Positive Outcomes from Poor Starts: Predictors of Dropping Back In

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Abstract:

Youth who take major missteps while teens often have positive outcomes by their mid-twenties. Using NELS 2000, we provide one of the first longitudinal analyses of well-being for teen mothers and high school dropouts that includes a nationally representative population of Hispanic and Asian youth. In addition, our study examines a host of positive outcomes for teen mothers and high school dropouts (such as being above 200% of the Federal Poverty Level or attending post-secondary schooling) and reveals that determinants of positive outcomes vary dramatically by type. For example, we find that educational outcomes are closely related to parental characteristics, whereas individual behavioral variables bear a closer relationship to employment and income outcomes. Delaying age at first intercourse and using birth control at first intercourse are associated with higher chances of achieving positive outcomes, even among those with poor starts, and even among male high school dropouts. Eighth grade test scores are highly relevant to positive outcomes, neighborhood and school characteristics only marginally so. For teens that have eventual positive educational outcomes, it appears to be important to return to schooling within a year or two of dropping out of high school or giving birth.

Introduction

The period of life between age 13 and age 24 is a key period for understanding and affecting progress. It is the period where many life-changing decisions are made, including the decision to start a family, to finish high school, and to go to college. There are a number of national, state, and local programs designed to influence and improve the lives of youth as well as to steer them in the direction of positive future outcomes.

Much of the research covering this age range focuses on one outcome, often a negative one such as having a teen birth or dropping out of high school. The economic consequences of these two poor starts are well understood. Teenage mothers are at a great economic disadvantage relative to women who delay childbirth (or never have children). Although differences in parental background, schools, and neighborhoods can explain much of the differences in educational and labor market outcomes between teenage mothers and other women, Hoffman (1998) argues that some of this difference is likely caused by the teen birth. High school dropouts also have lower labor-market outcomes than graduates. For example, in 1999, high school dropouts have lower annual earnings of more than $4,000 compared to high school graduates who never attended college.[1]

The literature suggests little hope for high school dropouts and teenage mothers, suggesting that they are likely to experience poor earnings and unstable family situations. But some of these individuals with poor starts achieve economic success or marry. In this paper, we study the determinants of positive outcomes for high school dropouts and teenage mothers. Our goal is to inform policy by understanding the role of families,

schools, neighborhoods, and behavior. We also pay particular attention to the role of race, ethnicity, and immigrant generation. Most previous research does not consider multiple positive outcomes.

Our findings suggest that the determinants of positive outcomes for teen mothers and high school dropouts vary dramatically across outcomes. For example, educational outcomes are closely related to parental characteristics, whereas individual behavioral variables bear a closer relationship to employment and income outcomes. Delaying age at first intercourse and using birth control at first intercourse are associated with higher chances of achieving positive outcomes, even among those with poor starts, and even among male high school dropouts. Eighth grade test scores are highly relevant to positive outcomes, neighborhood and school characteristics only marginally so. For teens that have eventual positive educational outcomes, it appears to be important to return to schooling within a year or two of dropping out of high school or giving birth.

Previous Literature

Determinants of poor starts

The majority of the literature on teenage childbearing and dropping out from high school can be divided into two areas: determinants of the poor start and the consequences of the poor start. Haveman and Wolfe (1995) summarize the literature on the determinants of both teenage nonmarital childbearing and dropping out of high school. For both outcomes, nearly all studies include controls for parental background. Parental income and education provide the most common measures of socioeconomic status. Both measures are negatively associated with teenage motherhood and not finishing high

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[1] This figure comes from an annual earnings regression using 2000 Census 1% PUMS individual-level

school, although the effect of parental education (of the mother in particular) is stronger than that of income. Other parental characteristics also have significant impacts, but the choice of which indicators to include varies greatly among studies. For example, children from two-parent families generally have lower probabilities of dropping out of high school than do children in other family structures according to multiple studies (see, for example, McLanahan and Sandefur, 1994).

Even after controlling for differences in parental background, Haveman and Wolfe (1995) find that blacks and Hispanics have higher probability of becoming teenage mothers. However, the racial/ethnic differences in the probability of dropping out from high school are insignificant when controlling for parental background. Nativity plays a role in these race/ethnic differences. Educational enrollment is of particular concern for Hispanic immigrant youth because, unlike white and Asian youth, the foreign-born have lower scholastic achievement than do the native-born (Vernez and Mizell, 2001). Driscoll (1999) finds that foreign-born Hispanic youth are more likely to drop out of high school than are the native-born, but that first and second generation youth are actually less likely than third generation Hispanic youth to drop out of high school once variables like school performance and parental background characteristics are held constant.

In addition to parental background, many studies of poor starts include controls for neighborhood and/or schools (see, for example, Duncan and Hoffman, 1990, or Wolfe, Wilson, and Haveman, 2001). In general, these studies find a modest association of averse neighborhood characteristics with residents' poor starts. However, interpreting a causal effect from these neighborhood controls can be difficult. They are often imprecisely measured, raising the concern of potential endogeneity. Rivkin's (2001)

data. The regression includes controls for sex, age, age squared, race, ethnicity, and marital status.

study of peer effects finds that aggregating to the metropolitan area or state level does not alleviate endogeneity concerns.

Previous research has demonstrated that individual behaviors, such as drug and alcohol use, employment, and criminal and gang activity (Ribar, 1994; National Research Council, 1998) are associated with poor starts. Like neighborhood and school characteristics, they are also likely to be endogenous. For example, students who use drugs are probably more likely to drop out of high school. However, using drugs may not cause a student to drop out, but may be associated with unobservable determinants of high school completions such as not valuing a high school or preferences for risk.

In this paper, we consider the impact of parental background (with a particular focus on race, ethnicity, and immigration). Despite the concerns raised above, our research design also considers the association of neighborhood and school characteristics, and behavioral choices with each poor start. Although the estimated relationships in the final model will not imply strict causality, the results will illuminate the relationships between key community characteristics (including those of schools) and behaviors and high school completion.

Consequences of poor starts

When studying the consequences of poor starts, most papers include the poor start as an independent variable. Several papers attempt to determine the causal impact of teenage childbearing on subsequent economic and educational success. A few papers treat childbearing as an exogenous event (Hofferth, 1987; McElroy, 1996), but most researchers believe that teenage motherhood is an endogenous determinant of educational attainment or economic success. Some papers use instruments for teenage childbearing

4

(Ribar, 1994; Klepinger, Lundberg, and Plotnick, 1995, 1999), whereas others attempt to compare teenage mothers to subsets of other women such as sisters/twins (Geronimus and Korenman, 1992; Bronars and Grogger, 1994) or women who had miscarriages as teenagers (Hotz, McElroy, and Sanders, 1999). From these studies, Hoffman (1999) concludes that the some of the large differences between teenage mothers and other women can be attributed to differences in observable characteristics (such as parental background), but that it is still unclear whether teenage childbearing has a causal impact – positive or negative – on future outcomes.

The literature on subsequent outcomes for high school dropouts is limited.[2] Chuang (1997) looks at the decision to return to high school for dropouts, treating the decision to drop out as exogenous and including GEDs as returning to high school. Stern et al. (1989) conclude that early labor market differences between high school dropouts and graduates "are mainly not attributable to differences in measured prior characteristics," (pg 233).

Data

The data for this paper come from the National Educational Longitudinal Survey (NELS), a nationally representative study of eighth-grade students in 1988. The NELS is a rich data set with information on youth experiences and aspirations, parental background, and school resources. Follow-up surveys are conducted in 1990, 1992, 1994, and 2000.

This paper considers two poor starts: becoming a teenager mother and dropping out of high school. Both are defined from 1994 survey questions. Teenage childbearing

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is defined as having a child by age 19. High school dropout is defined as having ever

dropped out of high school by 1994 (six years after eighth grade) and not having

graduated "on time" in 1992 (i.e. students who were continuously enrolled in high school

but graduate within five years are not considered dropouts in our analysis).

Positive outcomes are defined as of the 2000 follow-up, when respondents were

approximately 26 years of age. In contrast, data sets such as the National Longitudinal

Survey of Youth (NLSY) and High School and Beyond (HSB) have respondents who

would be at least 35 years old in 2000. Thus, the NELS data are more representative of

today's young adults, especially for nonwhites and children of immigrants.

We define six positive outcomes all as of 2000. The first four are defined for both

poor starts: family income above 200 percent of the poverty line, working full time,

graduating high school (not including GED), and attending at least some post-secondary

schooling. For teenage mothers there are two additional positive outcomes: being

married or cohabiting and avoiding an additional teenage birth.[3]

One of the goals of the analysis is to study differences in race, ethnicity, and

immigrant generation. The NELS sample only includes individuals in eighth grade in the

United States. Our focus is on students who are educated in the United States, so we

further restrict the sample to students who arrived in the United States by age 5. The data

also distinguish second-generation students from students whose parents were born in the

United States (third generation or higher). We combine first-generation (who arrived by

age 5) and second-generation students into a single category called children of

immigrants. All other students are defined as children of natives. Immigration

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[3] We consider not being a single mother to be a positive outcome due to the economic hardships faced by single mothers.

6

generation is interacted with race/ethnicity to create mutually exclusive race, ethnicity, and immigration generation categories. Appendix Tables 1 and 2 contain the descriptive statistics for these variables, along with other parental background, school, neighborhood, and individual characteristics. The first table is for the teenage motherhood sample, and the second table is for the high school dropout sample (separated by sex).

Methods

The analysis begins with an investigation of the determinants of each of the two poor starts defined above: becoming a teenage mother and dropping out of high school. Equation (1) contains a logit model:

$$(1) \qquad \Pr(Y_i = 1) = \frac{\exp(R_i'\lambda + X_i'\beta + Q_i'\alpha + W_i'\gamma)}{1 + \exp(R_i'\lambda + X_i'\beta + Q_i'\alpha + W_i'\gamma)}$$

For individual i, Y denotes a poor start. R is a vector of dummy variables for race, ethnicity, and immigration. X is a vector of parental background characteristics such as parental income, education, and family structure. Q is a vector of school and neighborhood characteristics such as poverty levels. W is a vector of individual characteristics and behaviors; examples are eighth grade test scores and drug use.

Because each poor start is defined as of 1994, the sample is limited to individuals who are in the 1994 follow-up. The teenage motherhood logit is only estimated for women, whereas the high school dropout logit is estimated separately for males and females. Substantial sample attrition occurs between 1988 and 1994 (as well as 2000), so all analyses are weighted in order to make the results as representative as possible of the U.S. population of that age.

Although many papers have considered the determinants of poor starts, few if any have looked at future success for individuals with poor starts. Instead, researchers go to

great lengths to establish the causal effect of the poor start on outcomes, such as the

impact of teenage motherhood on educational attainment. These analyses provide little

insight on how to assist individuals who have a poor start. In equation (2), we use

another logit model to investigate the determinants of a positive outcome for individuals

with poor starts:

$$(2) \qquad \Pr(Z_i = 1 \mid Y_i = 1) = \frac{\exp(R_i'\lambda + X_i'\beta + Q_i'\alpha + W_i'\gamma)}{1 + \exp(R_i'\lambda + X_i'\beta + Q_i'\alpha + W_i'\gamma)}$$

In this equation, Z is defined as a positive outcome, and Y, R, X, Q, and W are defined as

in equation (1). Due to smaller sample sizes, some of the racial, ethnic, and immigration

groups in R are combined.

The probability in equation (2) is conditional on a poor start occurring. In other

words, we are looking at the predictors of positive outcomes for individuals who have

poor starts, not for individuals who do not have poor starts or for all individuals. The

goal is to see whether there are factors at the parental, school/neighborhood, and

individual level that are associated with positive outcomes. This knowledge has the

potential to assist policymakers in making policies concerning teenage mothers and high

school dropouts.

At the same time, there are limitations to conditioning the sample on having a poor start.

As the literature argues, having a poor start is an endogenous determinant of the positive

outcomes. Consequently, the coefficient estimates from equation (2) could be biased due

to this endogeneity. The common solution to this problem is a Heckman selection

equation that controls for the non-random selection of people into poor starts. However,

the literature on poor starts has been largely unable to find compelling instruments:

variables that are highly correlated with a poor start but uncorrelated with a positive

outcome. Such a model can be identified on functional form assumptions alone, but such assumptions have no basis in economic theory in this case. Therefore, we do not estimate any selection-correction models, although we will consider them in future work.

Results

Determinants of poor starts

Table 1 contains the descriptive statistics for the two poor starts. Twelve percent of the females in the sample experience a teen birth (i.e. a birth before the age of 20), and 16.3 percent are high school dropouts. The high school dropout percentage for males (16.7 percent) is nearly identical.

Table 2 presents the results from the logit model outlined in equation (1). The dependent variables are teenage motherhood (columns 1 through 3) and high school dropouts (columns 4 through 9). The first specification for each outcome (columns 1, 4, and 7) only includes controls for race, ethnicity, and immigrant generation. The second specification (columns 2, 5, and 8) adds controls for parental background, schools, and neighborhoods. The third specification (columns 3, 6, and 9) includes individual choice variables.

Race, ethnicity, and immigration generation have significant impacts on poor starts in the specifications with no other control variables. Compared to the omitted group of white children of natives, white children of immigrants and Asian children of natives are associated with lower probabilities of poor starts. In contrast, Hispanics – both children of natives and children of immigrants – and Blacks / Native Americans are associated with higher probabilities of poor starts. When we include additional controls for parental background, schools and neighborhoods, the effects of race, ethnicity, and

immigration are generally insignificant. When further controls for individual characteristics and behaviors, such as drug use and eighth grade test scores, are included, some of the effects for Hispanics and Blacks / Native Americans become negative and significant. Blacks / Native Americans and Hispanic children of natives are associated with lower probabilities of dropping out (although the effect for Hispanic men is only significant at 10 percent). These results are consistent with the hypothesis that adverse individual choices for Hispanics and Blacks / Native Americans are in part responsible for their higher rates of becoming teen mothers and of dropping out of high school.

Parental background characteristics are significant predictors of poor starts, although some of the characteristics are sensitive to the model specification. Traditional families (i.e. married with both parents) are associated with fewer poor starts, whereas more siblings are associated with more poor starts. Parental education and income are negatively related to poor starts. Neighborhood and school characteristics, on the other hand, are not systematically related to poor starts.

Individual choices have strong impacts on poor starts, although these results should be interpreted with caution due to endogeneity concerns. Student ability, measured by eighth grade test scores, has a negative and highly significant impact on poor starts. Students who engaged in risky behaviors such as drug use and sexual intercourse by tenth grade were at risk for poor starts, although use of birth control lessened the risk. Male students who worked in tenth grade were at greater risk of dropping out of high school.

Consequences of poor starts

Table 3 contains the descriptive characteristics for the positive outcomes for

individuals with poor starts. The left panel describes teenage mothers. Less than 40

percent of teenage mothers have family incomes above 200 percent of the poverty line

even though 60.3 percent of them are working full time. Less than half are high school

graduates,[4] and 57 percent have pursued some sort of post-secondary schooling

(including adult education classes that do not require high school graduation or a GED).

Less than half are married or cohabiting in 2000, but nearly 80 percent did not have

another teenage birth (in large part because the majority of first teenage births occurred at

ages 18 and 19).

The right two panels of the table contain the descriptive statistics for high school

dropouts, separated by sex. Males have more economic success. For example, 55.3 of

men have family income above 200 percent of the poverty, compared with 43.9 percent

for women. Females have slightly more education: 11.5 percent have high school

degrees by 2000, and 44.1 have attended some sort of post-secondary schooling. For

men, the numbers are 7.7 percent for high school and 39.8 for college.[5]

In order to determine the predictors of these positive outcomes, we estimate the

logit model described above in equation (2). These results are in Tables 4 through 8. For

each outcome, there are three model specifications, as in Table 2. The first specification

contains controls for race, ethnicity, and immigration. The second specification adds

controls for parental background, schools, and neighborhoods, and the third specification

includes controls for individual choices and behaviors. Except for Table 8, which

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[4] Another 23.3 percent of teenage mothers have earned a GED (although not reported in the table).

includes family outcomes only for teen mothers, the first three columns of each table are for teenage mothers, the middle three are for female high school dropouts, and the final three are for male high school dropouts. Due to small sample sizes in these tables, the discussion of significance in the text refers to significance at the 10 percent level.

In Table 4, the dependent variable is a dummy variable for whether the family income is above 200 percent of the poverty line in 2000. In nearly all specifications, the coefficient for Black / Native American is negative and significant. For teen mothers, Hispanics (children of natives and immigrants) are associated with lower family income (i.e lower probability of being above 200 percent of the poverty line).

Parental background characteristics measured in eighth grade have modest impacts on 2000 family income. The presence of a father in the household has a positive effect for male high school dropouts but no effect for female dropouts or teen mothers. Perhaps fathers provide role models for work and access to job networks for their sons. Maternal education has inconsistent effects. Parental income, especially at higher levels, has positive impacts for all the samples. Some of these youth may still be living with their parents or receive other direct assistance. Poverty, measured at either the school or neighborhood level, is negatively associated with family income for both samples of females, especially teen mothers, but not for males.

The coefficient for eighth grade test scores is positive and highly significant for females, but not for males. For female high school dropouts, having a teen birth is negatively associated with family income (although we do not assume that this effect is necessarily causal). Surprisingly, recent drug use is associated with higher family

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[5] If we combine GEDs and high school diplomas, the percentages are 61.1 percent for women and 55.8 percent for men.

income, a result that merits more investigation. Having sex before the 10th grade is associated with poor starts, and here we find that the negative impact extends even to male high school dropouts and their chances of being above 200% of the poverty level. This may be because young men who had sex at young ages are more likely to be young fathers, and thus more likely to be poor, or its association with unobservable factors than increase both chances of early sex and being poor.

Table 5 displays the logit results for working full time in 2000. Here, we find one important race/ethnic difference persists across all models. Among female high school dropouts, Hispanic children of immigrants are more likely than whites to working full time. Maternal education appears to bear a negative relationship to work among young women, and no relationship among men. Parental income is negatively associated with work for both young men and women. Poor neighborhoods are linked to not working, but only significantly so among female dropouts. Perhaps neighborhood poverty is measure of local opportunities. Male high school dropouts who worked in the 10th grade may have built some employment skills in that experience because they are more likely to work full time in 2000 than those who did not. However, working in 10th grade makes them more likely to dropout in the first place (see Table 2). Being married in 2000 makes young women significantly less likely to work, whether they are teen mothers or high school dropouts. However, being married did not increase their material resources substantially, nor did it increase their chances of returning to schooling.

The positive outcome in Table 6 is graduating from high school. The receipt of a GED is excluded, as GED recipients have similar earnings to high school dropouts (Cameron and Heckman, 1993). There are fewer significant predictors of high school

graduation by 2000 for people who dropped out of high school than for teen mothers. For teen mothers, there is some evidence that Blacks/ Native Americans, and Native Hispanics have higher probabilities of graduation once we include controls for individual, parental, school, and neighborhood characteristics. Parental income also has a positive impact for teen moms, although neighborhood poverty also has a modest, positive impact. This is particularly surprising, given its strong negative association with being above 200% of the poverty level for teen mothers. In contrast, the effect of neighborhood poverty for male dropouts is much larger and negative. Eighth-grade test scores are positively associated with high school graduation for all samples. However, the negative impact of early sexual experience and the positive impact of using birth control are limited to both samples of females (teen mothers and dropouts).

Table 7 contains the results for logits estimating college attendance. The coefficient for Black / Native American is positive and sometimes significant, whereas the coefficients for other race, ethnicities, and immigrant generations is insignificant. Maternal education and parental income have strong positive impacts for all the populations, and the presence of fathers is associated with marginally significant, increases in post-secondary education attendance for teen mothers. School poverty has a negative impact on college attendance for male dropouts, although this effect is tempered by the marginally significant positive impact of neighborhood poverty for that sample.

Individual characteristics have limited effects on college attendance. Eighth grade test scores are highly significant, positive predictors of college attendance for females with poor starts, but the effect for males is nearly zero and insignificant. The coefficient on marriage (measured in 1994) is negative for all samples, but it is

significant for teen mothers and male dropouts (not for female dropouts). Surprisingly, in the female dropout sample, the coefficient for teen motherhood is positive and significant at one percent.

Table 8 contains the logit results for two family formation outcomes: not having an additional teen birth (columns 1 through 3) and being married or cohabiting in 2000 (columns 4 through 6). Parental income is positively associated with not having an additional teen birth, as is being from a traditional family. Those teenage mothers who delayed first intercourse to after their 10th grade year and who used birth control at first intercourse were much less likely to have had an additional teenage birth. No doubt, part of this difference is due to having fewer years of exposure to the risk of teenage pregnancy. For the married / cohabiting equation, Blacks / Native Americans are less likely to be married or cohabiting for all specifications. Having more siblings is associated with lower chances of being married or cohabiting in 2000, perhaps larger families provide more potential babysitters and therefore provide fewer incentives to form a partnership. Teen mothers who used birth control at first intercourse are more likely to be married or cohabiting as young adults.

Simulations

In this section, we attempt to identify possible avenues for policy interventions. For each group of "poor starters," we examine their positive outcomes and the relative importance of three classes of determinants: parental background, school/neighborhood characteristics, and behavioral variables. One additional determinant, eighth grade test scores, is included as a fourth class of determinant both because it was so important and because it is difficult to categorize as either "parental" or "behavioral."

In the figures that follow, we simulate the effect of improving each class of characteristics on the positive outcomes of interests. We improve parental background variables by assigning each youth to a father-present family, reduce the number of siblings one standard deviation, assign maternal education at the college degree level, and parental income at $35,000 plus. Neighborhood and school factors are improved by decreasing neighborhood poverty and the percent free lunch one standard deviation. Test scores are increased by one standard deviation. Permitting each youth to have worked in 10th grade and female youth to use birth control at first intercourse improves individual choice characteristics. We conduct F-tests for the parental background variables, the neighborhood and school variables, and the behavioral variables to determine the joint significance of these changes.[6]

Figure 1displays the results of the simulation exercise for teen mothers, female dropouts, and male dropouts, respectively. One of the most striking findings is the difference in the benefit from parental resources across positive outcomes. Among young women, the net effect of improving parental characteristics bears a positive and significant relationship only on post secondary education, and in the case of teen mothers, on avoiding an additional teen birth. For all other outcomes, the overall effects of improving parental characteristics are insignificant. Among male dropouts, parental background is insignificantly related to chances of working full time, but positively related to the other outcomes. Recall, however, that parental resources are very important in avoiding poor starts (Table 2).

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[6] Note that, as in the logit analysis, we do not assume causality in the simulation results. The goal of the simulations is to illustrate the relative importance of different factors. However, even this modest goal is complicated by the fact that some of the factors are binary and others are continuous.

Neighborhood and school characteristics appear to be relatively unimportant in the relationship to positive outcomes, and are only occasionally significant. On the other hand, eighth grade test scores appear to help nearly all youth. However, it is difficult to argue that these test scores are unrelated to parental background.

Working in 10th grade has generally insignificant effects, except for the positive impact on working full time in 2000. However, in Table 2 we saw that male high school students were more likely to dropout of high school if they worked than if they did not. Thus the benefit of encouraging work among high school students is likely to be mixed, if in fact, it operates in a causal manner. The potential effect of using birth control at first intercourse is fairly substantial for young women. Both groups of poor starters have more positive outcomes if they use birth control at first intercourse, especially in the case of graduating high school, and among teen mothers, chances of avoiding additional teen births and being married in 2000. Undoubtedly, helping students to use birth control at first intercourse and delay the age at first intercourse would decrease exposure to the risk of having a teenage birth. It may also increase chances of attaining positive outcomes among poor starters, as the logit coefficients suggest. However, it may not be the simple acts of using birth control and delaying first intercourse that improve outcomes, but rather these actions may be indicators of positive future orientation among students and higher levels of responsibility.

Timing of positive outcomes

In the logit results discussed above, the dependent variable is a dummy variable for whether or not a positive outcome occurred. In this section, we investigate the timing

of positive outcomes. The timing of positive outcomes can also inform policy by identifying when policies have the largest potential effect.

Figure 2 presents the timing of high school graduation for individuals with poor starts.[7] The top panel shows that the vast majority of teenage mothers who graduate do so in the spring of 1992 (i.e. "on time"). A sizeable number graduate a year later, in the spring of 1993.

The bottom two panels of the figure display high school graduation rates for individuals who dropped out of high school by 1994. By definition, these individuals did not graduate "on time" in spring of 1992. Therefore, the earliest graduation date for these individuals is June 1992.[8] For female dropouts, over half of the graduates received their degree in May or June of 1993. Few male dropouts receive high school diplomas, as illustrated by the small sample size of the panel. Of those who receive diplomas, the graduation dates are spread out among the springs of 1993 through 1995, along with a few in the summer of 1992. This suggests that the first or second year might be the most important in influencing dropouts to return to school, and also have the benefit of being the time in which it would be easiest to locate these former students.

GED receipt is much more common among high school dropouts. However, as mentioned above, the labor-market returns to a GED are extremely low, questioning the "positiveness" of this outcome. Appendix Figure 1 contains the timing of GED receipt for individuals with poor starts. The most common dates are spring 1992 for females and spring 1993 for males, but the distribution has more variance than high school

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[7] All the figures in this section are weighted frequencies of a timing variable (in this case, high school graduation date).
[8] Despite this definition of high school dropout (not graduating on time or early), some dropouts gave high school graduation dates before June 1992. These individuals are excluded from the figures.

graduation, suggesting that this may be a "successful" strategy even many years after leaving high school.

Figure 3 looks at the timing of post-secondary education. Specifically, the variable of interest is the number of months between high school completion or GED receipt and college attendance. A few individuals began college before finishing high school, and these individuals are excluded from the figure. The timing of college attendance is similar for all three poor starts. Most students who attend post-secondary education do so within a couple of months of completing high school or obtaining a GED. There is a small concentration of people who wait about a year (around 12 months). A few people enter college at various other times. Some students may complete high school or earn a GED in order to enroll in post-secondary schooling, which would explain the close temporal relationship. However, the occasions of the earning of a high school diploma or GED of a former dropout would be an excellent time to target students and encourage them to continue their educations.

Future work will investigate whether there are systematic determinants of the timing of these positive outcomes.

Conclusion

We have demonstrated in this paper that many young people who begin adult life inauspiciously transition into adulthood successfully. Some high school dropouts do graduate, enroll in post-secondary education, display a commitment to working, and earn wages that put them well above the poverty line. The same is true for some teenage mothers, many of whom delay additional childbearing into their twenties (or beyond) and marry.

By examining these multiple positive outcomes separately, we are able to show that the determinants of these positive outcomes are varied. The findings suggest that the schooling and work/family related positive outcomes have quite different determinants. Although parental background and resources, neighborhood and school characteristics, and behavioral choices all bear some relationship to each positive outcome, this relationship is not always the same. For example, we find that maternal education, which is very important in avoiding a poor start to begin with, is positively associated with post-secondary education, but negatively associated with being above 200% of the poverty level for female high school dropouts and with being married or cohabiting for teen mothers. We suggest that high parental resources make returning to schooling more likely and work and family less likely.

We also find that racial and ethnic differences, although relatively important in predicting poor starts, do not have much bearing on chances of positive outcomes once other characteristics are controlled, with a few important exceptions. Most notably, Black teen girls who have either dropped out of high school or had a baby are actually more likely to get post-secondary education than are white teen girls with similar poor starts. However, Black teen mothers are much less likely than white teen mothers to be married at age 26.

It is clear from these analyses that there is a strong association between age at first intercourse, use of birth control at first intercourse, and positive outcomes, even for those who have had a teen birth. We can not argue with certainty that delaying age at first intercourse would cause more teen mothers to graduate from high school, but it seems likely that a program which successfully helps young women make other choices about

sex at young ages might also help them to make better choices about school and life in general. The results suggest such programs might even be advantageous for young men. Notably, we also found a positive link between delaying age at first intercourse for male high school dropouts and being above 200% of the poverty line.

Finally, we find that those youth who have positive educational outcomes often make their return to scholastic activities within a year or two. In the case of high school graduation, most return within or a year or two of dropping out or having a child. Timing seems to matter less among those who earn GEDs, but we would argue that the return to the GED should be utilized as a way to encourage those students to advance to other forms of post-secondary education. Those who do get some post-secondary schooling do so within one or two years of completing a high school diploma or GED.

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Table 1 - Descriptive Statistics for Poor Starts

	Females		Males	
	Mean	**Std Dev**	**Mean**	**Std Dev**
Teen mother	0.120	0.325		
High school dropout	0.163	0.369	0.167	0.373
Observations	5,490		4,865	

Table 2 - Logit Results for Poor Starts

Dependent Variable	Child by Age 19			Female HS Dropout			Male HS Dropout		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
White, child of	-0.70	-0.32	-0.14	-0.92	-0.56	-0.34	-0.03	0.24	0.19
Native	(2.31)	(1.02)	(0.40)	(3.25)	(1.90)	(1.04)	(0.14)	(0.99)	(0.72)
Asian, child of	-0.37	-0.15	-0.29	-2.79	-2.79	-3.22	-1.06	-1.30	-1.63
Native	(0.63)	(0.24)	(0.45)	(1.82)	(1.81)	(2.06)	(1.46)	(1.72)	(2.07)
Asian, child of	-1.70	-1.36	-1.40	-0.38	-0.13	-0.07	-1.05	-1.31	-0.67
Immigrant	(2.59)	(2.02)	(1.99)	(1.24)	(0.39)	(0.17)	(2.46)	(2.80)	(1.39)
Hispanic, child of	0.74	0.28	0.12	0.90	0.20	-0.18	0.58	-0.13	-0.36
Native	(3.86)	(1.25)	(0.50)	(5.43)	(0.97)	(0.79)	(2.92)	(0.53)	(1.32)
Hispanic, child of	0.43	-0.16	-0.14	0.55	-0.48	-0.52	0.67	-0.44	-0.45
Immigrant	(2.43)	(0.67)	(0.50)	(3.66)	(2.20)	(2.02)	(4.10)	(1.92)	(1.83)
Black / Native	1.02	0.50	0.24	0.62	-0.15	-0.59	0.63	-0.30	-0.54
American	(9.88)	(3.60)	(1.55)	(6.25)	(1.11)	(3.77)	(5.87)	(1.97)	(3.23)
Traditional family		-0.57	-0.29		-0.43	-0.19		-0.43	-0.31
		(5.68)	(2.62)		(4.65)	(1.77)		(4.08)	(2.68)
Number of siblings		0.15	0.13		0.13	0.12		0.10	0.13
		(5.78)	(4.39)		(5.12)	(4.27)		(3.42)	(4.09)
Mother HS graduate		-0.63	-0.27		-0.85	-0.47		-0.40	-0.29
		(4.47)	(1.74)		(6.51)	(3.18)		(2.84)	(1.93)
Mother some college		-0.60	-0.16		-0.63	-0.02		-0.99	-0.77
		(4.59)	(1.12)		(5.23)	(0.11)		(7.11)	(5.02)
Mother college grad		-1.36	-0.48		-1.94	-0.90		-2.14	-1.53
		(5.77)	(1.84)		(7.57)	(3.07)		(8.70)	(5.76)
Parental inc 10-15,000		-0.14	-0.05		-0.22	-0.06		-0.81	-0.82
		(0.88)	(0.27)		(1.47)	(0.32)		(4.57)	(4.18)
Parental inc 15-20,000		-0.49	-0.41		-0.36	-0.19		-0.84	-0.58
		(2.63)	(2.00)		(2.27)	(1.02)		(4.51)	(2.83)
Parental inc 20-25,000		-0.45	-0.10		-0.62	-0.19		-0.91	-0.70
		(2.56)	(0.53)		(3.93)	(1.03)		(5.34)	(3.74)
Parental inc 25-35,000		-0.68	-0.33		-1.06	-0.60		-1.21	-0.96
		(4.13)	(1.81)		(7.01)	(3.50)		(7.46)	(5.40)
Parental inc 35,000+		-0.76	-0.38		-1.32	-0.83		-1.36	-1.19
		(4.97)	(2.22)		(9.23)	(5.06)		(8.65)	(6.81)
Percent free lunch, 10th grade		1.02	0.74		0.71	0.49		0.58	0.46
		(3.92)	(2.54)		(2.95)	(1.75)		(2.16)	(1.55)
Percent poor (zip code)		-0.45	0.33		-0.61	0.09		-0.22	-0.26
		(0.77)	(0.49)		(1.13)	(0.15)		(0.35)	(0.37)
Drug use in 10th grade			0.09			0.57			1.09
			(0.47)			(3.32)			(6.96)
Student works in 10th grade			-0.08			0.02			0.52
			(0.66)			(0.15)			(4.50)
Test scores in 8th grade			-0.05			-0.09			-0.05
			(7.88)			(14.17)			(8.93)
First sex by 1990			1.49			1.31			0.92
			(12.01)			(11.65)			(7.15)
Used birth control			-0.97			-0.78			-0.49
			(8.85)			(7.14)			(4.50)
Observations	5,488	5,488	5,488	5,489	5,489	5,489	4,865	4,865	4,865

Note: Resuls are logit coefficients, with absolute value of t-statistics in parentheses.

Table 3 - Descriptive Statistics for Positive Outcomes

| | Teen Mothers | | High School Dropouts | | | |
| | | | Female | | Male | |
	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev
Above 200 percent of poverty line	0.377	0.485	0.439	0.497	0.552	0.498
Working full time	0.603	0.490	0.553	0.498	0.827	0.379
High school grad (2000)	0.457	0.499	0.115	0.320	0.077	0.266
College attendance	0.570	0.495	0.441	0.497	0.398	0.490
Not a single parent in 2000	0.427	0.495				
Not another teen birth	0.816	0.388				
Observations	592		696		602	

Table 4 - Logit Results for Having Family Income above 200 Pct of Poverty Line

Sample	Teen Mother			Female HS Dropout			Male HS Dropout		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Asian	0.82	0.77	0.80	2.45	1.59	1.32	-0.35	-0.17	-0.31
	(0.87)	(0.68)	(0.68)	(2.25)	(1.41)	(1.15)	(0.43)	(0.18)	(0.34)
Hispanic, child of	-0.46	-0.99	-0.76	-0.48	-0.54	-0.62	-0.62	-0.36	-0.49
Native	(1.19)	(2.00)	(1.47)	(1.51)	(1.33)	(1.44)	(1.59)	(0.73)	(0.93)
Hispanic, child of	-0.34	-1.15	-0.96	-0.09	-0.20	-0.28	-0.09	-0.11	-0.39
Immigrant	(0.99)	(2.14)	(1.66)	(0.32)	(0.44)	(0.57)	(0.28)	(0.23)	(0.77)
Black / Native	-1.07	-0.83	-0.58	-0.42	-0.56	-0.29	-1.66	-1.58	-1.55
American	(5.10)	(2.77)	(1.82)	(2.15)	(2.06)	(1.01)	(7.49)	(5.41)	(5.03)
Traditional family		0.03	-0.04		-0.15	-0.03		0.78	0.73
		(0.12)	(0.20)		(0.82)	(0.17)		(3.50)	(3.16)
Number of siblings		-0.05	-0.09		-0.03	-0.03		-0.03	-0.02
		(0.79)	(1.37)		(0.53)	(0.51)		(0.44)	(0.38)
Mother HS graduate		0.18	0.08		-0.33	-0.41		0.57	0.50
		(0.60)	(0.25)		(1.26)	(1.47)		(2.05)	(1.67)
Mother some college		0.69	0.55		0.10	-0.04		0.53	0.39
		(2.60)	(1.93)		(0.40)	(0.14)		(1.79)	(1.25)
Mother college grad		-0.33	-0.74		-1.40	-1.55		-0.25	-0.37
		(0.62)	(1.30)		(2.25)	(2.41)		(0.44)	(0.61)
Parental inc 10-15,000		0.28	0.19		0.08	0.04		-0.43	-0.43
		(0.85)	(0.54)		(0.27)	(0.14)		(1.30)	(1.25)
Parental inc 15-20,000		0.42	0.35		0.91	0.74		0.53	0.57
		(1.06)	(0.81)		(2.81)	(2.18)		(1.40)	(1.46)
Parental inc 20-25,000		0.33	0.08		0.31	0.09		0.71	0.71
		(0.88)	(0.20)		(0.95)	(0.27)		(2.02)	(1.93)
Parental inc 25-35,000		0.21	-0.12		1.02	0.89		0.26	0.19
		(0.60)	(0.30)		(3.15)	(2.48)		(0.78)	(0.56)
Parental inc 35,000+		0.97	0.66		1.26	1.05		1.15	1.13
		(3.05)	(1.88)		(4.32)	(3.32)		(3.47)	(3.24)
Percent free lunch, 10th grade		-1.25	-1.62		-1.64	-1.79		-0.41	-0.38
		(2.09)	(2.52)		(3.20)	(3.23)		(0.67)	(0.59)
Percent poor (zip code)		-4.99	-4.29		-3.49	-3.46		-1.50	-1.62
		(3.70)	(2.89)		(2.89)	(2.68)		(1.02)	(1.05)
Drug use in 10th grade			0.39			0.72			0.40
			(1.02)			(2.25)			(1.23)
Student works in 10th grade			0.31			0.18			0.27
			(1.13)			(0.78)			(1.13)
Test scores in 8th grade			0.07			0.05			0.01
			(4.42)			(3.98)			(0.61)
First sex by 1990			-0.20			-0.04			-0.60
			(0.73)			(0.18)			(2.00)
Used birth control			0.28			-0.07			-0.07
			(1.20)			(0.35)			(0.34)
Married by 1994			-0.24			0.14			-0.26
			(1.02)			(0.62)			(0.88)
Teen mother						-0.78			
						(3.77)			
Observations	592	592	592	696	696	694	602	602	602

Note: Resuls are logit coefficients, with absolute value of t-statistics in parentheses.

Table 5 - Logit Results for Full-time Work in 2000

Sample	Teen Mother			Female HS Dropout			Male HS Dropout		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Asian	2.71	2.69	2.71	-0.85	-0.34	-0.26	0.60	1.23	1.70
	(1.29)	(1.24)	(1.25)	(1.29)	(0.48)	(0.36)	(0.39)	(0.76)	(1.04)
Hispanic, child of Native	-0.05	0.24	0.23	-0.74	-0.56	-0.61	-0.17	0.25	0.43
	(0.13)	(0.52)	(0.49)	(2.35)	(1.46)	(1.57)	(0.31)	(0.37)	(0.62)
Hispanic, child of Immigrant	0.38	0.49	0.41	0.59	0.92	1.02	0.23	0.54	0.85
	(1.09)	(0.94)	(0.77)	(1.88)	(2.01)	(2.22)	(0.44)	(0.81)	(1.22)
Black / Native American	0.25	0.33	0.30	0.01	-0.20	-0.22	-1.17	-0.62	-0.36
	(1.30)	(1.16)	(1.00)	(0.03)	(0.77)	(0.84)	(4.95)	(1.75)	(0.98)
Traditional family		-0.06	0.00		-0.28	-0.32		-0.17	-0.25
		(0.32)	(0.01)		(1.62)	(1.79)		(0.57)	(0.84)
Number of siblings		0.07	0.06		0.01	0.01		0.00	-0.06
		(1.37)	(1.10)		(0.19)	(0.26)		(0.04)	(0.75)
Mother HS graduate		-0.72	-0.80		-0.57	-0.67		0.59	0.58
		(2.66)	(2.87)		(2.31)	(2.66)		(1.51)	(1.44)
Mother some college		-0.01	-0.13		0.23	0.19		-0.40	-0.51
		(0.05)	(0.48)		(1.00)	(0.80)		(1.06)	(1.30)
Mother college grad		-0.94	-1.09		-0.90	-0.90		-0.08	-0.40
		(1.89)	(2.10)		(1.57)	(1.54)		(0.11)	(0.51)
Parental inc 10-15,000		-0.04	-0.15		-0.17	-0.28		-0.32	-0.27
		(0.13)	(0.47)		(0.62)	(0.99)		(0.70)	(0.58)
Parental inc 15-20,000		-0.14	-0.15		-0.24	-0.22		-1.03	-1.04
		(0.36)	(0.39)		(0.78)	(0.69)		(2.24)	(2.19)
Parental inc 20-25,000		-0.09	-0.16		-0.31	-0.31		0.23	0.21
		(0.24)	(0.43)		(0.99)	(0.97)		(0.46)	(0.41)
Parental inc 25-35,000		-0.24	-0.48		-0.72	-0.78		0.17	0.13
		(0.72)	(1.40)		(2.37)	(2.44)		(0.33)	(0.26)
Parental inc 35,000+		0.10	-0.11		-0.14	-0.05		-0.51	-0.18
		(0.33)	(0.34)		(0.50)	(0.15)		(1.26)	(0.42)
Percent free lunch, 10th grade		-0.26	-0.24		0.00	-0.12		0.63	0.80
		(0.48)	(0.43)		(0.00)	(0.24)		(0.80)	(0.99)
Percent poor (zip code)		-0.79	-0.57		-3.32	-2.89		-0.28	-1.06
		(0.71)	(0.49)		(3.08)	(2.59)		(0.16)	(0.57)
Drug use in 10th grade			-0.10			-0.21			-0.28
			(0.27)			(0.71)			(0.75)
Student works in 10th grade			0.26			0.31			0.64
			(1.05)			(1.42)			(1.98)
Test scores in 8th grade			0.02			-0.01			0.03
			(1.81)			(1.06)			(3.03)
First sex by 1990			-0.37			-0.16			-0.11
			(1.71)			(0.83)			(0.36)
Used birth control			-0.08			0.41			-0.12
			(0.39)			(2.27)			(0.45)
Married by 1994			-0.54			-0.37			0.50
			(2.53)			(1.88)			(1.10)
Teen mother						0.22			
						(1.21)			
Observations	592	592	592	696	696	694	602	602	602

Note: Resuls are logit coefficients, with absolute value of t-statistics in parentheses.

Table 6 - Logit Results for High School Graduation (2000)

Sample	Teen Mothers			Female HS Dropout			Male HS Dropout		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Asian	2.49	1.98	3.14	-2.09	-2.82	-2.32	1.35	1.66	1.84
	(1.70)	(1.26)	(1.64)	(0.86)	(1.13)	(0.93)	(1.44)	(1.47)	(1.56)
Hispanic, child of Native	0.44	0.89	1.05	-0.40	0.16	0.15	-1.33	-1.16	-1.03
	(1.19)	(1.89)	(2.01)	(0.73)	(0.26)	(0.22)	(1.07)	(0.88)	(0.76)
Hispanic, child of Immigrant	0.38	0.91	0.91	0.19	0.59	0.64	-0.59	-0.19	0.04
	(1.13)	(1.78)	(1.63)	(0.45)	(0.91)	(0.94)	(0.80)	(0.21)	(0.04)
Black / Native American	0.27	0.44	0.53	-0.11	0.52	0.35	-0.26	-0.41	-0.15
	(1.43)	(1.61)	(1.71)	(0.35)	(1.41)	(0.89)	(0.67)	(0.79)	(0.27)
Traditional family		-0.17	-0.25		0.26	0.34		-0.04	-0.16
		(0.87)	(1.15)		(0.96)	(1.14)		(0.11)	(0.40)
Number of siblings		0.06	0.07		0.17	0.20		0.09	0.05
		(1.12)	(1.17)		(2.24)	(2.44)		(0.91)	(0.43)
Mother HS graduate		0.56	0.51		0.06	0.02		0.62	0.65
		(2.01)	(1.69)		(0.15)	(0.05)		(1.07)	(1.08)
Mother some college		0.40	0.26		0.53	0.52		0.74	0.64
		(1.55)	(0.91)		(1.49)	(1.37)		(1.27)	(1.05)
Mother college grad		0.33	-0.04		-0.11	-0.06		1.27	1.00
		(0.64)	(0.06)		(0.12)	(0.06)		(1.46)	(1.06)
Parental inc 10-15,000		0.85	0.82		0.04	-0.24		-0.19	-0.32
		(2.88)	(2.56)		(0.08)	(0.48)		(0.28)	(0.44)
Parental inc 15-20,000		1.14	1.20		0.13	0.11		-0.01	-0.03
		(3.03)	(2.90)		(0.25)	(0.20)		(0.01)	(0.04)
Parental inc 20-25,000		0.68	0.42		0.06	-0.10		0.23	0.21
		(1.94)	(1.08)		(0.13)	(0.19)		(0.36)	(0.32)
Parental inc 25-35,000		1.40	0.94		0.70	0.43		0.18	0.14
		(4.06)	(2.49)		(1.62)	(0.92)		(0.31)	(0.24)
Parental inc 35,000+		0.84	0.46		0.48	0.17		0.09	0.15
		(2.76)	(1.34)		(1.17)	(0.37)		(0.17)	(0.27)
Percent free lunch, 10th grade		-0.80	-0.84		-0.04	-0.20		0.51	0.17
		(1.51)	(1.44)		(0.06)	(0.27)		(0.41)	(0.14)
Percent poor (zip code)		2.60	3.16		-0.06	-0.37		-11.67	-11.15
		(2.32)	(2.50)		(0.03)	(0.20)		(3.54)	(3.27)
Drug use in 10th grade			0.46			-0.34			-0.06
			(1.27)			(0.80)			(0.10)
Student works in 10th grade			0.10			0.02			0.22
			(0.35)			(0.06)			(0.57)
Test scores in 8th grade			0.05			0.04			0.03
			(3.37)			(2.61)			(1.87)
First sex by 1990			-1.34			-0.57			-0.24
			(4.63)			(1.65)			(0.61)
Used birth control			0.72			0.74			-0.35
			(3.25)			(2.27)			(1.00)
Married by 1994			-0.43			-0.48			0.08
			(1.87)			(1.53)			(0.14)
Teen mother						0.39			
						(1.30)			
Observations	590	590	590	694	694	692	601	601	601

Table 7 - Logit Results for College Attendance

Sample	Teen Mothers			Female HS Dropout			Male HS Dropout		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Asian	0.38	-0.80	-0.54	-1.35	-1.42	-1.33	0.91	1.33	1.43
	(0.41)	(0.61)	(0.38)	(1.61)	(1.53)	(1.32)	(1.10)	(1.39)	(1.46)
Hispanic, child of	0.00	0.06	0.20	-0.36	-0.23	-0.13	-0.11	0.47	0.38
Native	(0.01)	(0.12)	(0.40)	(1.12)	(0.57)	(0.30)	(0.27)	(0.89)	(0.67)
Hispanic, child of	0.14	0.57	0.85	-0.52	-0.10	0.10	0.04	0.97	0.50
Immigrant	(0.42)	(1.07)	(1.48)	(1.68)	(0.21)	(0.21)	(0.11)	(2.02)	(0.99)
Black / Native	0.27	0.40	0.66	0.41	0.42	0.49	0.51	0.42	0.46
American	(1.44)	(1.39)	(2.09)	(2.17)	(1.59)	(1.75)	(2.53)	(1.45)	(1.50)
Traditional family		0.40	0.41		-0.02	0.10		-0.21	-0.14
		(1.88)	(1.81)		(0.12)	(0.49)		(0.93)	(0.60)
Number of siblings		0.01	-0.02		-0.04	-0.04		0.06	0.00
		(0.10)	(0.35)		(0.77)	(0.67)		(1.00)	(0.07)
Mother HS graduate		0.69	0.65		0.69	0.72		0.92	0.89
		(2.44)	(2.18)		(2.60)	(2.53)		(2.96)	(2.74)
Mother some college		1.40	1.31		1.26	1.21		1.48	1.34
		(5.25)	(4.59)		(5.18)	(4.69)		(4.52)	(3.94)
Mother college grad		2.71	2.44		1.52	1.46		1.95	1.75
		(3.36)	(2.95)		(2.27)	(2.11)		(3.33)	(2.82)
Parental inc 10-15,000		0.97	0.92		0.51	0.52		1.19	1.29
		(3.21)	(2.87)		(1.74)	(1.66)		(3.44)	(3.62)
Parental inc 15-20,000		-0.04	-0.12		0.63	0.70		0.99	1.32
		(0.10)	(0.28)		(1.93)	(2.01)		(2.47)	(3.17)
Parental inc 20-25,000		0.84	0.86		0.64	0.65		0.89	0.90
		(2.29)	(2.17)		(1.99)	(1.90)		(2.42)	(2.35)
Parental inc 25-35,000		0.62	0.29		0.68	0.67		0.72	0.86
		(1.81)	(0.77)		(2.13)	(1.92)		(2.00)	(2.28)
Parental inc 35,000+		1.69	1.34		1.81	1.56		1.56	1.66
		(5.18)	(3.83)		(6.10)	(4.86)		(4.73)	(4.76)
Percent free lunch, 10th grade		0.97	0.88		0.06	-0.26		-2.07	-2.08
		(1.71)	(1.46)		(0.12)	(0.51)		(3.10)	(2.98)
Percent poor (zip code)		-1.60	-0.98		-0.12	0.70		1.79	2.68
		(1.32)	(0.74)		(0.12)	(0.60)		(1.18)	(1.71)
Drug use in 10th grade			0.07			0.36			0.29
			(0.17)			(1.16)			(0.94)
Student works in 10th grade			-0.01			0.01			-0.09
			(0.02)			(0.05)			(0.38)
Test scores in 8th grade			0.07			0.06			0.00
			(4.40)			(4.30)			(0.04)
First sex by 1990			0.24			0.16			-0.32
			(0.83)			(0.65)			(1.40)
Used birth control			0.03			0.26			-0.35
			(0.14)			(1.23)			(1.67)
Married by 1994			-0.55			-0.34			-1.48
			(2.35)			(1.57)			(4.35)
Teen mother						0.57			
						(2.78)			
Observations	591	591	591	695	695	693	600	600	600

Note: Resuls are logit coefficients, with absolute value of t-statistics in parentheses.

Table 8 - Logit Results for Family Outcomes for Teen Mothers

| Outcome	No Addtitional Teen Births			Married / Cohabiting in 2000		
	(1)	(2)	(3)	(4)	(5)	(6)
Asian	-0.60	-2.44	-2.44	0.83	0.55	0.40
	(0.62)	(1.93)	(1.65)	(0.87)	(0.47)	(0.34)
Hispanic, child of	0.36	0.47	-0.02	0.15	-0.47	-0.41
Native	(0.70)	(0.64)	(0.02)	(0.41)	(1.00)	(0.82)
Hispanic, child of	1.90	1.61	1.42	0.20	-0.71	-0.82
Immigrant	(2.23)	(1.48)	(1.30)	(0.58)	(1.31)	(1.44)
Black / Native	0.08	0.13	0.06	-1.00	-0.81	-0.92
American	(0.36)	(0.33)	(0.14)	(4.81)	(2.81)	(2.98)
Traditional family		0.77	0.63		0.20	0.17
		(2.60)	(1.90)		(0.96)	(0.78)
Number of siblings		0.03	0.06		-0.18	-0.17
		(0.34)	(0.74)		(3.14)	(2.81)
Mother HS graduate		0.45	0.22		0.03	-0.04
		(1.03)	(0.46)		(0.12)	(0.14)
Mother some college		-0.39	-0.44		-0.41	-0.52
		(1.09)	(1.09)		(1.58)	(1.86)
Mother college grad		0.76	0.97		-0.81	-0.80
		(1.05)	(1.09)		(1.54)	(1.40)
Parental inc 10-15,000		2.24	2.35		0.37	0.37
		(4.04)	(3.94)		(1.22)	(1.16)
Parental inc 15-20,000		2.11	2.46		0.16	-0.04
		(2.54)	(2.80)		(0.41)	(0.10)
Parental inc 20-25,000		0.50	0.29		0.24	0.01
		(1.06)	(0.55)		(0.67)	(0.02)
Parental inc 25-35,000		1.16	0.80		0.40	0.14
		(2.21)	(1.40)		(1.15)	(0.37)
Parental inc 35,000+		0.15	0.25		0.01	-0.22
		(0.39)	(0.56)		(0.03)	(0.66)
Percent free lunch, 10th grade		1.35	1.28		0.71	1.02
		(1.78)	(1.53)		(1.25)	(1.67)
Percent poor (zip code)		-0.17	-0.20		2.12	2.24
		(0.10)	(0.10)		(1.70)	(1.71)
Drug use in 10th grade			0.44			0.17
			(0.84)			(0.48)
Student works in 10th grade			-0.03			0.12
			(0.09)			(0.47)
Test scores in 8th grade			0.01			0.02
			(0.33)			(1.28)
First sex by 1990			-3.36			0.50
			(3.03)			(1.79)
Used birth control			1.21			0.66
			(3.76)			(2.96)
Married by 1994			0.02			
			(0.06)			
Observations	592	592	592	578	578	578

Note: Resuls are logit coefficients, with absolute value of t-statistics in parentheses.

Figure 1: Simulated Effects of "Positive" Characteristics on Positive Outcomes, by Poor Start

Teen Mothers
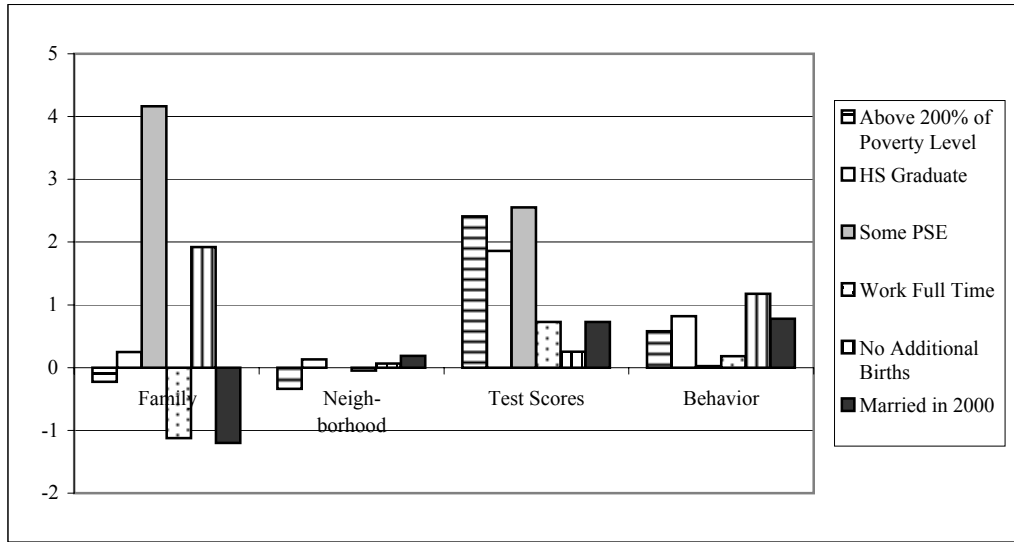
Female High School Dropouts
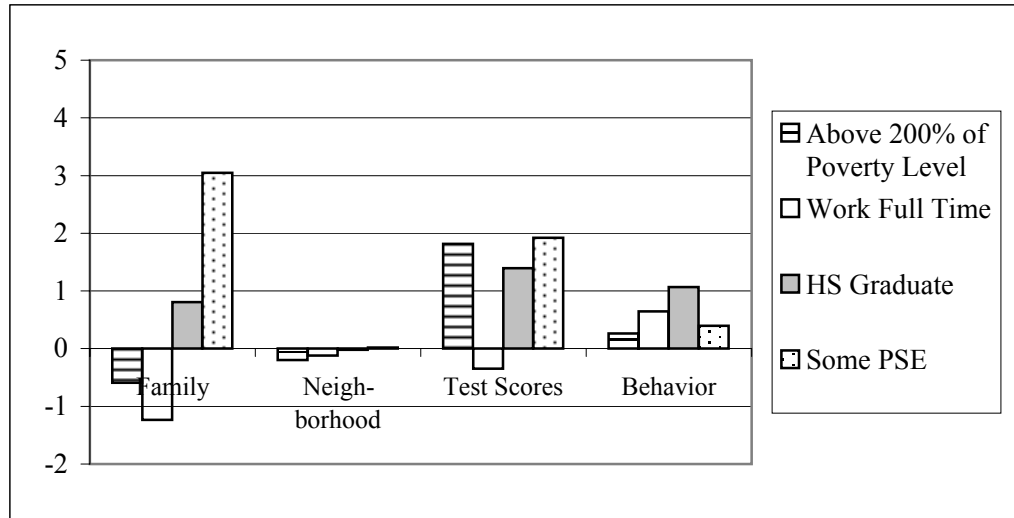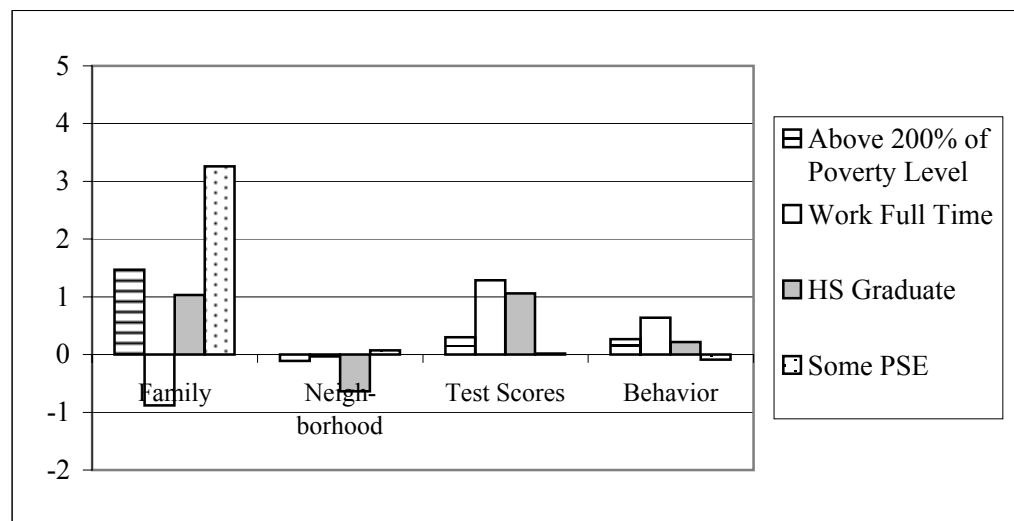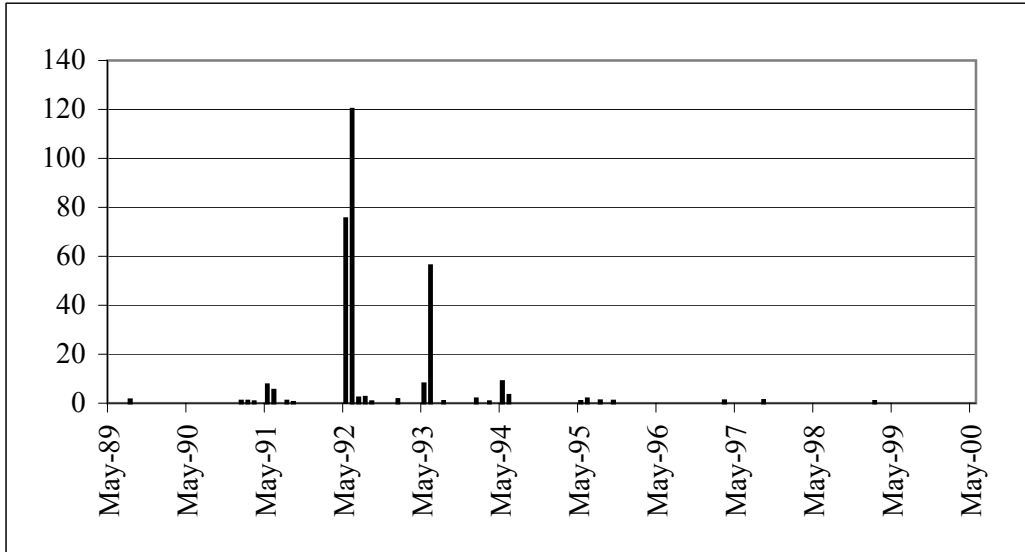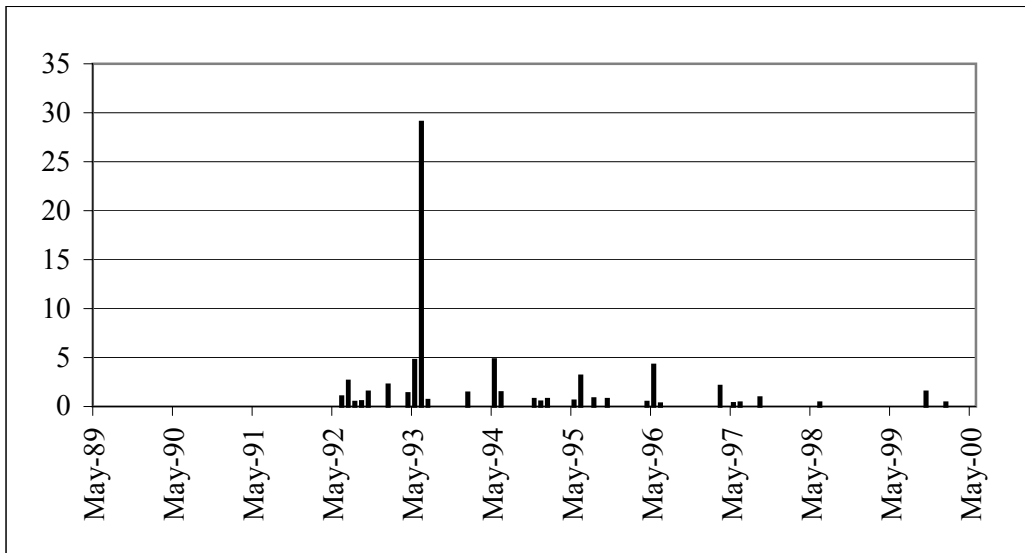

Male High School Dropouts

Figure 2 - High School Graduation Dates, by Poor Start

Teen
Mothers
(N=308)

Female
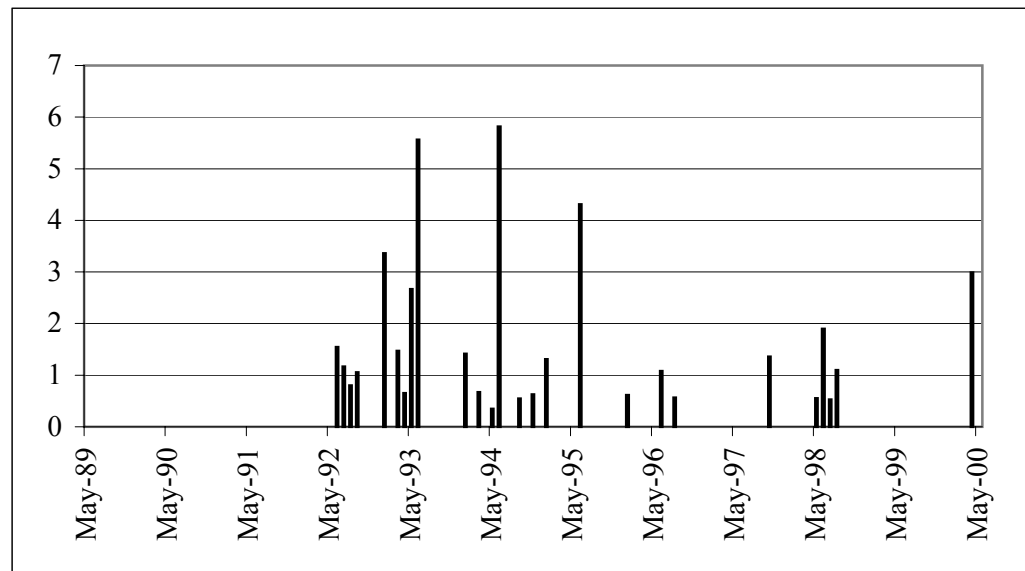High
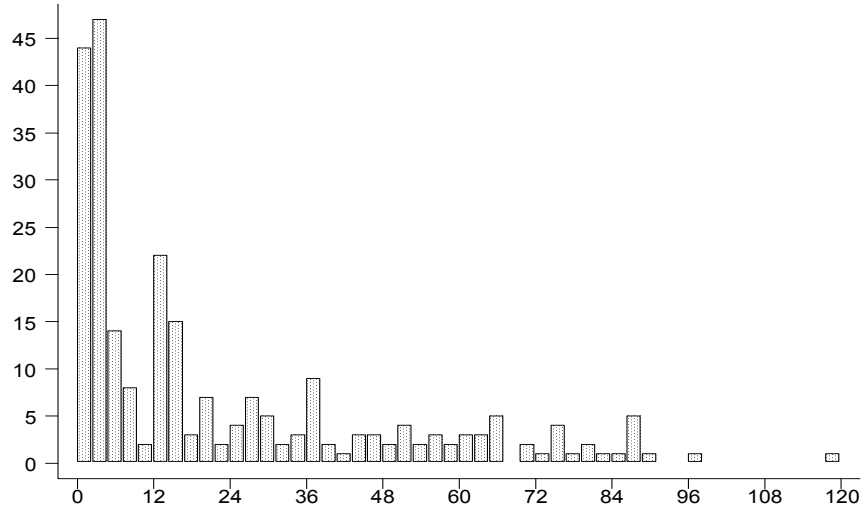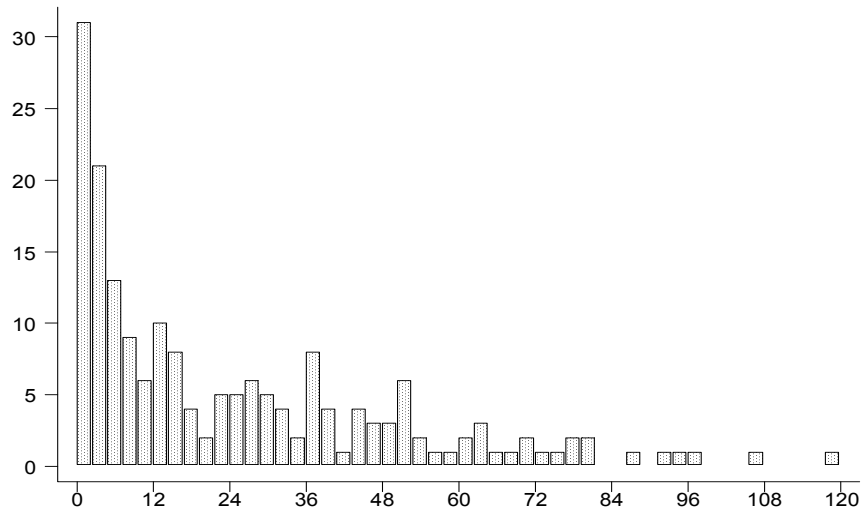School
Dropouts
(N=79)

Male
High
School
Dropouts
(N=59)

Figure 3 - Months between HS Grad/ GED and College Attendance, by Poor Start
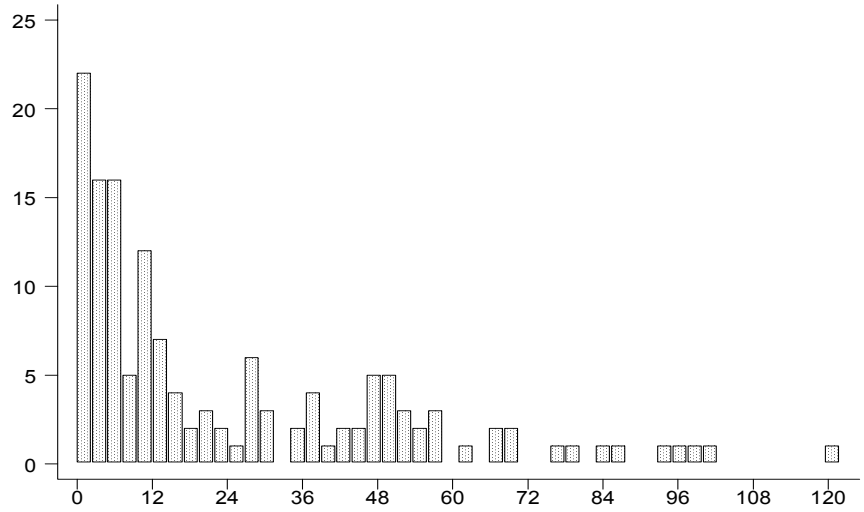
Teen
Mothers
(N=247)

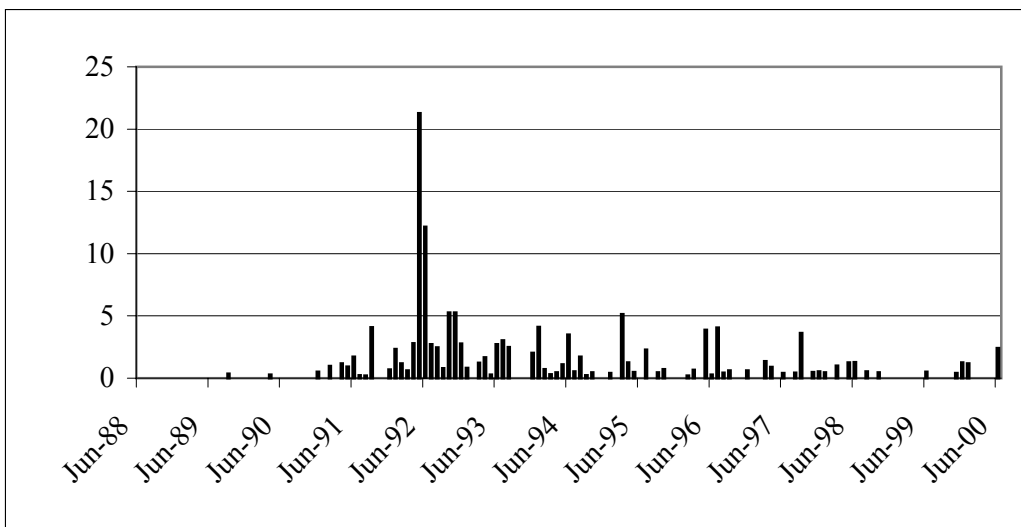Female
High
School
Dropouts
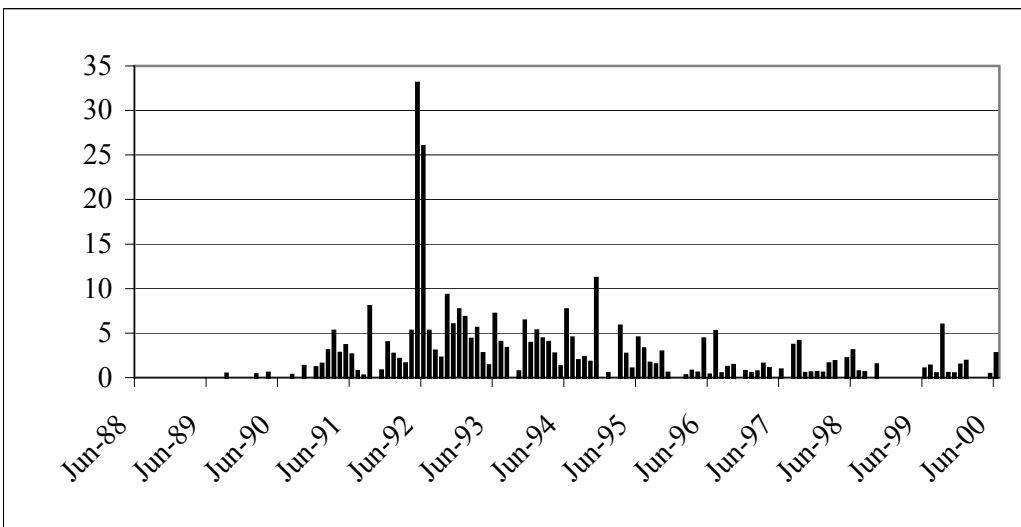(N=185)

Male
High
School
Dropouts
(N=142)

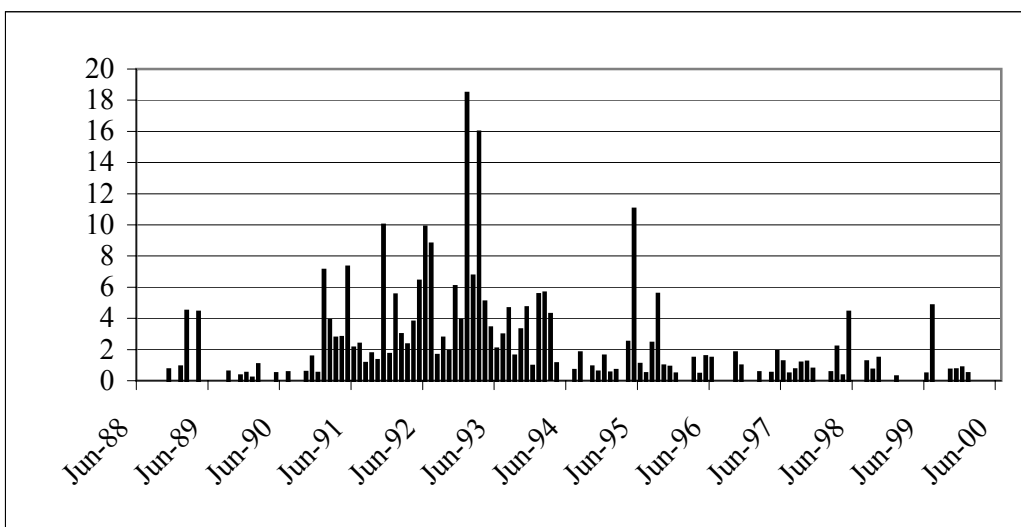Appendix Figure 1 - GED Dates, by Poor Start

Teen
Mothers
(N=140)

Female
High
School
Dropouts
(N=318)

Male
High
School
Dropouts
(N=272)

Appendix Table 1 - Descriptive Statistics for
Teen Mother Sample

	All Females		Teen Mothers	
	Mean	**Std Dev**	**Mean**	**Std Dev**
Race/Ethnicity/Immigration				
White child of native	0.681	0.466	0.550	0.498
White child of immigrant	0.044	0.204	0.019	0.137
Asian child of native	0.009	0.096	0.005	0.070
Asian child of immigrant	0.025	0.155	0.004	0.060
Hispanic child of native	0.041	0.198	0.055	0.228
Hispanic child of immigrant	0.058	0.233	0.068	0.252
Black / Native American	0.143	0.350	0.301	0.459
Family Background				
Number of siblings	2.307	1.597	3.006	1.838
Traditional family	0.662	0.473	0.443	0.497
Mother HS dropout	0.143	0.350	0.282	0.450
Mother HS grad	0.274	0.446	0.251	0.434
Mother some college	0.424	0.494	0.420	0.494
Mother college grad	0.160	0.366	0.047	0.213
Parental inc <10,000	0.117	0.322	0.274	0.446
Parental inc 10-15,000	0.084	0.277	0.165	0.371
Parental inc 15-20,000	0.078	0.268	0.081	0.273
Parental inc 20-25,000	0.092	0.289	0.104	0.306
Parental inc 25-35,000	0.191	0.393	0.136	0.343
Parental inc > 35,000	0.438	0.496	0.241	0.428
School/Neighborhood				
Percent free lunch, 10th gr	0.200	0.210	0.297	0.237
Percent poor (zip code)	0.137	0.107	0.181	0.125
Individual level				
Drug use in 10th grade	0.067	0.250	0.111	0.315
Student works in 10th grade	0.235	0.424	0.199	0.399
Test scores in 8th grade	36.04	11.77	28.47	8.03
First sex by 1990	0.375	0.484	0.805	0.397
Used birth control	0.769	0.421	0.534	0.499
Married by 1994	0.145	0.352	0.411	0.492
Observations	5,488		592	

Appendix Table 2 - Descriptive Statistics for
High School Dropout Sample

| | Females | | | | Males | | | |
| | All | | HS Dropouts | | All | | HS Dropouts | |
	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev
Race/Ethnicity/Immigration								
White child of native	0.680	0.466	0.603	0.490	0.693	0.461	0.607	0.489
White child of immigrant	0.044	0.204	0.017	0.130	0.040	0.195	0.034	0.181
Asian child of native	0.009	0.096	0.001	0.024	0.009	0.095	0.003	0.051
Asian child of immigrant	0.025	0.155	0.014	0.119	0.026	0.160	0.008	0.088
Hispanic child of native	0.041	0.199	0.069	0.254	0.035	0.185	0.048	0.213
Hispanic child of immigr.	0.058	0.233	0.076	0.265	0.048	0.213	0.072	0.258
Black / Native American	0.143	0.351	0.221	0.415	0.150	0.357	0.228	0.420
Family Background								
Number of siblings	2.308	1.598	2.847	1.755	2.194	1.482	2.549	1.740
Traditional family	0.662	0.473	0.469	0.499	0.679	0.467	0.467	0.499
Mother HS dropout	0.143	0.350	0.318	0.466	0.116	0.320	0.267	0.443
Mother HS grad	0.273	0.446	0.238	0.426	0.274	0.446	0.390	0.488
Mother some college	0.424	0.494	0.415	0.493	0.409	0.492	0.306	0.461
Mother college grad	0.159	0.366	0.030	0.169	0.201	0.401	0.038	0.190
Parental inc <10,000	0.117	0.322	0.285	0.452	0.100	0.300	0.282	0.450
Parental inc 10-15,000	0.084	0.277	0.149	0.356	0.076	0.265	0.128	0.334
Parental inc 15-20,000	0.078	0.268	0.115	0.319	0.064	0.245	0.088	0.283
Parental inc 20-25,000	0.092	0.289	0.110	0.313	0.114	0.318	0.116	0.321
Parental inc 25-35,000	0.191	0.393	0.134	0.341	0.182	0.386	0.143	0.350
Parental inc > 35,000	0.438	0.496	0.207	0.405	0.464	0.499	0.244	0.430
School/Neighborhood								
Percent free lunch, 10th gr	0.200	0.210	0.288	0.255	0.196	0.213	0.280	0.241
Percent poor (zip code)	0.137	0.107	0.172	0.132	0.130	0.100	0.167	0.109
Individual level								
Drug use in 10th grade	0.067	0.250	0.155	0.363	0.082	0.275	0.210	0.408
Student works in 10th gr	0.235	0.424	0.209	0.407	0.253	0.435	0.277	0.448
Test scores in 8th grade	36.03	11.77	26.96	7.96	36.83	12.16	28.71	9.13
First sex by 1990	0.375	0.484	0.745	0.436	0.497	0.500	0.796	0.404
Used birth control	0.770	0.421	0.591	0.492	0.724	0.447	0.554	0.498
Married by 1994	0.145	0.352	0.360	0.480	0.071	0.257	0.189	0.392
Observations	5,489		4,865		696		602	