.78                                | (0.71)      |
| Male                      | -0.98                                  | (0.58) *    | -0.46                 | (0.49)      | -0.61                              | (0.59)      | -1.83                                | (0.55) ***  |
| Welfare leaver            | -1.22                                  | (0.62) *    | -0.69                 | (0.56)      | -0.11                              | (0.57)      | -1.36                                | (0.60) **   |
| Male * leaver             | 2.30                                   | (0.75) ***  | 2.01                  | (0.70) ***  | 2.38                               | (0.85) ***  | 3.46                                 | (0.78) ***  |
| 50-99% poverty level      | 0.54                                   | (0.65)      | -0.10                 | (0.52)      | -0.68                              | (0.46)      | -0.16                                | (0.64)      |
| 100-149% poverty level    | 0.04                                   | (0.80)      | 0.34                  | (0.52)      | -1.35                              | (0.64) **   | -0.01                                | (0.67)      |
| 150%+ poverty level       | 0.89                                   | (0.67)      | 0.33                  | (0.64)      | -1.44                              | (0.68) **   | 0.23                                 | (0.64)      |
| R <sup>2</sup>            |  | 0.09        |                       | 0.09        |                                    | 0.18        |                                      | 0.16        |
| Intercept                 | -0.89                                  | (0.44) **   | -0.38                 | (0.44)      | -1.53                              | (0.39) ***  | -0.68                                | (0.41)      |
| Male                      | -0.96                                  | (0.55) *    | -0.46                 | (0.48)      | -0.58                              | (0.59)      | -1.82                                | (0.54) ***  |
| Welfare leaver            | -1.03                                  | (0.58) *    | -0.70                 | (0.54)      | -0.18                              | (0.61)      | -1.34                                | (0.61) **   |
| Male * leaver             | 2.21                                   | (0.71) ***  | 2.00                  | (0.66) ***  | 2.28                               | (0.85) ***  | 3.41                                 | (0.75) ***  |
| Below 100% poverty level  | -0.13                                  | (0.35)      | -0.40                 | (0.34)      | 0.97                               | (0.48) **   | -0.20                                | (0.37)      |
| R <sup>2</sup>            |  | 0.07        |                       | 0.09        |                                    | 0.16        |                                      | 0.16        |
| Intercept                 | -0.94                                  | (0.53) *    | -0.63                 | (0.48)      | -0.76                              | (0.49)      | -0.88                                | (0.52) *    |
| Male                      | -1.06                                  | (0.56) *    | -0.57                 | (0.48)      | -0.53                              | (0.54)      | -1.86                                | (0.54) ***  |
| Welfare leaver            | -1.20                                  | (0.59) **   | -0.82                 | (0.54)      | -0.31                              | (0.63)      | -1.43                                | (0.57) **   |
| Male * leaver             | 2.45                                   | (0.75) ***  | 2.24                  | (0.68) ***  | 2.24                               | (0.81) ***  | 3.53                                 | (0.75) ***  |
| Parent cohabits           | -0.71                                  | (0.73)      | -0.80                 | (0.57)      | 0.15                               | (0.60)      | -0.07                                | (0.75)      |
| Parent is married         | 0.44                                   | (0.60)      | 0.48                  | (0.49)      | -0.03                              | (0.47)      | 0.43                                 | (0.62)      |
| R <sup>2</sup>            |  | 0.09        |                       | 0.11        |                                    | 0.13        |                                      | 0.16        |
| Intercept                 | -1.50                                  | (0.38) ***  | -1.08                 | (0.34) ***  | -0.95                              | (0.42) **   | -1.08                                | (0.44) **   |
| Male                      | -1.20                                  | (0.61) *    | -0.68                 | (0.49)      | -0.51                              | (0.57)      | -1.83                                | (0.57) ***  |
| Welfare leaver            | -1.05                                  | (0.59) *    | -0.61                 | (0.52)      | -0.31                              | (0.64)      | -1.31                                | (0.63) **   |
| Male * leaver             | 2.62                                   | (0.82) ***  | 2.28                  | (0.73) ***  | 2.28                               | (0.90) **   | 3.46                                 | (0.81) ***  |
| Poor parent mental health | 1.10                                   | (0.50) **   | 0.89                  | (0.37) **   | 0.51                               | (0.49)      | 0.59                                 | (0.50)      |
| R <sup>2</sup>            |  | 0.13        |                       | 0.13        |                                    | 0.14        |                                      | 0.16        |

Note: The R<sup>2</sup> reported here is the adjusted generalized coefficient of determination proposed by Nagelkerke (1991).

\* Differs significantly from 0 (\* p < .10, \*\* p < .05, \*\*\* p < .01)

**Appendix Table 5. Logistic Regression Models Predicting Developmental Risk among Children Age 12-17  
National Survey of America's Families, 1999 (weighted estimates)**

|                                  | High behavioral and emotional problems |             | Low school engagement |             | Suspended or expelled in past year |             | Skipped school 2+ times in past year |             |
|----------------------------------|--|-------------|-----------------------|-------------|------------------------------------|-------------|--------------------------------------|-------------|
|                                  | Parameter Estimate                     | (St. Error) | Parameter Estimate    | (St. Error) | Parameter Estimate                 | (St. Error) | Parameter Estimate                   | (St. Error) |
| Intercept                        | -0.99                                  | (0.47) **   | -0.70                 | (0.43)      | -0.73                              | (0.45)      | -0.83                                | (0.46) *    |
| Male                             | -0.96                                  | (0.54) *    | -0.47                 | (0.47)      | -0.55                              | (0.56)      | -1.83                                | (0.54) ***  |
| Welfare leaver                   | -1.01                                  | (0.59) *    | -0.62                 | (0.54)      | -0.33                              | (0.63)      | -1.30                                | (0.63) **   |
| Male * leaver                    | 2.21                                   | (0.71) ***  | 1.97                  | (0.66) ***  | 2.26                               | (0.83) ***  | 3.40                                 | (0.76) ***  |
| R <sup>2</sup>                   |  | 0.07        |                       | 0.08        |                                    | 0.13        |                                      | 0.15        |
| Intercept                        | -0.99                                  | (0.71)      | -0.57                 | (0.53)      | -0.87                              | (0.67)      | -0.83                                | (0.62)      |
| Male                             | -1.24                                  | (0.94)      | -0.84                 | (0.62)      | -0.20                              | (0.72)      | -1.75                                | (0.68) **   |
| Welfare leaver                   | -1.12                                  | (0.67)      | -0.63                 | (0.63)      | -0.39                              | (0.78)      | -1.34                                | (0.73) *    |
| Male * leaver                    | 2.00                                   | (0.81) **   | 1.84                  | (0.83) **   | 2.74                               | (1.08) **   | 3.59                                 | (0.95) ***  |
| Fully employed parents           | -0.36                                  | (0.85)      | -0.42                 | (0.74)      | 0.30                               | (0.87)      | -0.13                                | (0.81)      |
| Other work schedule              | 0.73                                   | (1.15)      | 0.15                  | (0.95)      | 0.20                               | (1.16)      | 0.25                                 | (1.40)      |
| Male * fully employed parents    | 1.09                                   | (1.24)      | 1.42                  | (0.96)      | -0.66                              | (1.16)      | 0.04                                 | (1.11)      |
| Male * other work schedule       | -0.11                                  | (1.38)      | -0.18                 | (1.15)      | -1.20                              | (1.35)      | -0.69                                | (1.58)      |
| R <sup>2</sup>                   |  | 0.10        |                       | 0.11        |                                    | 0.14        |                                      | 0.16        |
| Intercept                        | -0.93                                  | (0.87)      | -0.27                 | (0.64)      | 0.54                               | (0.49)      | -0.43                                | (0.71)      |
| Male                             | -2.35                                  | (1.00) **   | -1.52                 | (0.92)      | -2.48                              | (0.77) ***  | -3.16                                | (1.01) ***  |
| Welfare leaver                   | -0.98                                  | (0.59)      | -0.52                 | (0.59)      | 0.15                               | (0.67)      | -1.31                                | (0.59) **   |
| Male * leaver                    | 1.90                                   | (0.78) **   | 1.67                  | (0.70) **   | 1.71                               | (1.00) *    | 3.22                                 | (0.75) ***  |
| 50-99% poverty level             | -0.05                                  | (0.93)      | -0.92                 | (0.80)      | -2.20                              | (0.85) **   | -0.81                                | (0.93)      |
| 100-149% poverty level           | -0.17                                  | (1.10)      | -0.22                 | (0.72)      | -2.38                              | (0.67) ***  | -0.51                                | (0.91)      |
| 150%+ poverty level              | -0.17                                  | (0.88)      | -0.51                 | (0.85)      | -2.96                              | (0.87) ***  | -0.19                                | (0.83)      |
| Male * 50-99% poverty level      | 1.85                                   | (1.27)      | 1.75                  | (1.09)      | 3.40                               | (1.05) ***  | 2.07                                 | (1.29)      |
| Male * 100-149% poverty level    | 1.08                                   | (1.34)      | 1.29                  | (1.16)      | 2.57                               | (0.98) **   | 1.78                                 | (1.24)      |
| Male * 150%+ poverty level       | 2.76                                   | (1.31) **   | 1.92                  | (1.31)      | 3.50                               | (1.35) **   | 1.60                                 | (1.27)      |
| R <sup>2</sup>                   |  | 0.13        |                       | 0.12        |                                    | 0.30        |                                      | 0.19        |
| Intercept                        | -1.10                                  | (0.44) **   | -0.58                 | (0.48)      | -1.97                              | (0.49) ***  | -0.78                                | (0.42) *    |
| Male                             | -0.53                                  | (0.71)      | -0.06                 | (0.59)      | 0.29                               | (0.89)      | -1.58                                | (0.67) **   |
| Welfare leaver                   | -0.99                                  | (0.56) *    | -0.65                 | (0.53)      | -0.12                              | (0.62)      | -1.31                                | (0.59) **   |
| Male * leaver                    | 2.15                                   | (0.70) ***  | 1.93                  | (0.65) ***  | 2.11                               | (0.88) **   | 3.37                                 | (0.73) ***  |
| Below 100% poverty level         | 0.14                                   | (0.57)      | -0.15                 | (0.52)      | 1.47                               | (0.55) **   | -0.07                                | (0.58)      |
| Male * below 100% poverty level  | -0.56                                  | (0.86)      | -0.51                 | (0.77)      | -1.00                              | (0.73)      | -0.31                                | (0.85)      |
| R <sup>2</sup>                   |  | 0.07        |                       | 0.09        |                                    | 0.17        |                                      | 0.16        |
| Intercept                        | -0.88                                  | (0.56)      | -0.47                 | (0.49)      | -0.63                              | (0.49)      | -0.83                                | (0.55)      |
| Male                             | -1.32                                  | (0.74) *    | -0.92                 | (0.56)      | -0.83                              | (0.55)      | -2.13                                | (0.64) ***  |
| Welfare leaver                   | -0.92                                  | (0.59)      | -0.69                 | (0.55)      | -0.19                              | (0.64)      | -1.20                                | (0.58) **   |
| Male * leaver                    | 2.29                                   | (0.73) ***  | 2.07                  | (0.67) ***  | 2.08                               | (0.80) **   | 3.40                                 | (0.77) ***  |
| Parent cohabits                  | -0.27                                  | (0.93)      | -1.31                 | (0.80)      | -0.10                              | (0.80)      | 0.19                                 | (0.91)      |
| Parent is married                | -0.47                                  | (0.95)      | -0.22                 | (0.63)      | -0.69                              | (0.78)      | -0.38                                | (0.62)      |
| Male * parent cohabits           | -2.43                                  | (1.26) *    | 1.04                  | (1.17)      | 0.62                               | (1.12)      | -0.99                                | (1.36)      |
| Male * parent is married         | 1.72                                   | (1.17)      | 1.43                  | (0.82) *    | 1.39                               | (0.94)      | 1.69                                 | (0.69) **   |
| R <sup>2</sup>                   |  | 0.14        |                       | 0.13        |                                    | 0.15        |                                      | 0.19        |
| Male                             | -1.83                                  | (0.45) ***  | -1.53                 | (0.36) ***  | -1.08                              | (0.47) **   | -1.35                                | (0.53) **   |
| Welfare leaver                   | -0.34                                  | (0.65)      | 0.42                  | (0.51)      | -0.12                              | (0.62)      | -1.04                                | (0.69)      |
| Male * leaver                    | -1.12                                  | (0.61) *    | -0.67                 | (0.56)      | -0.31                              | (0.67)      | -1.36                                | (0.64) **   |
| Poor parent mental health        | 2.42                                   | (0.76) ***  | 2.02                  | (0.71) ***  | 2.15                               | (0.84) **   | 3.27                                 | (0.80) ***  |
| Male * poor parent mental health | 1.69                                   | (0.72) **   | 1.80                  | (0.52) ***  | 0.81                               | (0.70)      | 1.13                                 | (0.72)      |
| R <sup>2</sup>                   |  | 0.15        |                       | 0.18        |                                    | 0.14        |                                      | 0.18        |

Note: The R<sup>2</sup> reported here is the adjusted generalized coefficient of determination proposed by Nagelkerke (1991).

\* Differs significantly from 0 (\*  $p < .10$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ )