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Youth Employment and Behavior Problems

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Abstract

This paper draws data from the Child Development Supplement to the Panel Study of Income Dynamics to examine the relationship between youth employment and behavior problems. With a recent national sample, we depict the employment patterns of American youth aged 12 through 18 in 2003. Significant differences in employment rates and job characteristics exist between black and white youth and, contrary to previous research usually based on local samples, youth employment is mainly determined by job availability rather than individual characteristics such as poor academic performance. Conflicting hypotheses about various mediating mechanisms through which youth employment can potentially shape children's behavior are investigated. These mechanisms include parental control/closeness to parents, peer influence, neighborhood quality, job characteristics, educational expectations, and emotional distress. We find that employment at an early age is associated with fewer behavior problems, but only when the jobs offer opportunities for human capital development and only when working moderate not intensive hours. Employment has a much stronger positive association with behavior for black male than for white female youth and the positive effect of work is mediated by positive peer influence for all youth. Findings support social and human capital theories and, more broadly, the social network/role model explanation for adolescent behavior.

INTRODUCTION

Research has shown that early employment has long lasting implications for human capital acquisition, later employment, and future earnings (Michael and Tuma 1984; Ruhm 1995; U.S. Department of Labor, Bureau of Labor Statistics 2000). Thus, early employment could generate important inequalities in adult life chances.

Adolescent employment may also have significant implications along the path to adulthood. The transition to adulthood is growing longer in the US and other developing countries (Furstenberg, 2008). This extension may be particularly acute for youth who are unable to find employment, which can delay other key adult transitions, such as establishing an independent household or entering marriage and parenthood. Does early employment smooth the successful transition to adulthood? Or, is there a time when employment is too early to be beneficial for development? Research on adolescent employment in the last few decades has provided contradictory findings about its impact on youth behavior.

Wilson's (1987) *The Truly Disadvantaged* suggests joblessness among young black men may generate many of the problems in urban neighborhoods. According to the Bureau of Labor Statistics¹, 16.8% of 16-19 year old white youth in the civilian labor force were unemployed in 2008, compared to almost twice the unemployment rate for black youth (31.2%). The racial gap is larger among young males aged 16-19 -- 19.1% of white males compared to 35.9% of black males are unemployed, versus 14.4% of white females compared to 26.8% of black females. The current economic recession and extension of the transition to adulthood may substantially reduce adolescent employment rates, particularly in low-income neighborhoods. If Wilson's arguments are correct, decreasing adolescent employment could

¹ <http://www.bls.gov/cps/tables.htm>

foster neighborhood problems and adolescent delinquency and hinder the transition to adulthood. Understanding the relationship between youth employment and behavior also has important implications for assessing the impact of legislation such as minimum wages, school-to-work programs, or juvenile justice and delinquency prevention acts. The Fair Labor Standards Act (FLSA), which includes youth employment laws, was passed during the Depression (1938). The current recession and high adult unemployment rates may stimulate renewed policy attention to adolescent employment and evidence based on recent, nationally representative research can inform the debate.

Despite the importance of adolescent employment for human capital and status attainment, the transition to adulthood, racial and neighborhood inequalities, and policies, research on effects of adolescent employment since the 1970s supports contradictory theories and predictions about its effects on youth and society. Some argue that working at an early age promotes self-esteem, independence, positive skills, a strong work ethic, and stronger social networks that facilitate the transition to adulthood; others argue that work exposes youth prematurely to adult environments that are conducive to various behavior problems. Still other theories predict different effects depending on the intensity of youth employment (role incompatibility and strain theory). Finally, some argue that the relationship between youth employment and behavior is spurious, due to selection bias and unobserved heterogeneity.

Extant empirical research to date also reports contradictory findings that limit our ability to generalize or to establish causality. Research by D'Amico (1984) and Elder (1974), for example, showed positive effects of work while Marsh (1991) reported negative effects on a variety of outcomes, including psychosocial development, school engagement and achievement, delinquency, and stress. More recently, Mortimer et al. (1996), Mihalic and Elliott (1997), Ruhm (1995), Mortimer and Johnson (1998), and Mortimer et al. (2002) find

evidence for positive effects of work conditional on work hours or quality. Methodological limitations related to using cross-sectional data or local samples may have contributed to the mixed results in this body of research. Furthermore, youth employment experiences vary substantially. Widely different types of work may explain some of the contradictory findings of previous research. However, while effects of work intensity (hours per week) are frequently studied, Staff and Mortimer (2008) suggest the need to study the effects of job quality on the transition to adulthood and whether job quality affects youth from different social classes differently.

To learn more about the transition process, in this paper we ask what shapes a youth's decision to work, and through what mechanisms does adolescent employment influence youth behavior. We examine job quality and work hours and how work interacts with class, race, and gender to affect youth behavior. This paper contributes to our understanding of adolescent employment and the transition to adulthood in four ways: 1) we synthesize existing theories and test multiple hypotheses about how various mechanisms mediate the relationship between early employment and youth behavior; 2) we base our analyses on current nationally representative panel data from the Panel Study of Income Dynamics Child Development Supplements (PSID-CDS); 3) we examine both job quality and work hours; and 4) we examine whether adolescent employment experience affects race, class and gender subgroups differently; 5) we address the selection and unobserved heterogeneity issues by including many prior characteristics of the adolescents and his/her family. Results suggest that moderate work hours and high quality jobs are associated with lower adolescent behavior problems through increasing association with positive peers. Thus, findings support human and social capital theory. Significant interaction effects of high quality work with race, gender, and positive peer influence yield further support for this social network/role model theory.

YOUTH EMPLOYMENT AND BEHAVIOR PROBLEMS

Employment Increases Problem Behavior

Theories predicting that youth employment increases problematic behaviors focus on several key mechanisms, including reduced parental control, peer association, and the nature of jobs youths hold. Social control theory (McNeal, 1997; Steinberg et al., 1993) predicts a positive relationship between adolescent employment and problem behaviors, suggesting that work increases economic independence and reduces social control by parents or the community, which is theorized to increase risky or age-inappropriate behavior (McNeal, 1997). Similarly, the theory of differential association (Sutherland and Cressey, 1974; Ploeger, 1997) suggests employment exposes adolescents to a wider social network, including peers who expose them to delinquent behaviors. Differential association theory assumes peers at work have negative influence on behavior. Precocious development hypothesis suggests that early adult role transitions are linked because youth are exposed to the less sheltered, more negative adult world before they are socially or developmentally prepared. Through this exposure, working during high school is expected to be associated with risk taking and behaviors deemed problematic during adolescence (Bozick, 2006; Bachman and Schulenberg, 1993; Greenberger and Steinberg, 1986). Partly due to the unskilled jobs available, the theory suggest working adolescents are exposed to deviant attitudes and values (materialism, cynicism, unethical behavior, and theft), which increases deviance (Greenberger & Steinberg, 1986). Newcomb and Bentler (1988) suggest that youth who transition early require institutional and social network support in order to prevent negative effects.

Employment Reduces Problem Behavior

In contrast, social capital or social network theory predicts that youth employment promotes exposure to prosocial peers and positive behavior (Wright and Cullen, 2004; Vazsonyi and Snider, 2008). According to this theory, employment builds affective ties and positive social networks in institutions and communities, which encourage positive behavior (Hirschi, 1969; Sampson and Laub, 1993). Mechanisms include peer and neighborhood influence.

Human capital or learning theory suggests that realistic contact with the adult world and the expectation of skills, responsibility, dependability, punctuality, diligence, and self-reliance promote positive behavior (President's Science Advisory Committee, Panel on Youth, 1973; National Commission on Youth, 1980; Ruhm, 1995). But only high quality jobs promote the development of these characteristics. Time spent at work could detract from other forms of human capital development, particularly educational attainment (Ruhm, 1995; Marsh, 1991). However, jobs that develop skills, enable responsibility, or expose youth to positive role models and supportive social networks could have positive effects that outweigh any negative effect of time diverted from school to work. A job's ability to develop human capital depends on employee's perception. Therefore, job characteristics as perceived by the youth are the key mechanism for human capital or learning theory.

Opportunity cost theory suggests that working adolescents perceive negative consequences for risky or problematic behavior because it would jeopardize their employment and income (Brewster et al., 1993; Kraft and Coverdill, 1994; Rich and Kim, 2002). Negative consequences of losing one's job should be greater for those from lower SES backgrounds, so SES is a key mediating mechanism to test this theory.

Role incompatibility and strain theories predict different effects of youth employment depending on the intensity (hours per week) of work. Role incompatibility theory suggests that

conflicting expectations or time requirements of school and work, for example, can inhibit identity development and make adolescence more tumultuous (Erikson, 1968; Peterson, 1987). Intense work during adolescence conflicts with schoolwork and causes stress. Similarly, strain theory suggests that work causes stress and puts strain on youth. Adolescents adopt the goals of society, such as high income, but cannot reach them with the jobs available. This mismatch between the cultural norms and structural possibilities causes psychological strain or depression, resulting in delinquent behavior (Merton, 1938). For both theories, the key mechanisms are stress and educational expectations, which could conflict with work. Role incompatibility predicts different effects depending on the number of hours worked per week and this may also relate to strain theory, as the gap between goals and possibilities becomes more apparent with longer work hours. Strain theory may also be complicated by job quality, because those in a good quality job may see less of a gap between goals and possibilities, reducing stress and problem behaviors.

Each of the above theories focuses on only one particular mediating pathway. It is useful to examine them systematically in a more comprehensive manner. In this paper, we synthesize theories on the relationship between adolescent employment and behavior and examine competing hypotheses about multiple mediating mechanisms with a national sample of American youth.

Spurious Relationship - Heterogeneity, Endogeneity, and Sample Selection Bias

Establishing the causal relationship between youth employment and behavior proves to be formidable. The contradictory findings of previous research could be due to heterogeneous effects of employment depending on youth background characteristics. For example, working black youth may experience racism at work and act out in response to this injustice.

Alternatively, work may provide a sense of control and autonomy not available elsewhere in their lives. Wilson's (1987) *The Truly Disadvantaged* suggests many problems of black urban areas are due to young male joblessness. If this is the case, we would expect jobs to have a stronger positive effect on behavior for black and male compared to white and female youth. Employment may also affect youth differently depending on their family income. For example, working youth from low income families may have stronger economic incentives to behave well. Staff and Mortimer (2008) suggest the need to study the effects of job quality on the transition to adulthood and whether job quality affects youth from different classes differently. Mihalic and Elliot (1997) (using National Youth Survey panel data) and Entwisle et al. (2000) (using panel data from Baltimore, MD) find differences by race, class, and gender, suggesting the consequences of employment may differ by these characteristics. Their findings show the importance of controlling for and investigating differences by race, SES, and gender.

A central debate in recent literature has been the issue of self-selection; namely, certain characteristics that encourage youths to take on employment early in life also encourage problematic behavior (Entwisle et al., 2000; Bachman and Schulenberg, 1993; Steinberg et al., 1993; Ploeger, 1997; Paternoster et al., 2003). For example, those who choose to work may also be deviant or well behaved and other factors such as disengagement from school, family poverty, or distant relationships with parents could be causing both employment and behavior problems. Paternoster et al. (2003) conduct a careful fixed effects study using NLSY 1997 data to address the self-selection issue. Using a sample born in 1980-84, they found no effect of youth employment on delinquency after controlling for selection. However, they only examine employment by work hours, not job quality (which Staff and Mortimer, 2008 stress is vital) and they do not assess potentially heterogeneous effects of employment by race, SES, or gender.

Mihalic and Elliott (1997) found that controlling for pre-employment differences reduces the negative effects of work, but not completely. Although Mihalic and Elliot use nationally representative National Youth Survey panel data, they examine the effect of employment on school performance, not adolescent behavior. Similarly, Bachman and Schulenberg (1992) and Steinberg et al. (1993) find that self-selection based on school performance partly explains the negative effects of work, but that negative effects of (especially intense) work still exist by encouraging further disengagement from school, increasing drug use and delinquency, and reducing self-esteem. Bachman and Schulenberg (1992) use Monitoring the Future data from senior classes in 135 schools in 1985 and Steinberg et al. (1993) use data from 1,777 sophomores and juniors in Wisconsin and California schools. In sum, previous work addressing this issue finds that controlling for self-selection reduces, but does not eliminate, the negative effects of work (e.g., Ploeger, 1997; Mortimer et al., 1996).

Ruhm (1995) uses nationally representative NLSY 1979 data and finds a positive relationship - employment is associated with increased educational and economic attainment, different than our area of interest. D'Amico and Baker (1984) also used NLSY 1979 data and found a positive relationship between early employment and later employment outcomes. The NLSY data, while excellent, follows a cohort of youth ages 14-22 in 1979. The effects of adolescent employment may have changed drastically in the intervening 25 years, particularly in light of major economic restructuring and the growth of service occupations. Analysis of more recent data is necessary to understand the contemporary transition to adulthood.

We address the challenges of endogeneity in several ways, including: 1) controlling for prior child characteristics and including prior behavior problems and family measures in all models; 2) analyzing and controlling for factors predicting work (as well as hours and quality

of work); and 3) estimating the work-behavior relationship using instrumental variable models.² With these efforts, we find that despite significant self-selection, youth employment is still positively associated with behavior.

Finally, apart from the issues of heterogeneity and self-selection, much previous research uses cross-sectional, local, or non-nationally representative samples. Elder's (1974) pioneering research, for example, examined the effects of youth employment in Iowa among those from a farming background during the depression. Mortimer and Johnson (1998) note that much previous research on adolescent employment is cross-sectional (e.g., Bachman and Schulenberg, 1993; Greenberger and Steinberg, 1986; Steinberg and Dornbusch, 1991). As they also note, several longitudinal studies on the effects of adolescent employment have data problems including small sample sizes (Greenberger and Steinberg, 1986) or low retention rates (Steinberg et al., 1993). Mortimer and Johnson (1998) improve on these issues, but their Youth Development Study has limitations of its own. Their data, also used in several subsequent studies (e.g., Mortimer et al., 1996; Mortimer et al., 2002; Staff and Mortimer, 2008), is a longitudinal community sample of 1,000 youth from the St. Paul, MN public school district. While it has an excellent retention rate, it is a local sample, overrepresenting middle class, white youth from Minnesota. The sample thus is not nationally representative and underrepresents individuals of particular interest to many theories, particularly low SES and minority youth. Mortimer et al. (2002) study effects of work conditional on both work hours and quality, as we do. They find a positive association with mental health outcomes when working youth are satisfied with their wages, feel earnings enable going out with friends, and feel work

² We used state minimum wage rate and youth employment certification laws (some states require age certification for employment until age 18, 16, or not at all) as instrumental variables to estimate the relationship between employment and behavior after controlling for self-selection. Coefficients for instrumented employment were positive (consistent with our results). However, due to the large standard errors, possibly due to the small sample size, results are not reported here.

does not interfere with academics. However, they use the local Youth Development Study data and look at effects of work on mental health rather than behavior. The PSID data used here improves on previous research by providing rich, longitudinal, and current nationally representative data that can be generalized to youth of all SES and family backgrounds.

RESEARCH METHODS

Conceptual Framework

As noted above, in this paper, we synthesize theories on the relationship between adolescent employment and behavior and examine competing hypotheses about multiple mediating mechanisms. Figure 1 depicts the main theoretical constructs and the mediating pathways through which employment may influence youth's behavior.

(Figure 1 about here)

Our main research questions are:

- What factors influence a youth's decision to hold a job during school?
- What is the relationship between youth employment and behavior problems? We test opportunity cost, social capital, and learning theories, which predict positive effects on behavior, and social control theory, differential association, and precocious development hypothesis, which predict negative effects.
- What are the mechanisms through which employment influences youth behavior? We investigate various mechanisms that the theories predict should be important: closeness to parents/parental control, peer effects, neighborhood quality, job quality, educational intent, and emotional distress. This investigation provides a complex and inclusive understanding of the relationships between employment,

behavior and various potential mechanisms and enables further tests of differential association, social capital, strain, and role incompatibility theories.

- Do the associations between youth employment and behavior differ by work hours and job quality? Unpacking work in this way allows us to further test all of the theories because in all cases effects should differ depending on quality and intensity of work.
- Do the associations between youth employment and behavior differ by race, gender, or family income? Interaction terms between race/gender/family income and work allow us to look for heterogeneous treatment effects. Different patterns may reflect varying experiences at the micro level at work and help explain differences in youth behavior by race, gender, and class.

Hypotheses

Based on the literature reviewed above, we test the following relationships between youth employment and their behavior.

1. Youth employment is associated with lower parental control/monitoring and higher behavior problems. This hypothesis tests social control theory and the mediating mechanism of parental monitoring or how close youths are to parents.
2. Youth employment is associated with greater exposure to delinquent peers/behavior/values, thus higher behavior problems. This hypothesis tests the differential association and precocious development theories and the mediating mechanism of peer influence.

We also postulate that the impact of youth employment on behavior varies by the quality and intensity of work.

3. High quality work develops human and social capital and increases opportunity costs of bad behavior, which promotes positive behavior. This hypothesis tests human capital, social capital, and opportunity cost theories. The mediating mechanisms tested are job quality, peer effects, and college plans, respectively.
4. Intensive work (20+ hours per week) is associated with higher emotional distress and behavior problems. This hypothesis tests role incompatibility and strain theories and the mediating mechanism of emotional distress.

Data and Sample

We draw on data from the Panel Study of Income Dynamics Child Development Supplements (PSID-CDS). The PSID is a longitudinal study that began in 1968 with a nationally representative sample of about 5,000 American families, with an oversample of black, low-income families. For the past three decades, the study has collected annual data from these families and individuals about their demographic, economic, and employment behavior. In 1997, the PSID began collecting data on a random sample of the PSID families that have children under the age of 13 in a Child Development Supplement (CDS-I). Data were collected from up to two children per family. The CDS collects information on child development and family dynamics, including parent-child relationships, home environment, indicators of children's health, cognitive achievement, social-emotional development, and time use, among other variables. The entire CDS sample size in 1997 is approximately 3,500 children residing in 2,400 households. A follow-up study with these children and families was conducted in 2002 and 2003³ (CDS-II). These children were between the ages of 8-18 in 2003. No new children were added to the study due to budget constraints. The total sample size in

³ The majority of the children were interviewed in 2003 (61%) with a smaller proportion of children interviewed in 2002 (39%). For simplicity, we will refer to the CDS II year as 2003 in subsequent text.

CDS-II is 2,907 children (response rate=85% at the child level) residing in 2,019 families (response rate=91% at the family level). In CDS-II, a set of questions about youth employment was asked of youth aged 12-18 in an audio computer-assisted self administered interview (ACASI). This method has been shown to yield more reliable responses from the youths, particularly on questions that are more sensitive or personal (Aquilino, 1994). The youth employment data are available only in CDS-II, not in CDS-I, when the respondents were younger. However, youth behaviors were assessed in both CDS waves and, due to child labor laws, few youth work before age 13 (the maximum age of our sample in 1997). These data allow us to link youth employment to their behavior for a national sample of youths from all socioeconomic statuses while controlling for a wide set of prior and contemporaneous family and child characteristics.

The PSID provides rich panel data about family background and youth behavior. Our study sample includes youths aged 12 through 18 in 2003 from all economic backgrounds. We excluded the 26 individuals not enrolled in school because they represented a very small group (only 3% of the sample) with potentially distinct life circumstances that shape the relationship between work and behavior. Due to these selection criteria, the final sample in this paper consists of 1,154 children. Missing data for some variables reduce the sample size in the regressions to 917 in some models. Longitudinal sampling weights developed by the PSID staff are used to help adjust for nonresponse and for the original selection probability. A more detailed discussion on sampling weights can be found in the technical report on the PSID-CDS website (<http://psidonline.isr.umich.edu/>).

Measures

Dependent Variable

The dependent variables are three measures of youth's behavior. The measures are indices based on responses of the primary caregiver to various questions about the youth's behavior. The PSID-CDS measures behavior problems in both 1997 and 2003 using the Behavior Problem Index (BPI) Externalizing score, developed by Peterson and Zill (1986), which includes the following questions about how often ("often," "sometimes," or "never") a child: "has sudden changes in mood or feeling"; "cheats or tells lies"; "argues too much"; "has difficulty concentrating"; "bullies or is cruel or mean to others"; "is disobedient"; "does not seem to feel sorry after misbehaves"; "has trouble getting along with other people (his/her) age"; "is impulsive"; "is restless or overly active"; "is stubborn, sullen, or irritable"; "breaks things on purpose"; "demands a lot of attention"; "hangs around with kids who get into trouble"; "is disobedient at school"; "has trouble getting along with teachers" (Cronbach's $\alpha=.86$). For more details about this or other measures, see the PSID-CDS User Guide (<http://psidonline.isr.umich.edu/CDS/wavesdoc.html> pp. 25-26).

We use another indicator that measures the positive behavior of the youths. This Positive Behavior Scale includes questions (10 items) about, for example, how much a child is cheerful, is curious, thinks before acting, gets along with others their age, obeys, or is self-reliant (Cronbach's $\alpha=.82$). We also create a "deviant behavior index" including four items that characterize more severe behavior problems that load tightly together in the factor analysis as a latent construct. Items included in this index are damaging property, hurting someone, getting stopped by police, and being arrested. However, the latter measures (Positive Behavior Scale and the deviant behavior index) do not show consistently significant associations with youth behavior in our analysis, so results are not shown in this paper.

Independent Variables

The main independent variable, youth employment, is measured by various characteristics of employment behavior. First, we use a simplistic characterization - a dummy variable indicating whether a youth currently holds a regularly paying job at the time of the interview. We also use categorical variables to capture job characteristics, distinguishing those that enable learning new skills, give responsibility, and provide higher satisfaction on the job from the rest. These are youth's own perceptions of their jobs, which are particularly useful for assessing opportunity cost theory. We create an index of these job characteristics and identify high quality jobs as those scoring at least a 6 or 7 on all three characteristics.

In addition, because previous work emphasizes the importance of hours invested in work (e.g., Hansen and Jarvis, 2000; Bachman and Schulenberg, 1993), we distinguish working youth by hours worked per week. Steinberg and Dornbusch, (1991: 304) suggest an emerging consensus that 20 hours is a key threshold point, and that intense work (over 20 hours per week) has negative effects on youth (Hansen and Jarvis, 2000; Greenberger and Steinberg, 1986; Steinberg and Dornbusch, 1991; Steinberg et al., 1993). Therefore, following the convention of previous research (Steinberg, Fegley, and Dornbusch, 1993; Mortimer and Johnson, 1998), we create categorical variables for those who do not work, those who work moderate hours (less than 20 hours a week), and those who work more intensively (over 20 hours a week).

Mediators

To test social control theory, which predicts that work reduces parents' control over youth behavior, we use an index of "parental control/closeness to parents" as a mediating variable. We create this index using the following questions posed to youth: "do your parents know what you do during your free time?"; "do your parents know which friends you hang out

with during your free time?"; "do your parents know what you spend your money on?"; "do you keep a lot of secrets from your parents about what you do during your free time?"; "do you hide a lot from your parents about what you do during nights and weekends?"; "if you are out at night, when you get home, do you tell your parents what you did that evening"? (Cronbach's $\alpha=.79$). These questions were included in the PSID-CDS based on Stattin and Kerr's (2000) definition of parental monitoring as the degree to which parents attend to and track their children's location and activities.

To test differential association and precocious development hypotheses, which predict that work exposes youths to delinquent peers and values, we use an index for peer influence. This index includes items that assess how many of a youth's friends: encourage you to do what your parents want, think schoolwork is very important, plan to go to college, (the following questions were flipped to reflect positive rather than negative peer influence) encourage you to disobey your parents, are in gangs, encourage you to do dangerous things, get in trouble in school, get in lots of fights with other kids, drink alcohol regularly (Cronbach's $\alpha=.70$). We broke this index into positive and negative peer influence to assess whether effects differed by the type of peer influence. Positive peer influence index includes how many of your friends: encourage you to do what your parents want, think schoolwork is very important, and plan to go to college ($\alpha=.61$). The negative peer influence index includes how many of your friends: encourage you to disobey your parents, are in gangs, encourage you to do dangerous things, get in trouble in school, get in lots of fights with other kids, drink alcohol regularly ($\alpha=.72$).

We include another index that proxies for the extent to which youths are likely to be exposed to delinquent behavior and values. Neighborhood quality is measured by two

questions administered to the primary caregivers, who rated their neighborhood from 1 to 5 in terms of how good a place it is to raise kids and how safe it is at night.

To test human capital theory, we include a measure that assesses whether a job provides the opportunity to learn new skills and handle responsibilities (reported by youths themselves). These qualitative characteristics of a job are measured using an index of three questions in which individuals are asked to rate their job according to: how true is it that I can learn new skills at my job?; how true is it that, I have a lot of responsibility; how satisfied are you with your present job? (Cronbach's $\alpha=.98$). We create a composite index with these 3 items, resulting in a 21-point scale. Individuals with scores of 18 or above (a score of at least 6 on all 3 items) were identified as having a high quality job and other workers as having a lower quality job.

To test opportunity cost theory, we use two dummy variable measures of a youth's own educational expectations: 1) whether a youth expects to attend, graduate from, or get more education than a 4-year college degree, and 2) whether a youth has a college savings account. These variables may relate to opportunity cost theory because those expecting to attend a four-year college may have less vested in a high school job, making work less likely to change behavior. College saving should be a better test of opportunity cost theory because it includes both expectations and actions; we refer to this as college intent. College saving gives a tangible, financial reason for good behavior. However, educational expectations may also be related to role incompatibility theory, which predicts that work pulls youth between contradictory demands. High educational expectations could increase problematic behaviors among working youth, who are pulled in conflicting directions. Saving for college could help mitigate any incompatibility between work and school. We find that expecting a four-year

college degree is correlated with saving for college and expecting a college degree is insignificant so we do not include it.

To test role incompatibility and strain theories, we include a measure that assesses youth's emotional distress. This index is created by using the Child Depression Inventory, an index developed by Kovacs (1992) that asks about feelings in the two weeks before the interview, including the following questions: how often you are sad; do you think things will work out for you; do you do things okay or wrong; do you hate yourself; how often do you feel like crying; how often do things bother you; how do you feel about your looks; how often do you feel alone; do you have any friends; and does someone love you. This index is established in the field and has been copyrighted and validated. This is a good measure to test strain and role incompatibility theories because it captures stress, depression, and self-esteem, which Greenberg (1977) suggests are central to youth delinquency.

Control Variables

Family background variables including mother's education and average family income since birth in 2001 were collected from the PSID core surveys. These variables control for social background but also relate to opportunity cost theory because those from low SES backgrounds may have higher opportunity costs for losing a job. If interaction terms between work and family income have a significant effect on problem behaviors, it would support opportunity cost theory. Working youth from lower SES backgrounds should have more to lose from problem behaviors for example.

We control for family structure measures, distinguishing two-biological parent families from other family types. Youth characteristics are also controlled. Child's age and gender are

self-reported. Race is taken from the primary caregiver interview, in which respondents were instructed to report one race for their child.

We also include a measure of parental psychological distress in 1997 as a control variable because previous research (McLoyd, 1998; Yeung et al., 2002) suggests parental psychological well-being is a strong predictor of children's behavior. This index assesses the psychological distress of the primary caregiver in the four weeks prior to interview; a score of 13 or above indicates nonspecific distress. This scale was developed to distinguish serious mental illness cases from the general population. Including it helps determine whether parental distress during childhood accounts for adolescent behavior problems.

Analytic Strategy

We first examine the extent and nature of youth employment. In asking why youth decide to work and to address self-selection, we regress employment on a large set of factors that previous research suggests influence the decision to work. We conduct various models including measures of prior child and family characteristics from the CDS-I 1997 interview, including self control, school performance and test scores, behavior problems, school behavior problems, self-concept, religiosity, relationship with parents, parental education expectations, parental warmth, and parental self-efficacy. We then added 2003 measures (variables that could mediate the relationship between work and behavior) in these models. These measures include parental monitoring behavior, peer influence, psychological well-being, and educational expectations.

Next, we use OLS regressions to examine relationships between youth employment and indicators of behavior problems. We include a host of control variables and BPI score in the first wave of the CDS (conducted in 1997) to control for previous behavior and address self-

selection, reducing the chance that the relationship is spurious. First, we control for family and child characteristics. Then, we add the mediating variables to examine whether the relationships between employment and behavior problems are mediated by parental control, peer influence, neighborhood quality, educational expectations, and psychological well-being. We also assess whether the relationships differ by job quality and work hours or by race, class, or gender. All of our models use Huber-White adjusted standard errors that allow for multiple respondents from the same family.

RESULTS

Employment Patterns

(Table 1 about here)

Table 1 provides basic information about youth employment for all, black, and white youth. Unfortunately, the PSID does not have a large enough sample of other ethnic groups to allow separate analysis in this paper. We observe significant qualitative differences in the employment patterns of black and white youth. White youths are more likely to work and, if they do, they are more likely to work moderate hours and earn more. Of those in the sample, 18% were holding a regular paying job at the time of the interview. Twenty-two percent of white teens, as compared to 15% of black teens, were holding a regular job. Bureau of Labor Statistics (BLS) data suggests these are valid measures.⁴

Of those who were holding regular jobs, about 30% were working for more than 20 hours a week (often defined as “intensive work” in the literature). A larger proportion of black

⁴ According to the BLS, among youth aged 16-17, 27% were employed in 2003, 30% of white and 15% of black youth. These rates are close to those in our PSID sample; 23% of all 16-17 year olds were employed, 28% of white and 14% of black youth. http://www.bls.gov/cps/cps_aa2003.htm.

than white youths were working intensively (40% compared to 28%), with an average of about 15 hours per week compared to 14 hours a week for white youths.

These results echo previous research, including early work by Coleman (1984). He studied school-to-work transitions among 1,589 black and white males in the US born between 1930 and 1939 using retrospective life history data. Coleman (1984) found that white men started working earlier (during school) and finish school later than black men. Among those who worked during school, white men were much more often in clerical, sales, or kindred jobs than black men.

Regarding the types of work youths do, the top 5 occupations are food service (31%), sales (29%), personal care and service (10%), cleaning and maintenance occupations (6%), and office and administrative support (6%). In terms of industry, the top 5 most common areas of employment are in accommodations and food services (33%), retail trade (18%), health care and social assistance (10%), other services except public administration (9.6%), and education tied for fifth with arts, entertainment, and recreation (6% in both categories).

Those who worked made an average of \$1,122 per month, although the distribution is highly skewed (skewness=7.3). A small minority (about 5% of those working) made more than \$1,100 per month. When we topcoded the monthly earnings at \$1,100, of those working, the mean (\$400) and median (\$390) earning is about \$400 per month, with black youths making 91% of what white youths make on average (\$356 vs. \$400).

Among those who are working (N=211), the qualitative index, assessing skill-building, responsibility, and satisfaction available in a job, shows differences by race: 16.2 overall, 14.9 for black, 16.5 for white youths. The qualitative job index has a median of 17 for those working. Dummy variables for high (those rating their job a 6 or above on all 3 questions) and low quality jobs show that black youths are less likely to hold jobs in which they feel satisfied,

can learn new skills, and have responsibility. In proportional terms, 34% of black youths who are currently working, compared to 46% of white youths, hold a good quality job. In short, like Coleman (1984) and Entwisle et al. (2000), we find that minority youth are less likely to work and, if they do, we find they earn less and are less likely to have a high quality job or work moderate as opposed to intensive hours. Compared to black males, black female youth are less likely to work, but those who work are more likely to have a high quality job, work high hours, and earn more. In addition, we find that youth do not simply work for economic reasons.

(Table 2 about here)

Data about how youth spend their money also indicates racial differences, with white youth (90%) significantly more likely to have a savings account than black youth (56%). The amount of savings is indicative of an early wealth gap with white youth having an average savings of \$1,295 while black youth have about 10% of that amount (\$125). White youth are significantly more likely to be saving for college (62% vs. 33% for black youth) and black youth are significantly more likely to help pay family bills (41% vs. 27% for white youth). Other significant differences include spending on cars and total spending per month. These differences in spending suggest differences in the purpose or utility of youth employment and suggest controls for family income and background as well as college saving is important.

Table 2 shows descriptive statistics of the measures we use in multivariate analysis. Data indicate that blacks have significantly higher behavior problems (measured with an index ranging from 0-17), with a mean of 6.2 for blacks and 5.3 for whites. Consistent with previous literature, white youth tend to have parents with higher education and much higher income; live in two-parent families; and live in better neighborhoods. They also tend to be closer to their parents than black youth. Black parents, on average, are more emotionally distressed,

though black youth have lower distress levels than whites. The data also show that white youth have higher educational attainment expectations for themselves than black youth, with more than three quarters of white youth expecting to go to a 4-year college, compared to less than two thirds of the black youth.

Who Works?

Concerns about self-selection indicate a perception that youth characteristics determine whether an individual works as an adolescent (e.g., Ploeger, 1997; Paternoster et al., 2003). Previous work argues that poor academic performance and school engagement (Entwisle et al., 2000; Steinberg et al., 1993), behavior problems, or poor relationships with their parents make youth more likely to work as a teen (Mortimer et al., 1996). Mihalic and Elliot (1997) found evidence that the following factors increase the likelihood of working: being less academic; less involved with parents; more involved with friends, dating, and delinquent peers; and more involved with substance use. Steinberg et al. (1993) find that the selection effects of education are stronger than delinquency and closeness to parents, contrary to Mihalic and Elliott (1997). This work indicates the need to control for previous school performance, parental monitoring, behavior problems, and peer effects.

Most previous research does not address potential self-selection into work based on social psychological factors, such as self-concept or emotional distress. However, work by Mortimer et al. (2002) suggests the importance of addressing this possibility. They identify the possibility of reciprocal effects between youth employment and mental health. We therefore look for any effects of youth psychological factors (e.g., self-concept, emotional distress) on the decision to work and control for these factors in our analysis.

To address self-selection and understand why teens work, we examine the relationship between work and many prior and contemporaneous child and family characteristics, including those identified by the research above as affecting selection into work. We examine the relationship between working and contemporaneous measures of urban residence, census tract unemployment rate, closeness to parents, peer influence, neighborhood quality, educational expectations and intent, emotional distress, and self-concept. We also examine the relationship between work and many baseline measures (from 1997 CDS-I, 5 years prior to the CDS-II data), including parental distress, parental monitoring, cognitive stimulation in the home, emotional support from parents, parental warmth, low test scores, school behavior problems, behavior problems (BPI), and self-concept. We also include other background variables as controls, including age, race, gender, region, family income since birth, mother's education, and family structure. Conventional wisdom suggests low income youth would be more likely to work – to help support the family, for example. This is not the case. While Herman (2000) and Besen (2006) find high SES youth are more likely to work, we find family income is not associated with the propensity to work.

(Table 3 about here)

Table 3 presents these results. Due to space constraints, coefficients for control variables are not shown in the table. Contrary to the literature discussed above, logistic regressions predicting youth employment indicate that by far the most important factor affecting adolescent employment is local job availability, with percent unemployed in the youth's census tract having a coefficient of -6.57 on employment in the final model of table 3. Living in a city, another indicator of job availability, also has a significant effect. Prior characteristics (self-concept, test scores, and BPI in 1997) have no significant effect on

employment. Parental monitoring in 1997 has no effect, but parental distress in 1997 makes one slightly more likely to work.

Current characteristics are also generally insignificant. However, emotional distress is associated with a lower likelihood of employment and college intent/saving is associated with a greater likelihood of working. It is important to note that youth characteristics measured in 2003 are potentially endogenous, so readers should interpret these results cautiously.

We also examined factors associated with the different levels of quality and intensity of employment studied here. We found similar results as those for holding a regular paying job. However, the following differences exist: self-concept in 1997 is associated with low quality work; Northeast residence is associated with high quality and moderate hours of work; and low test scores in 1997 and college savings are slightly associated with intense work (note that these suggest contradictory relationships between educational engagement and employment). Based on these findings, we control for these factors in later regressions.

The abundance of non-significant coefficients suggests the selection bias is not severe. However, we are keenly aware of the potential endogeneity problem here in that measures of youth's relationship with their parents and peers, their psychological well-being, and educational expectations could be endogenous and these factors, as well as others, could still affect their decisions about whether they hold a regular job or not. As data on youth employment is only available in the second wave of the CDS, we are unable to disentangle this relationship satisfactorily at this point. Readers are cautioned in interpreting these results due to potential reverse causality.

Youth Employment and Behavior Problems

Results show that holding a job is associated with lower behavior problems. This negative relationship is robust when we use all three different ways of characterizing youth employment. (Results are not shown with the independent variable that indicates whether a youth was working or not.) A more careful examination reveals that only jobs with high quality and those with moderate hours (not more than 20 hours per week) are associated with fewer externalizing behavior problems while jobs that do not offer human capital development opportunities or extend to long hours (20 or more hours per week) are not.

(Table 4 about here)

Table 4 presents results for the relationship between job quality and Externalizing Behavior Problem Index score. High quality work is shown to be associated with lower BPI scores. Model 2 shows most of the hypothesized mediating covariates do not mediate the relationship. We found that positive peer influence, rather than negative influence, is the dominant mediating factor. We also find that current self-concept is not significant in any models and does not mediate the effect of work (we do not include it in the models shown because it is correlated with self-concept in 1997). This contradicts the social psychological argument (e.g., Mortimer et al., 1996; Mortimer et al., 2002) that working affects youth outcomes through self-concept and self-esteem.⁵ However, positive peer influence is associated with lower externalizing BPI and emotional distress with higher BPI.

Opportunity cost theory suggests that work will lead youths to avoid problem behavior so as not to jeopardize their future. Youths who expect to achieve academically would refrain from deviance because they foresee future benefits for current good behavior. However, controlling for educational expectations or college intent does not explain the work-problem behavior relationship either. In addition, opportunity cost theory might expect working youth

⁵ Because self-concept in 1997 is highly correlated with current self-concept, we do not include it in the models presented.

from low income families to improve their behavior in order to avoid losing their job.

However, average family income and interaction terms between the log of family income and working or working in a high quality job are all insignificant. Yet the positive effect of high quality work suggests opportunity cost theory has predictive power.

Model 3 tests for an interaction between race and quality of work. Results show that there is a significant interaction between race and having a high quality job such that there is a stronger association between high quality work and fewer behavior problems for blacks than for whites. A black youth with a high quality job has a behavior problem score 1.6 points lower than a white counterpart. Including the interaction term makes the main effect of a high quality job insignificant, suggesting it is more important for black youth. Model 4 shows that positive peer influence explains this interaction effect, making it insignificant. This suggests that quality employment at an early age may be substantially more important for black youth's successful transitioning to adulthood by providing positive role models or social networks.

Model 5 shows a significant interaction effect between gender and high quality work. Specifically, holding a high quality job reduces male BPI externalizing scores by almost 1.8 points. Gender does not have a significant main effect in any of the models, but this interaction effect suggests employment has different effects by gender. High quality work significantly reduces behavior problems for male but not female youth. This gendered effect of work is not explained by peer influence or race; interaction terms between gender and positive peers or race, or between race and job quality, do not mediate the effect and are not significant. An interaction term between job quality, race, and gender is significant, makes the main effect of high quality work insignificant, and is associated with a lower BPI score (-2.60). Models including interactions between high quality work and both race (insignificant) and gender (significant) Instead, adding an interaction term between gender and hours worked (not

shown) to Model 5 makes all work effects insignificant. The male-hours worked term has a very small negative, but insignificant, effect. This is consistent with social capital and social network theories, with further exposure to high quality work reducing behavior problems.

The significant interaction terms between high quality work, exposure (weekly hours), and positive peer influence, as well as the mediating effect of positive peers or exposure (hours worked), all support social capital theory. Results suggest high quality jobs expose youth, particularly black males, to more positive peer influence and social networks, which reduce behavior problems.

Table 5 shows the effects of work intensity on BPI scores. Results show that moderate work hours reduce BPI scores, but high work hours have no significant effect. As in Table 4, positive peers and emotional distress have significant effects, while other individual characteristics do not. Higher neighborhood quality is also associated with lower BPI scores, echoing the importance of peers for behavior.

(Table 5 about here)

Again, positive peer influence seems to explain the positive effect of moderate work hours. When we include an interaction term between positive peers and moderate hours the effect of work becomes insignificant. According to the interaction term, working moderate hours amplifies the positive effect of positive peer influence on BPI. This relationship between positive peer effects, moderate work hours, and BPI holds for youth of all races. The different effects of work quality and hours by race may indicate that human capital and opportunity cost theories are more important for black youth, with higher quality jobs significantly reducing BPI scores for black but not other youth. However, peer effects mediate the effects for all youth, which suggests the apparently different effects by race may be related to different peers encountered at work in high quality jobs. Compared to similar white youth, black youth

working in high quality jobs may be exposed to more positive peer influence and role models than they would otherwise encounter.

To summarize, we find no evidence in support of social control, differential association, or precocious development hypotheses (hypotheses 1 and 2). Results (not shown) contradict hypothesis 4, because an interaction term between work hours and emotional distress is associated with fewer behavior problems. Evidence confirms hypothesis 3, supporting human and social capital and opportunity cost theories. High quality jobs are related to fewer behavior problems. However, peer influence is consistently the main mechanism explaining the positive effects of both moderate work hours and high quality jobs, which supports social network theory more than opportunity cost or human capital theory. Differential association theory does not predict the positive relationship between work and behavior (it predicts negative rather than positive peer influence from working), but it does accurately stress the role of peer influence.

Discussion

Results based on the PSID data suggest that working moderate hours in a job that offers opportunities to learn new skills and responsibilities at an early age is associated with fewer behavior problems; this relationship is mediated through positive peer influence. As such, these findings lend some support to human capital/learning, social capital, and opportunity cost theories and contradict social control, differential association, and precocious development theories that predict early work leads to more behavior problems. We also found that the main determining factors for youth employment are not poor academic performance or behavior or a lack of parental supervision but rather the availability of jobs in the community. White youths

are more likely to be employed with a job that offers training opportunities and higher pay. Black youths, when employed, are more likely to work more intensive hours.

We investigated different effects by race and gender and found that high quality work has a particularly strong association with fewer behavior problems for black and male youth. As with the effect of work hours on all youth, high quality work has a stronger positive relationship with black adolescent behavior through exposure to positive peer influence. Time spent at work mediates the association between high quality work and positive behavior for males, further supporting the socialization mechanism of positive peer influence. In short, positive socialization and peer influence through youth employment are consistently identified as important factors for adolescent behavior, particularly for black males.

Our findings lend some support to the view suggested by other scholars (e.g., Wilson, 1987) that many social problems of black urban areas are due to young male joblessness and lack of quality jobs for youth. But the peer effects mechanism indicates an important potential area for intervention if good jobs cannot be created. Further research should explore these differences.

As the transition to adulthood lengthens, it is important to understand the effects of adolescent employment, a key transition to adulthood. The evidence suggests that youth benefit from working in quality jobs or for moderate hours by interacting with positive peers. Although we cannot rule out self-selection entirely, our analyses suggest that working moderate hours provides opportunity for positive peers found at work to have an influence while intense work does not. High quality jobs may filter youth with low behavior problems, exposing those hired or retained to only positive peer influence. Alternatively, quality or moderate work could enhance human capital and socialize youth to positive behaviors. Peers gained through work may then police each other and support positive behavior. Further

research should investigate youth experiences on the job to understand precisely how peer effects could reduce behavior problems. Research should also address how youth find and keep jobs, looking particularly at how and why some youth work moderate hours or in high quality jobs.

Evidence presented here also suggests that availability of jobs is a main determinant of youth employment and that high quality jobs are more available to white than for black youth. The current economic downturn has curtailed the employment opportunities for youth. This could have negative consequences for adolescent behavior by slowing the transition to work, particularly for black and male youth. Positive social networks and role models at work, less accessible through family and community networks and more beneficial to black male youth, may help explain differences in behavior problems by race and gender and contribute to racial inequality in the transition to adulthood. The current economic downturn and low job availability for adolescents could have particularly negative effects in neighborhoods with high concentrations of black male youth.

References

- Aquilino, W. S. 1994. "Interview mode effects in surveys of drug and alcohol use: a field experiment." *Public Opinion Quarterly*, 58, 210–240.
- Bachman, J.G. and J. Schulenberg. 1993. "How part-time work intensity relates to drug use, problem behavior, time use, and satisfaction among high school seniors: Are these consequences or merely correlates?" *Developmental Psychology*, 29: 220-235.
- Bauermeister, Jose A.; Zimmerman, Marc A.; Barnett, Tracey E.; and Caldwell, Cleopatra Howard. 2007. "Working in High School and Adaptation in the Transition to Young Adulthood among African American Youth." *Journal of Youth and Adolescence*, 36, 7: 877-890.
- Bellair, Paul E. and Vincent J. Roscigno. 2000. "Local Labor Market Opportunity and Adolescent Delinquency." *Social Forces*, 78: 1509-1538.
- Besen, Yasemin 2006. "Fun or Exploitation: The Lived Experience of Work in Suburban America." *Journal of Contemporary Ethnography*, 35: 319–41.
- Bozick, Robert. 2006. "Precocious Behaviors in Early Adolescence: Employment and the Transition to First Sexual Intercourse." *Journal of Early Adolescence*, 26, 1: 60-86.
- Brewster, K.L., Billy, J.O.G., and Grady, W.R. 1993. "Social context and adolescent behavior: The impact of community on the transition to sexual activity?" *Social Forces*, 71: 713-740.
- Coleman, James S. 1984. 'The Transition from School to Work.' *Research in Social Stratification and Mobility* 3: 27–59.
- Elder, Glenn H., Jr. 1974. *Children of the Great Depression: Social Change in Life Experience*. Chicago, IL: University of Chicago Press.
- Entwisle, Doris R., Karl L. Alexander and Linda Steffel Olson. 2000. "Early Work Histories of Urban Youth." *American Sociological Review*, 65: 279–97.
- Erikson, Erik H. 1968. *Identity, Youth and Crisis*. New York: W. W. Norton.
- Furstenberg, Frank F. 2008. "The Intersections of Social Class and the Transition to Adulthood." *Social Class and Transitions to Adulthood, New Directions for Child and Adolescent Development*, 119: 1-10.
- Greenberg, David F. 1977. "Delinquency and the Age Structure of Society." *Contemporary Crises*, 1, 2: 189-223.
- Greenberger, E. and Steinberg, L. 1986. *When Teenagers Work: The psychological and social costs of adolescent employment*. New York: Basic Books.
- Herman, Alexis M. 2000. *Report on the Youth Labor Force*. Washington, DC: United States Department of Labor.
- Hirschi, T. 1969. *Causes of delinquency*. Berkeley: University of California Press.
- Ihlanfeldt, Keith R. 2007. "Neighborhood drug crime and young males' job accessibility." *Review of Economics and Statistics*, 89, 1: 151-164.
- Kraft, J.M. and Coverdill, J.E. 1994. "Employment and the use of birth control by sexually active single Hispanic, Black, and White women." *Demography*, 31: 593-602.
- Kovacs, M. 1992. *The Children's Depression Inventory (CDI) Technical Manual*. North Tonawanda, NY: MHS.
- Largie, Shay et al. 2001. "Employment during Adolescence Is Associated with Depression, Inferior Relationships, Lower Grades, and Smoking." *Adolescence*, 36, 142: 395-401.
- Marsh, Herbert W. 1991 'Employment during High School: Character Building and Subversion of Academic Goals.' *Sociology of Education* 64: 172–89.
- McLoyd, Vonnie C. 1998. "Socioeconomic disadvantage and child development." *American Psychologist*, 53: 185-204.

- McNeal, R. 1997. "Are students being pulled out of high school? The effect of adolescent employment on dropping out." *Sociology of Education*, 70: 206-220.
- Merton, Robert K. 1938. "Social Structure and Anomie". *American Sociological Review* 3: 672-82.
- Mortimer, Jeylan T. (ed.) 2008. Social Class and Transitions to Adulthood. *New Directions for Child and Adolescent Development*, 119.
- Mortimer, Jeylan T., Carolyn Harley, Jeremy Staff. 2002. "The Quality of Work and Youth Mental Health." *Work and Occupations*, 29, 2: 166-197.
- Mortimer, Jeylan T. and M.K. Johnson. 1998. "New Perspectives of Adolescent Work and the Transition to Adulthood," in Richard Jessor (ed.), *New Perspectives on Adolescent Risk Behavior*. Cambridge: Cambridge University Press: 425-496.
- Mortimer, Jeylan T.; Finch, Michael D.; Ryu, Seongryeol; Shanahan, Michael J.; Call, Kathleen T. 1996. "The Effects of Work Intensity on Adolescent Mental Health, Achievement, and Behavioral Adjustment: New Evidence from a Prospective Study." *Child Development*, 67, 3: 1243-1261.
- National Commission on Youth. 1980. *The Transition of Youth to Adulthood: A Bridge Too Long*. Boulder: Westview Press.
- Newcomb, M. D, & Bentler, P. M. 1988. *Consequences of adolescent drug use: Impact on the lives of young adults*. Newbury Park, CA: Sage.
- Paternoster, R; Bushway, S; Brame, R; Apel, R. 2003. "The effect of teenage employment on delinquency and problem behaviors." *Social Forces*, 82, 1: 297-335.
- Peterson, Gary W. 1987. "Role Transitions and Role Identities during Adolescence: A Symbolic Interactionist View," *Journal of Adolescent Research*, 2, 3: 237-254.
- Peterson, J. L. and Zill, N. 1986. Marital disruption, parent-child relationships, and behavioral problems in children. *Journal of Marriage and the Family*, 48, 2: 295-307.
- Ploeger, Matthew. 1997. "Youth Employment and Delinquency: Reconsidering a Problematic Relationship." *Criminology*, 35, 4: 659-675.
- Rich, L.M. and Kim, S. 2002. "Employment and the sexual reproductive behavior of female adolescents." *Perspectives on sexual and reproductive health*, 34: 127-134.
- Ruhm, Christopher 1995. 'The Extent and Consequences of High School Employment' *Journal of Labor Research* 16, 3: 293-303.
- Ruscoe, G.; J.C. Morgan; C. Peebles. 1996. "Students who work." *Adolescence*, 31: 625-632.
- Sampson, R. J., and Laub, J. H. 1993. *Crime in the making: Pathways and turning points through life*. Cambridge, MA: Harvard University Press.
- Staff, Jeremy and Jeylan T. Mortimer. 2008. "Social Class and the School-to-Work Transition." *Social Class and Transitions to Adulthood, New Directions for Child and Adolescent Development*, 119: 55-69.
- Staff, J. and C. Uggen. 2003. "The fruits of good work: Early work experiences and adolescent deviance." *Journal of Research in Crime and Delinquency*, 40, 3: 263-290.
- Stattin, H., & Kerr, M. (2000). Parental monitoring: A reinterpretation. *Child Development*, 71: 1072-1085.
- Steinberg, Laurence and Sanford M. Dornbusch. 1991. "Negative Correlates of Part-time Employment during Adolescence: Replication and Elaboration." *Developmental Psychology*, 27: 304-13.
- Steinberg, L; Fegley, S; and Dornbusch, SM. 1993 "Negative Impact of Part-Time Work on Adolescent Adjustment – Evidence from a Longitudinal Study." *Developmental Psychology*, 29, 2: 171-180.
- Stephens, W. 1979. *Our Children Should Be Working*. Springfield: Charles C. Thomas.

- Sutherland. 1974. *Criminology*. J.B. Lippincott Company.
- Vazsonyi, Alexander T. and Snider, J. Blake. 2008. "Mentoring, competencies, and adjustment in adolescents: American part-time employment and European apprenticeships." *International Journal of Behavioral Development*, 32, 1: 46-55.
- Yeung, W.J., Linver, M, & Brooks-Gunn, J. 2002. "How Money Matters for Young Children's Development: Parental Investment and Family Processes." *Child Development*, 73, 6: 1861-1879.
- Wilson, William Julius. 1987. *The Truly Disadvantaged*. Chicago: University of Chicago Press.
- Wright, John Paul; Cullen, Francis T. 2004. "Employment, Peers, and Life-Course Transitions." *Justice Quarterly*, 21, 1: 183-205.

Figure 1: Conceptual Framework for Youth Employment and Behavior

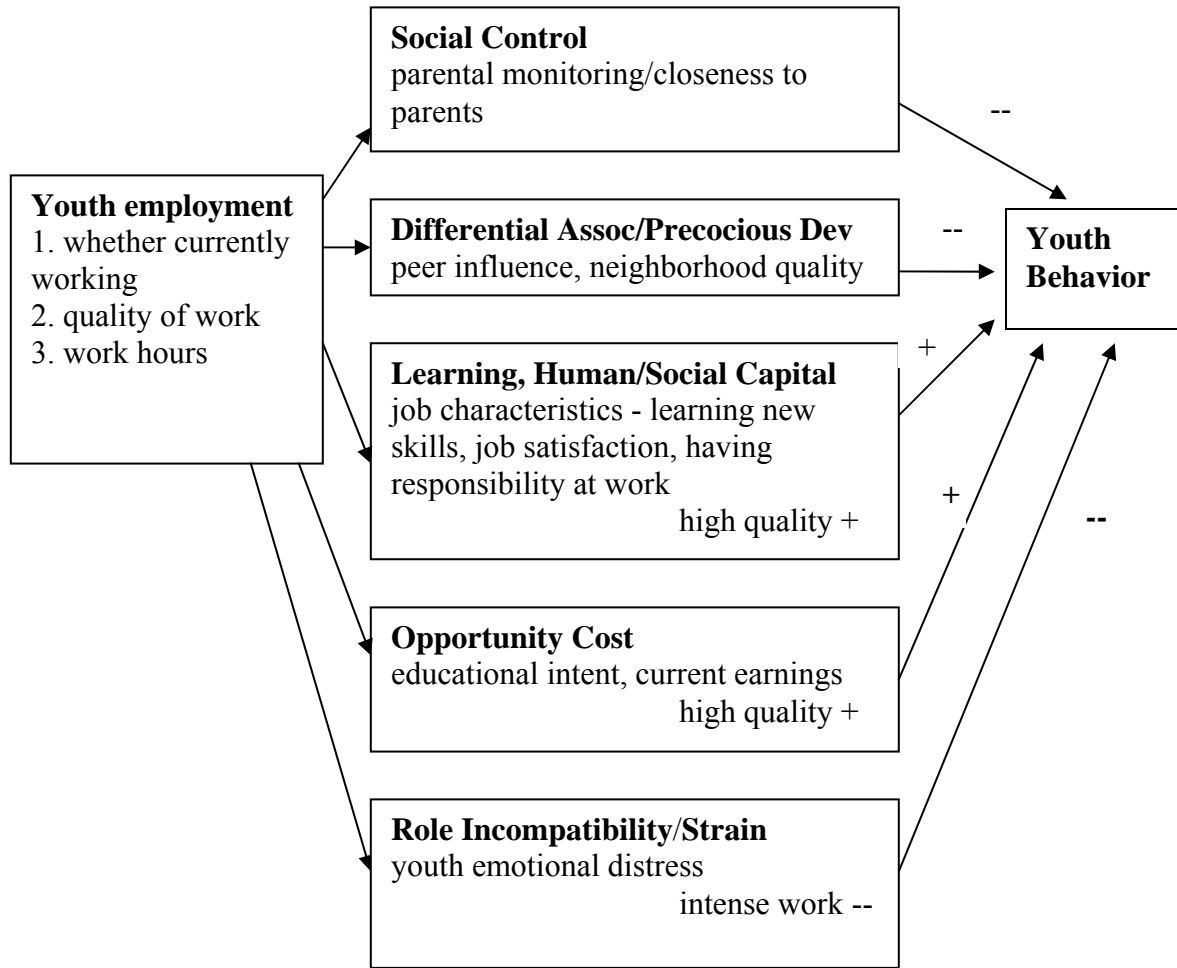


Table 1: Patterns of Youth Employment and Spending, by Ethnicity

	ALL (N=1154)		BLACK (N=497)		WHITE (N= 512)	
	Mean	Std.	Mean	Std.	Mean	Std.
% currently holding a regular job*	18%	(.39)	15%	(.36)	22%	(.42)
<u>OF THOSE WORKING</u>						
	(N=211)		(N=79)		(N=118)	
Average weekly work hours*	13.8	(8.8)	15.1	(10.8)	14.0	(8.3)
% moderate work (<20 hours/week)*	70%	(.46)	60%	(.49)	72%	(.45)
% intensive work (20+ hours/week)*	30%	(.46)	40%	(.49)	28%	(.45)
Quality of job scale (0-21)	16.2	(3.7)	14.9	(4.3)	16.5	(3.6)
% in low quality (<18)	59%	(.49)	66%	(.48)	54%	(.50)
% in high quality (≥18)	41%	(.49)	34%	(.48)	46%	(.50)
Earnings/month (topcoded)						
Earn <\$275 per month	36%	(.48)	43%	(.50)	35%	(.48)
Earn \$275 to <525 per month	33%	(.47)	30%	(.46)	34%	(.48)
Earn ≥\$525 per month	31%	(.47)	27%	(.45)	31%	(.46)
Median	\$390	(270)	\$356	(286)	\$400	(268)
Type of work/Occupation						
food service	31%	(.47)	31%	(.46)	33%	(.47)
sales	29%	(.45)	40%	(.49)	24%	(.43)
personal care service	10%	(.30)	8%	(.27)	12%	(.32)
cleaning and maintenance	6%	(.24)	3%	(.16)	5%	(.22)
office and administrative support	4%	(.20)	4%	(.20)	5%	(.22)
education	4%	(.20)	5%	(.22)	3%	(.16)
others	19%	(.39)	15%	(.36)	21%	(.41)
arts and entertainment*	3.8%	(.19)	0	(0)	5.2%	(.22)
health	3.1%	(.17)	1.5%	(.12)	3.9%	(.19)
agriculture	2.1%	(.14)	0	(0)	2.8%	(.17)
installation and repair	1.5%	(.12)	1.5%	(.12)	1.7%	(.13)
transportation	1.4%	(.12)	4.8%	(.22)	1.0%	(.10)
construction	1.0%	(.10)	0.7%	(.08)	1.2%	(.11)
protective services	0.8%	(.09)	0	(0)	0.9%	(.09)
architecture and engineering	0.5%	(.07)	0	(0)	0.7%	(.08)
military	0.3%	(.06)	0	(0)	0.5%	(.07)
production	0.1%	(.04)	0.9%	(.09)	0	(0)

<u>OF THOSE WORKING</u>	ALL (N=211)		BLACK (N=79)		WHITE (N=118)	
Savings and Spending						
Have a savings account*	80%	(.40)	56%	(.50)	90%	(.30)
Savings amount*	\$1029	(2477)	\$125	(216)	\$1295	(2813)
Saving for college*	54%	(.50)	33%	(.47)	62%	(.49)
Help pay family bills*	29%	(.45)	41%	(.49)	27%	(.45)
Family spending last month	\$75	(227)	\$63	(124)	\$81	(257)
School spending per month	\$2	(7)	\$2	(6)	\$2	(5)
Activity spending per month	\$8	(23)	\$3	(7)	\$10	(27)
Social spending per month	\$91	(92)	\$81	(89)	\$92	(94)
Car spending per month*	\$60	(123)	\$15	(47)	\$71	(135)
Total spending per month*	\$81	(121)	\$30	(65)	\$93	(130)

Note: * denotes that the means are statistically different by race at 0.05 level

Table 2: Descriptive Statistics of Main Measures

	All			Black			White		
	Mean	St Dev	N	Mean	St Dev	N	Mean	St Dev	N
Dependent variable									
Behavior problems	5.49	4.30	1151	6.15	4.81	496	5.30	4.09	510
Individual Covariates									
Age of child	15.52	1.77	1154	15.72	1.76	497	15.56	1.69	512
Black	0.18	0.38	1151	1	0	497	0	0	512
Other race/ethnicity	0.22	0.41	1151	0	0	497	0	0	512
Male	0.51	0.50	1154	0.56	0.50	497	0.50	0.50	512
Urban area	0.55	0.50	1138	0.65	0.48	495	0.44	0.50	504
Northeast	0.18	0.38	1138	0.17	0.37	497	0.21	0.41	512
North Central	0.24	0.42	1154	0.19	0.39	497	0.29	0.45	512
South	0.32	0.47	1154	0.55	0.50	497	0.28	0.45	512
West	0.26	0.44	1154	0.09	0.29	497	0.21	0.40	512
Area unemployment rate	0.07	0.06	1146	0.10	0.06	495	0.05	0.03	508
Family Covariates									
Family inc since birth (\$10k)	5.53	4.40	1087	3.30	2.37	472	6.70	4.72	477
Mother's education	12.78	2.85	1074	12.32	1.82	471	13.67	2.08	475
2-biol parent household	0.65	0.48	1087	0.32	0.47	472	0.71	0.45	477
Potential Mediating Mechanisms									
Close to parents	22.77	5.02	1078	21.68	4.90	456	23.40	4.76	585
Peer influence	4.21	0.57	1124	4.22	0.67	484	4.19	0.55	499
Positive peer influence	3.33	0.87	1134	3.49	0.89	491	3.30	0.85	502
Negative peer influence	1.59	0.59	1135	1.63	0.71	488	1.59	0.56	504
Neighborhood quality	3.46	0.79	1144	3.12	0.88	489	3.70	0.63	510
Educational expectations	0.72	0.45	1125	0.62	0.49	485	0.78	0.41	497
College savings acct	0.41	0.49	1130	0.25	0.43	486	0.52	0.50	501
Emotional distress 2003	3.95	3.31	892	3.40	2.58	377	3.13	3.47	512
Self-concept 2003	3.99	0.65	1145	4.16	0.58	495	3.99	0.64	506
Parental distress index 1997	3.54	3.42	735	3.90	4.18	278	3.29	3.13	373
Parental monitoring 1997	4.05	0.68	1143	3.69	0.79	493	4.20	0.51	511
Cognitive stimulation 1997	10.03	1.86	1154	9.23	1.89	497	10.60	1.67	512
Emotional support 1997	9.18	1.15	1154	9.00	1.29	497	9.34	1.05	512
Parental warmth 97	4.32	0.58	1150	4.21	0.70	497	4.40	0.50	511
Low test scores 97	0.14	0.35	817	0.30	0.46	377	0.09	0.29	403
School behavior problems 97	1.19	0.39	1137	1.32	0.47	495	1.16	0.35	502
Expelled 1997	0.06	0.24	1104	0.26	0.44	472	0.02	0.13	495
Self-concept 1997	5.65	0.83	788	5.54	0.88	344	5.74	0.79	371
Externalizing BPI score 1997	5.37	3.76	1131	5.60	3.92	490	5.26	3.83	501

Note: Includes only those with work-related data.

Table 3: Factors Predicting Youth Employment

VARIABLES	(1)	(2)	(3)	(4)
		Regular paying job		
Individual Background Factors				
Age	0.565** (0.0757)	0.562** (0.0759)	0.554** (0.0833)	0.536** (0.0855)
Avg fam income birth to 2001, in \$10,000	-0.00279 (0.0249)	-0.00978 (0.0251)	-0.00930 (0.0277)	-0.0103 (0.0280)
Whether live in SMSA 2003	0.330 (0.229)	0.360 (0.231)	0.521* (0.233)	0.572* (0.245)
% unemployed in 2000 census tract		-5.480* (2.606)	-6.829** (2.534)	-6.570* (2.604)
Potential Mediating Mechanisms				
Self-concept 97@			0.229 (0.184)	0.159 (0.195)
Low test scores 97@			-0.547 (0.428)	-0.614 (0.456)
BPI 97			0.0260 (0.0341)	0.0295 (0.0345)
Parental monitoring 97			0.353 (0.210)	0.269 (0.226)
Parental distress 97@			0.111* (0.0536)	0.114* (0.0544)
College intent 03				0.536* (0.249)
Positive peers 03				-0.006 (0.160)
Close to parents index 03				-0.009 (0.0302)
Emotional distress 03@				-0.0945* (0.0442)
Constant	-10.34** (1.370)	-9.682** (1.402)	-12.80** (2.263)	-11.07** (2.283)
Observations	1057	1052	1015	926
Log likelihood	-429.3	-424.4	-391.8	-364.3

Robust standard errors in parentheses

** p<0.01, * p<0.05; @ Includes missing cases

The following covariates are included but are insignificant and not shown:

Male; Black; Other race other than white; Average family income from birth to 2001; North Central; West; Mother's years of education; Does not live with 2 biological parents; Perceived neighborhood quality. (North East 03 is included and significant across all models, but is not shown.)

Table 4: OLS Regressions – Effect of Job Quality and Covariates on BPI Externalizing Score

VARIABLES	(1) BPI external	(2) BPI external	(3) BPI external	(4) BPI external	(5) BPI external
Job Quality (ref group is nonworkers)					
Low quality	-1.234 (0.807)	-1.276 (0.809)	-1.109 (0.808)	-1.156 (0.834)	-1.227 (0.821)
High quality	-1.865* (0.821)	-1.796* (0.791)	-1.445 (0.845)	-1.478 (0.863)	-1.517 (0.846)
Individual Characteristics					
Black	0.817 (0.488)	0.901 (0.476)	1.005* (0.488)	0.473 (0.583)	0.600 (0.576)
Male	-0.255 (0.322)	-0.435 (0.311)	-0.393 (0.317)	-0.322 (0.364)	-0.518 (0.356)
Black*high quality job			-2.614* (1.236)	-0.227 (1.023)	-0.225 (1.021)
Black*male				0.604 (0.810)	0.692 (0.765)
Black*male*high quality job				-2.895* (1.453)	-2.657 (1.472)
Potential Mediating Mechanisms					
Close to parents index		-0.0591 (0.0358)	-0.0473 (0.0335)	-0.0897** (0.0330)	-0.0568 (0.0357)
Positive peers		-0.602** (0.209)			-0.598** (0.209)
Peer influence			-1.133** (0.340)		
Perceived neighborhood quality		-0.441 (0.243)	-0.390 (0.244)	-0.430 (0.244)	-0.465 (0.242)
College intent 03		0.364 (0.312)	0.273 (0.313)	0.207 (0.314)	0.352 (0.315)
Emotional distress 03 @		0.120* (0.0554)	0.0939 (0.0582)	0.134* (0.0571)	0.119* (0.0559)
Constant	6.169** (1.987)	6.129* (2.995)	8.863** (3.206)	4.971 (2.932)	6.603* (3.022)
Observations	923	923	917	930	923
R-squared	0.348	0.411	0.420	0.404	0.413

** p<0.01, * p<0.05; @ Includes missing cases
Robust standard errors in parentheses

The following covariates are included but are generally insignificant and not shown:

Model 1: Age; Other race other than white; Average family income from birth to 2001; Average family income*work; Lives in SMSA 2003; North East; West; Mother's years of education; Does not live with 2 biological parents; % unemployed in 2000 census tract. (North Central 03 and BPI 97 are included and significant across all models, but are not shown.)

Models 2-4: those in Model 1 + Low test scores 97@; Parental monitoring 97; Parental distress 97@; Self-concept 97@ (the latter is significant in all 3 models).

Table 5: OLS Regressions – Effect of Work Intensity and Covariates on BPI Externalizing Score

VARIABLES	(1) BPI external	(2) BPI external	(3) BPI external
Work Intensity			
Moderate (<20 hrs per week)	-1.789* (0.875)	-1.711* (0.844)	1.436 (1.872)
High (20 or more hrs per week)	-0.935 (0.778)	-1.039 (0.824)	-1.083 (0.813)
Potential Mediating Mechanisms			
Close to parents index		-0.0581 (0.0357)	-0.0542 (0.0351)
Positive peers		-0.598** (0.209)	-0.469* (0.220)
Positive peers*moderate hours per week			-0.966* (0.473)
perceived neighborhood quality		-0.449 (0.243)	-0.486* (0.243)
College intent 03		0.352 (0.312)	0.353 (0.310)
Emotional distress 03 @		0.120* (0.0560)	0.127* (0.0557)
Constant	6.237** (1.977)	6.159* (2.993)	5.823* (2.955)
Observations	922	922	922
R-squared	0.349	0.411	0.415

** p<0.01, * p<0.05; @ Includes missing cases
Robust standard errors in parentheses

The following covariates are included but are generally insignificant and not shown:

Model 1: Male; Age; Black; Other race other than white; Average family income from birth to 2001; Average family income*work; Lives in SMSA 2003; North East; West; Mother's years of education; Does not live with 2 biological parents; % unemployed in 2000 census tract. (North Central 03 and BPI 97 are included and significant across all models, but are not shown.)

Model 2-3: those in Model 1 + Low test scores 97@; Parental monitoring 97; Parental distress 97@; Self-concept 97@ (the latter is significant in all 3 models).